20230711119777

Borealis AB
556078-6633

Årsredovisning
för räkenskapsåret 2022-01-01 - 2022-12-31

Styrelsen och verkställande direktören för Borealis AB avger härmed följande årsredovisning.

Innehåll **Sida**

Förvaltningsberättelse	2
Resultaträkning	5
Balansräkning	6
Kassaflödesanalys	8
Rapport över förändring i eget kapital	8
Tilläggsupplysningar	
Redovisningsprinciper m.m.	9
Noter	12

Styrelsens säte: Stenungsund
Företagets redovisningsvaluta: Svenska kronor (SEK).
Alla belopp redovisas, om inte annat anges, i tusentals kronor (tkr).

Undertecknad Styrelseledamot och styrelseordförande i **Borealis AB** intygar härmed, dels att denna kopia av årsredovisningen överensstämmer med originalet, dels att resultat- och balansräkning fastställts på ordinarie bolagsstämma den 9 juni, 2023. Stämman beslöt tillika godkänna styrelsens förslag till vinstdisposition.

Stenungsund den 6 juli, 2023

Marcus Kierkegaard
Styrelseledamot / Verkställande Direktör

Sensitivity: Internal

20230925042213

Borealis AB
556078-6633

Årsredovisning
för räkenskapsåret 2022-01-01 - 2022-12-31

Styrelsen och verkställande direktören för Borealis AB avger härmed följande årsredovisning.

Innehåll **Sida**

Förvaltningsberättelse	2
Resultaträkning	5
Balansräkning	6
Kassaflödesanalys	8
Rapport över förändring i eget kapital	8
Tilläggsupplysningar	
Redovisningsprinciper m.m.	9
Noter	12

Styrelsens säte: Stenungsund
Företagets redovisningsvaluta: Svenska kronor (SEK).
Alla belopp redovisas, om inte annat anges, i tusentals kronor (tkr).

Att denna fotokopia riktigt återgiver den fotograferade handlingen i dess helhet, intygas:

20230925042214

Borealis AB
556078-6633

Förvaltningsberättelse

Allmänt om verksamheten
Borealis AB är ett helägt dotterbolag till Borealis Sverige AB, som är ett helägt dotterbolag till koncernens moderbolag Borealis AG, med säte i Wien, Österrike. Moderbolaget ägs av det österrikiska olje- och gasbolaget OMV till 75%. De resterande 25% ägs av Abu Dhabi National Oil Company (ADNOC), baserat i Förenade Arabemiraten (UAE).

Borealiskoncernen är en ledande leverantör av innovativa lösningar för polyolefiner, baskemikalier och konstgödsel med totalt 6900 anställda. Huvudkontoret ligger i Wien och koncernen har, förutom i Sverige, produktionsanläggningar och verksamhet i ett flertal europeiska länder, Förenade Arabemiraten, Brasilien och USA.

Borealis AB i Stenungsund producerar olefiner (eten och propen) vid sin krackeranläggning och polyetenråvara vid sin polyolefin-anläggning. Sedan 2009 bedriver Borealis AB större delen av sin verksamhet som uppdragproduktion (toll manufacturing) för huvudmannen Borealis AG. Detta innebär en begränsad risk då ersättning erhålls för täckande av produktionskostnaderna.

Väsentliga händelser under räkenskapsåret

Marknaden för företagets produkter har varit balanserad under 2022. Första halvan av året på präglades av en återgång från COVID-pandemin till normala omständigheter med minskande restriktioner och ökande tillgång till marknaden. Detta hade initialt en positiv effekt på försäljning och produktion.

I februari 2022 inledde Ryssland en invasion av Ukraina vilket påverkarade företaget och dess omvärld. Råvaru- och energipriser steg kraftigt under året. Borealis har ersatt leveranser från Ryssland med annan råvara och försäljning till Ryssland har tills vidare upphört.

Under senare delen av 2022 har marknaden påverkats negativt av en allmänt sämre ekonomisk utveckling. Stigande inflation, höga och fluktuerande energipriser tillsammans med högre räntor påverkar konjunkturen negativt. Företaget anpassar sig löpande till rådande marknadsläge genom produktionsbegränsningar, breddning av produktionsportföljen och fokus på kvalitet.

Borealis krackeranläggning i Stenungsund genomförde under året ett större, planerat underhållsstopp under tre månader. Detta genomförs normalt med 3-6 års mellanrum. Kostnader direkt relaterade till periodbundet underhåll aktiveras och skrivs av under tiden fram till nästa stopp. Under 2022 redovisades 457 MSEK som investering i periodbundet underhåll.

Totalt uppgick investeringar i företagets anläggningar till 1 168 MSEK (722 MSEK). Främst beror ökningen jämfört med föregående år på det genomförda underhållsstoppet. Ett stort antal investeringsprojekt genomfördes under produktionsstoppet.
Bolaget fortsätter med sitt enskilt största investeringsprojekt gällande renovering och ombyggnad av fyra krackerugnar till högsta tillgängliga standard vad gäller processäkerhet och energieffektivitet. Genom ombyggnaden säkerställs tillförlitlighet och driftsäkerhet samtidigt som komplexitet och underhållsbehov av anläggningen minskar. En större investering har även gjorts i företagets vattenreningsanläggning.

Resultat och ställning

Från 2010 genomförs all försäljning av polyolefine och olefiner på uppdrag av moderbolaget Borealis AG. Borealis AB ersätts för fasta produktions- kostnader, inklusive finansieringskostnader av Borealis AG genom ett sk. "Toll-manufacturing"-avtal. För 2022 uppgick denna ersättning till 3 054 mkr (2 858 mkr). Borealis AB uppbär också koncerninterna ersättningar för tjänster inom forskning- och utveckling, försäljningsstöd och administrativa tjänster. Dessa ersättningar redovisas under övriga rörelseintäkter.

Rörliga produktionskostnader som råvaror, energi, utsläppsrätter och logistiktjänster hanteras också av Borealis AG. De rörliga kostnader som betalas av bolaget vidarefaktureras till moderbolaget utan marginal. Från 2020 redovisas ersättningar för rörliga produktionskostnader som en del av nettoomsättningen. Under 2022 uppgick dess intäkter till 400 mkr (369 mkr).

Resultatet efter finansiella poster uppgick till 180 mkr (208 mkr) och bolagets soliditet var 49% (52%).

Fasta kostnader ökar under året drivet av inflationseffekter, underhållsaktiviteter, koncerngemensamma kostnader och högre personalkostnader. Personalkostnader har påverkats av fler anställda, resultatberoende ersättningar och ökande lönebikostnader.
Företaget pensionsskuld ökade under året med 143 MSEK, främst beroende på förändringar i diskonteringsräntan som används av PRI vid beräkning av den aktuella skulden. Denna effekt med tillägg för löneskatter har påverkat årets pensionskostnad.

Som en effekt av hög investeringsnivå ökar avskrivningar till 775 MSEK (725 MSEK).
Under 2021 infördes ett investeringsstöd i form av en skattelättnad för att mildra effekterna av COVID 19-pandemin. Borealis redovisade en uppskjuten skattefordran på 25,5 mkr bokslutet 2021 till följd av detta. Bolagets bedömning är att stödet kan användas till att reducera skattekostnaden på resultatet för 2022.

Bolaget har under året beslutat om en utdelning på 300 mkr. Eget kapital uppgår efter detta till 335 mkr (513 mkr).

20230925042115

Borealis AB
556078-6633

Verksamhet inom forskning och utveckling

Borealis AB har ett marknads- och utvecklingscenter i Stenungsund (Innovation center). Anläggningen omfattar bland annat ett avancerat högspänningslab, HVTC (High Voltage Test Center).

Innovation center fokuserar främst på produkter och kunder inom segmentet för energiöverföring. Borealis är innovationsledande inom området för överföring av energi över långa avstånd med minimal energiförlust. Stor vikt läggs på utveckling av material utan negativ påverkan på miljö- och hälsa med bibehållen hög prestanda.

Ett hundratal anställda är involverade i forsknings- och marknadsutveckling, teknisk service och produkt- och processutveckling. Arbetet sker på uppdrag av bolagets huvudman, Borealis AG, i tätt sammarbete med övriga forskningsenheter inom Borealisgruppen, universitet, forskningsinstitut och kunder.

Miljö och säkerhetsinformation
Borealis kracker- och polyetenanläggningar bedriver tillståndspliktiga verksamheter och miljötillståndens villkor omfattar bland annat utsläpp till luft och vatten, buller och avfallshantering.

Verksamheten omfattas även av industriutsläppsförordningen och slutsatser om bästa tillgängliga teknik (BAT) gällande "Rening hantering av avloppsvatten och avgaser inom den kemiska sektorn". Krackeranläggningen berörs dessutom av BAT i referensdokumenten "Stora förbränningsanläggningar"(LCP) och " Produktion av organiska högvolymkemikalier" (LVOC).

Under 2022 har utsläppen till vatten, luft och buller varit inom villkorsgränserna för bolagets två anläggningar, även BAT-slutsatsernas gränsvärden (BAT-AEL) uppfylls. Borealis har dock haft dispens gällande BAT-AEL för dygns- och årsmedelhalt av NOx från C-pannan, vilket också legat högt under året innan brännarna bytes ut i hösten 2022. Därefter är NOx-halterna låga och väl inom gränsvärdet i LCP BREF.

Bolaget har lämnat ett antal handlingsplaner till tillsynsmyndigheten för ytterligare förbättringar gällande verksamhetens miljöpåverken. Mark- och miljödomstolen beviljades villkorsändring gällande avskiljningsgrad >90% för en cyklon under 2022, eftersom det mättekniskt varit svårt att fastställa.

Fackelsystemet används för uppstart och nedtagning av anläggningen, både vid planerade start och stopp, men också vid driftstörningar. Vid produktionsstörningar är fackling en säkerhetsåtgärd som vidtas. Anledningen till bullret vid fackling är att ånga tillsätts i fackeltoppen för att öka förbränningen och säkerställa att facklingen inte sotar. Under 2022 har fackling förekommit i anslutning till nedtagningen av krackern i april, samt vid uppstarten i juni efter underhållsstoppet samt vid några mindre driftstörningar.

Borealis genomför fortlöpande studier och åtgärder för att minska miljöpåverkan från anläggningarna både när det gäller utsläpp till luft och vatten, minimera spridningen av pellets och mikroplast samt buller. Exempel på projekt som pågått under 2022 är renoveringen av B-ugnen och byggnationen av en ny processvattenreningsanläggning på krackern, samt uppgraderingen av tankinvallningen på polyeten både gällande säkerhet och miljö.

Bolaget följer löpande upp inträffade och potentiella processäkerhetshändelser. Målsättning är att inga allvarliga händelser skall inträffa.

Under 2022 registrerades tre processäkerhetshändelser som klassificerades som allvarliga. En av dessa var en potentiell händelser.

Under året inträffade 7 (6) personskador (TRI). Detta ger en frekvens på 2,1 (2,3) skador per miljoner arbetstimmar.
Borealis långsiktiga målsättning är att detta nyckeltal inte skall överstiga 1,3.

Sjukfrånvaron var under året 4,4% (3,5%). Sjukfrånvaron påverkades fortsatt av COVID-19 pandemin, främst under det första kvartalet.

Hållbarhetsredovisning
Borealis AB hänvisar till Borealiskoncernens årsredovisning "Borealis Annual Report 2022", vilken inkluderar en redovisning av verksamhetens hållbarhetsinformation. Rapporten finns tillgänglig på Borealis hemsida; www.borealisgroup.com.

Borealis AB
556078-6633

Förväntningar avseende den framtida utvecklingen samt risker och osäkerhetsfaktorer

Det främsta övergripande målet kommunicerat från Borealisgruppens ledning är att fortsätta fokusera på säkerhet, hållbarhet och miljöpåverkan.
Den globala ekonomiska utvecklingen innebär en utmaning för Borealis. Inflation, volatila energipriser och stigande markandsräntor bedöms ha en negativ inverkan på efterfrågan och marginaler.

Rysslands invasion av Ukraina fortgår. Ledningen för Borealiskoncernen fortsätter att utvärdera situationen för att vidta nödvändiga åtgärder, i enlighet med all gällande lagstiftning och i förekommande fall de sanktioner som införts av USA, UK och EU.

Flerårsöversikt	**2022**	**2021**	**2020**	**2019**	**2018**
Nettoomsättning (tkr)	3 454 445	3 227 235	3 003 087	2 596 014	3 015 239
Resultat efter finansiella poster (tkr)	180 008	207 551	177 546	209 721	768 539
Rörelsemarginal (%)	5,4%	6,4%	5,8%	7,5%	25,5%
Avkastning på eget kapital (%)	4,0%	4,7%	4,2%	5,1%	20,7%
Balansomslutning (tkr)	8 984 027	8 849 139	8 259 546	8 196 882	8 071 892
Soliditet (%)	49,1%	51,6%	52,5%	51,2%	49,6%
Antal anställda	932	888	914	930	923

Nettoomsättningen från 2021 påverkades av en förändring av redovisning av fakturering av rörliga tillverkningskostnader till andra bolag inom Borealisgruppen. Totalt uppgick detta till 400 (389 mkr). Under 2021 inkluderar nettoomsättningen ersättningar från koncernens försäkringsbolag med 121 mkr (2020: 425 mkr).
Flertalet av de ovan redovisade nyckeltalen för 2018 har påverkats av en korrigering av tidigare års Toll manufacturing ersättning och licensintäkter.

Förslag till resultatdisposition

Styrelsen föreslår att till förfogande stående medel (kronor)

Balanserat resultat	97 771 304
Årets resultat	122 718 238
	220 489 542
disponeras så att	
utdelas till aktieägarna	
i ny räkning överföres	220 489 542

Vad beträffar företagets resultat och ställning i övrigt hänvisas till efterföljande resultat- och balansräkning med tillhörande bokslutskommentarer.

20230925042217

Borealis AB
556078-6633

Resultaträkning

	Not	2022-01-01 -2022-12-31	2021-01-01 -2021-12-31
Nettoomsättning	1	3 454 445	3 227 235
Kostnad för sålda varor och tjänster	4,5,6,7	-3 311 468	-3 091 747
Bruttoresultat		**142 977**	**135 488**
Administrationskostnader	2,7	-145 147	-118 965
Forsknings- och utvecklingskostnader	7	-116 768	-117 230
Övriga rörelseintäkter	3	389 945	309 272
Övriga rörelsekostnader		-84 709	-3 607
Rörelseresultat		**186 299**	**204 958**
Resultat från finansiella poster			
Ränteintäkter och liknande resultatposter	8	17 030	20 932
Räntekostnader och liknande resultatposter	9	-23 321	-18 338
		-6 291	**2 594**
Resultat efter finansiella poster		**180 008**	**207 551**
Bokslutsdispositioner	10	-25 496	41 858
Resultat före skatt		**154 512**	**249 410**
Skatt på årets resultat	11	-31 793	-26 332
Årets resultat		**122 718**	**223 078**

20230925042218

Balansräkning

	Not	2022-12-31	2021-12-31
TILLGÅNGAR			
Anläggningstillgångar			
Immateriella anläggningstillgångar			
Licenser och liknande rättigheter	12	33 128	43 724
		33 128	**43 724**
Materiella anläggningstillgångar			
Byggnader och mark	13	855 770	952 376
Maskiner och andra tekniska anläggningar	14	5 622 848	5 769 660
Inventarier, verktyg och installationer	15	4 335	7 640
Pågående nyanläggningar	16	818 172	573 876
Periodbundet underhåll	17	418 391	18 217
		7 719 516	**7 321 770**
Finansiella anläggningstillgångar			
Andelar i koncernföretag	18,19	20 955	20 955
Andelar i intresseföretag	20	87 628	83 364
Uppskjuten skattefordran	21	0	25 762
Andra långfristiga fordringar	20	20	20
		108 603	**130 101**
Summa anläggningstillgångar		**7 861 247**	**7 495 595**
Omsättningstillgångar			
Varulager m.m.			
Råvaror och förnödenheter		66 236	66 233
		66 236	**66 233**
Kortfristiga fordringar			
Kundfordringar		15 667	36 869
Fordringar hos koncernföretag		846 763	795 302
Aktuell skattefordran		1 119	0
Övriga fordringar	22	132 796	438 004
Förutbetalda kostnader och upplupna intäkter	23	60 199	17 136
		1 056 545	**1 287 311**
Kassa och bank		0	0
Summa omsättningstillgångar		**1 122 781**	**1 353 544**
SUMMA TILLGÅNGAR		**8 984 027**	**8 849 139**

20230923043219

Balansräkning

	Not	2022-12-31	2021-12-31
EGET KAPITAL OCH SKULDER			
Eget kapital			
Bundet eget kapital			
Aktiekapital		65 000	65 000
Reservfond		50 000	50 000
		115 000	**115 000**
Fritt eget kapital			
Balanserat resultat		97 771	174 693
Årets resultat		122 718	223 078
		220 489	**397 771**
Summa eget kapital		**335 489**	**512 771**
Obeskattade reserver	24	**5 129 129**	**5 103 671**
Avsättningar	25		
Avsättningar för pensioner och liknande förpliktelser		866 789	724 228
Uppskjuten skatteskuld	21	11 173	11 173
		877 961	**735 401**
Långfristiga skulder	26		
Övriga skulder		17 094	19 629
		17 094	**19 629**
Kortfristiga skulder			
Leverantörsskulder		302 734	191 783
Skulder till koncernföretag		1 369 705	1 318 651
Aktuella skatteskulder		0	41 679
Övriga skulder	27	492 527	533 671
Upplupna kostnader och förutbetalda intäkter	28	459 389	391 883
		2 624 354	**2 477 667**
SUMMA EGET KAPITAL OCH SKULDER		**8 984 027**	**8 849 139**

20230925042220

Kassaflödesanalys

	2022-01-01 -2022-12-31	2021-01-01 -2021-12-31
Den löpande verksamheten		
Resultat efter finansiella poster	180 008	207 551
Justeringar för poster som inte ingår i kassaflödet m.m.		
Avskrivningar och nedskrivningar	775 042	724 653
Förlust vid utrangering av inventarier	5 945	1 498
Ej erhållen ränta och utdelning, resultat från aktier och andelar	-4 264	-4 288
Ej erlagd ränta	0	0
Avsättning till pensioner	142 561	21 536
Övriga avsättningar	-7 929	-2 232
	1 091 363	**948 718**
Betald inkomstskatt	-48 829	-42 363
Kassaflöde från den löpande verksamheten före förändringar av rörelsekapital	**1 042 534**	**906 355**
Förändringar i rörelsekapital		
Förändring av varulager	-3	-3 292
Förändring av rörelsefordringar	231 885	-559 889
Förändring av rörelseskulder	-106 277	379 339
Kassaflöde från den löpande verksamheten	**1 168 139**	**722 513**
Investeringsverksamheten		
Förvärv av materiella anläggningstillgångar	-1 168 139	-722 513
Kassaflöde från investeringsverksamheten	**-1 168 139**	**-722 513**
Finansieringsverksamheten		
Amortering av lån	0	0
Kassaflöde från finansieringsverksamheten	**0**	**0**
Årets kassaflöde	**0**	**0**
Likvida medel vid årets början	**0**	**0**
Likvida medel vid årets slut	**0**	**0**

Rapport över förändringar i eget kapital

	Bundet eget kapital		*Fritt eget kapital*		**Totalt**
	Aktie-kapital	Reservfond	Balanserat resultat	Årets resultat	**Eget kapital**
Ingående balans 2021-01-01	65 000	50 000	32 307	142 387	289 694
Omföring resultat föregående år			142 387	-142 387	0
Årets resultat			0	223 078	223 078
Utgående balans 2021-12-31	**65 000**	**50 000**	**174 694**	**223 078**	**512 772**
Utdelning			-300 000		-300 000
Omföring resultat föregående år			223 078	-223 078	0
Årets resultat			0	122 718	122 718
Utgående balans 2021-12-31	**65 000**	**50 000**	**97 772**	**122 718**	**335 490**

Antal aktier uppgår till 650 000 med ett kvotvärde på 100 kr/styck.

20230925042221

Tilläggsupplysningar

Redovisningsprinciper m.m.

Allmänna redovisningsprinciper
Årsredovisningen har upprättats enligt Årsredovisningslagen (1995:1554) och BFNAR 2012:1 Årsredovisning och koncernredovisning (K3). Redovisningsprinciperna är oförändrade mot föregående år.

Koncernredovisning
Företaget är ett moderföretag men upprättar ingen koncernredovisning med hänvisning till undantagsregeln i årsredovisningslagen 7 kap. 2 §. Koncernredovisning upprättas av Borealis AG med säte i Wein, Österrike. Denna finns tillgänglig på www.borealisgroup.com.

Bolaget redovisar andelar i intresseföretag enligt anskaffningsvärdemetoden. Värdet justeras vid förändringar i intresseföretagets eget kapital.

Intäktsredovisning
Försäljning av varor
Intäkten redovisas till verkligt värde av vad företaget fått eller kommer att få. Det innebär att företaget redovisar intäkten till nominellt värde (fakturabelopp) om företaget får ersättning i likvida medel direkt vid leveransen. Avdrag görs för lämnade rabatter.

Vid försäljning av varor redovisas normalt inkomsten som intäkt när de väsentliga förmåner och risker som är förknippade med ägandet av varan har överförts från företaget till köparen.

Intäkter för licenser i enlighet med toll manufacturing avtalet anses vara en del av företagets huvudsakliga verksamhet och är därmed inkluderade i nettoomsättningen.

Leasingavtal
Företaget som leasetagare
Företaget redovisar samtliga leasingavtal, såväl finansiella som operationella, som operationella leasingavtal. Operationella leasingavtal redovisas som en kostnad linjärt över leasingperioden.
Se vidare not 4.

Ersättningar till anställda
Ersättningar till anställda avser alla typer av ersättningar som företaget lämnar till de anställda. Företagets ersättningar innefattar bland annat löner, betald semester, betald frånvaro, bonus och ersättningar efter avslutad anställning (pensioner). Redovisning sker i takt med intjänandet. Ersättningar till anställda efter avslutad anställning avser avgiftsbestämda eller förmånsbestämda pensionsplaner. Som avgiftsbestämda planer klassificeras planer där fastställda avgifter betalas och det inte finns förpliktelser, vare sig legala eller informella, att betala något ytterligare, utöver dessa avgifter. Övriga planer klassificeras som förmånsbestämda pensionsplaner. Företaget har inga övriga långfristiga ersättningar till anställda.

I företaget finns såväl avgiftsbestämda som förmånsbestämda pensionsplaner. Utgifter för avgiftsbestämda planer redovisas som en kostnad under den period de anställda utför de tjänster som ligger till grund för förpliktelsen. Företagets övriga planer klassificeras som förmånsbestämda och beräknas enligt Tryggandelagen och redovisas i enlighet med förenklingsreglerna i BFNAR 2012:1. Från 2018 redovisas ränteuppräkning av pensionskulden som en del av personalkostnader. Tidigare redovisades detta som en del av företagets finanskostnader.

Företaget har förmånsbestämda pensionsplaner som finansieras via Alecta, vilka redovisas som avgiftsbestämda planer då det inte finns tillräcklig information för att redovisa planen som förmånsbestämd.

Omräkning av poster i utländsk valuta
Fordringar och skulder i utländsk valuta har värderats till balansdagens kurs. Kursvinster och kursförluster på rörelsefordringar och rörelseskulder redovisas i rörelseresultatet medan kursvinster och kursförluster på finansiella fordringar och skulder redovisas som finansiella poster.

Koncernbidrag
Erhållna och lämnade koncernbidrag redovisas som bokslutsdisposition.

Skatt
Total skatt utgörs av aktuell skatt och uppskjuten skatt. Skatter redovisas i resultaträkningen, utom då underliggande transaktion redovisas direkt mot eget kapital varvid tillhörande skatteeffekt redovisas i eget kapital.

20230925042222

Aktuell skatt
Aktuell skatt avser inkomstskatt för innevarande räkenskapsår samt den del av tidigare räkenskapsårs inkomstskatt som ännu inte redovisats. Aktuell skatt beräknas utifrån per den skattesats som gäller per balansdagen.

Uppskjuten skatt
Uppskjuten skatt är inkomstskatt som avser framtida räkenskapsår till följd av tidigare händelser. Redovisning sker enligt balansräkningsmetoden. Enligt denna redovisas uppskjutna skatteskulder och uppskjutna skattefordringar på temporära skillnader som uppstår mellan bokförda respektive skattemässiga värden för tillgångar och skulder samt för övriga skattemässiga avdrag eller underskott.
Uppskjutna skattefordringar nettoredovisas mot uppskjutna skatteskulder endast om de kan betalas med ett nettobelopp. Uppskjuten skatt beräknas utifrån gällande skattesats på balansdagen. Effekter av förändringar i gällande skattesatser resultatförs i den period förändringen lagstadgats. Uppskjutna skattefordringar reduceras till den del det inte är sannolikt att den underliggande skattefordran kommer att kunna realiseras inom en överskådlig framtid. Uppskjuten skattefordran redovisas som finansiell anläggningstillgång och uppskjuten skatteskuld som avsättning.

Anläggningstillgångar
Materiella och immateriella anläggningstillgångar redovisas till anskaffningsvärde minskat med ackumulerade avskrivningar och eventuella nedskrivningar.
När det finns en indikation på att en tillgångs värde minskat, görs en prövning av nedskrivningsbehov. Har tillgången ett återvinningsvärde som är lägre än det redovisade värdet, skrivs den ner till återvinningsvärdet. Vid bedömning av nedskrivningsbehov grupperas tillgångarna på det lägsta nivåer där det finns separata identifierbara kassaflöden (kassagenererande enheter). För tillgångar, andra än goodwill, som tidigare skrivits ner görs per varje balansdag en prövning av om återföring bör göras.

Immateriella anläggningstillgångar utgörs i huvudsak av licenser vars avskrivningstid baseras på avtalsenliga rättigheter.

Materiella anläggningstillgångar har delats upp på betydande komponenter när komponenterna har väsentligt olika nyttjandeperioder.

Avskrivningsbart belopp utgörs av anskaffningsvärdet minskat med ett beräknat restvärde om detta är väsentligt. Avskrivning sker linjärt över den förväntade nyttjandeperioden.

Följande avskrivningstider tillämpas:

Immateriella anläggningstillgångar	
Licenser	3 - 10 år
Materiella anläggningstillgångar	
Byggnader och Markanläggningar	
Fabriksbyggnader	20 år
Kontorsbyggnader	40 år
Markanläggningar	20 år
Maskiner och andra tekniska anläggningar	
Maskiner och andra tekniska anläggningar	6-20 år
Periodbundet underhåll	5-6 år
Inventarier, verktyg och installationer	3-10 år

Internt upparbetade immateriella anläggningstillgångar
Företaget tillämpar den s.k. "aktiveringsmodellen" avseende internt upparbetade immateriella anläggningstillgångar. Metoden innebär att samtliga utgifter som uppfyller kriterierna i BFNAR 2012:1 aktiveras som immateriell anläggningstillgång och skrivs av under tillgångens beräknade nyttjandeperiod.

Finansiella instrument
Finansiella instrument värderas utifrån anskaffningsvärdet. Vid varje balansdag bedömer bolaget om det finns någon indikation på nedskrivningsbehov i någon utav de finansiella anläggningstillgångarna. Nedskrivning sker om värdenedgången bedöms vara bestående. Nedskrivningsbehovet prövas individuellt för aktier och andelar och övriga enskilda finansiella anläggningstillgångar som är väsentliga.

Varulager
Varulagret har värderats till det lägsta av dess anskaffningsvärde och dess nettoförsäljningsvärde på balansdagen. Med nettoförsäljningsvärdet avses varornas beräknade försäljningspris minskat med försäljningskostnader. Den valda värderingsmetoden innebär att eventuell inkurans i varulagret har beaktats.

Borealis AB
556078-6633

Fordringar, skulder och avsättningar
Om inget annat anges ovan värderas kortfristiga fordringar till det lägsta av dess anskaffningsvärde och det belopp varmed de beräknas bli reglerade. Långfristiga fordringar och långfristiga skulder värderas efter det första värderingstillfället till upplupet anskaffningsvärde. Övriga skulder och avsättningar värderas till de belopp varmed de beräknas bli reglerade. Övriga tillgångar redovisas till anskaffningsvärde om inget annat anges ovan.

Kassaflödesanalys
Kassaflödesanalysen upprättas enligt indirekt metod. Det redovisade kassaflödet omfattar endast transaktioner som medfört in - och utbetalningar.

Uppskattningar och bedömningar
Borealis AB gör uppskattningar och bedömningar om framtiden. De uppskattningar för redovisningsändamål som blir följden av dessa kommer, definitionsmässigt, inte alltid att motsvara det verkliga resultatet. De uppskattningar och antaganden som innebär en betydande risk för väsentliga justeringar i redovisade värden för tillgångar och skulder under nästkommande år behandlas i huvuddrag nedan.

Intäkter: Borealis AB tillhandahåller tjänster inom produktion, marknadsföring, forskning och utveckling och andra administrativa tjänster på uppdrag av sin huvudman, Borealis AG. Borealis AB erhåller en ersättning för detta baserad på verklig kostnad med en marknadsmässig marginal. Risken för Borealis AB är därför låg och bolagets huvudintäkter kan beräknas relativt väl med utgångspunkt från konstaterade och bedömda, upplupna kostnader. Under 2020-2021 har Borealis AB lagt ner betydande kostnader för reparationer och nya investeringar till följd av en fabriksbrand. Bolaget har redovisat försäkringsintäkter som en del av nettoomsättningen under dessa år. Under 2021 uppgick försäkringsintäkter till 120 mkr. Vid räkenskapsårets ingång fanns en fordran på 345 mkr upptagen i bolagets balansräkning vilket har reglerats under 2022.

Utgifter: I samband med årsbokslut görs bedömningar av upplupna kostnader. Dessa bedömningar baseras på levererade varor och tjänster och värderas enligt gällande avtal.

Aktier och andelar: Värdet av aktier och andelar i dotterbolag och intressebolag redovisas till värdet av Borealis andel av eget kapital.

Pensionsskulder: Borealis AB gör avsättningar i balansräkningen för åtagande enligt ITP2. Denna pensionsskuld beräknas enligt grunder fastställda av Pensionsregistreringsinstitutet (PRI). Bedömningar görs bl a av diskonteringsränta, livslängd och framtida omkostnader. Under 2022 sänkte PRI sin diskonteringsränta vilket har ökat bolagets pensionsskuld. Den totala ökningen uppgick till 143 mkr och har påverkat årets pensionskostnader.

Inkurans i varulager: Som produktionsenhet lagerför bolaget främst förnödenheter och reservdelar för löpande behov. Det finns viss risk att lager måste kasseras på grund av skador eller ändrade behov. I bokslutet görs nedskrivning för inkurans baserat på generella antaganden om 3% bortfall. Årets resultat har belastats med 3 kkr (102 kkr) för inkuransnedskrivningar.

20230925042224

Noter

Not 1 Nettoomsättningens fördelning

	2022	2021
Ersättning enligt Toll Manufacturingavtal	3 054 305	2 737 093
Försäkringsersättningar relaterade till återställning av anläggning 2020-2021	0	120 691
Ersättning för rörliga tillverkningskostnader	400 140	369 451
	3 454 445	**3 227 235**

Bolagets huvudersättning hänför sig till ersättning för legoproduktionstjänster, toll manufacturing, för huvudmannen Borealis AG. Försäkringsintäkter redovisas baserat på de reparationskostnader och nödvändiga investeringar för att återställa krackeranläggningen som förväntas ersättas. Från 2020 redovisas rörliga produktionskostnader, främst energi, som vidarefaktureras till huvudmannen Borealis AG som en intäkt.

Nettoomsättningen avser Europa som geografisk marknad

Not 2 Arvode till revisorer

	2022	2021
PricewaterhouseCoopers AB		
Revisionsuppdraget	799	733
Övriga tjänster	0	37
	799	**770**

Not 3 Övriga rörelseintäkter

	2022	2021
Försäljning av tjänster	27 018	20 958
Försäljning av tjänster, koncernföretag	249 103	234 366
Kommissioner	4	1 237
Kursvinster/förluster på fordringar / skulder av rörelsekaraktär	68 309	32
Resultatandel i intressebolag	4 264	4 237
Övrigt	41 248	48 443
	389 945	**309 272**

Not 4 Leasingavtal - leasetagare

Operationell leasing

	2022	2021
Kostnadsförda leasingavgifter avseende operationella leasingavtal	20 588	19 602
Framtida minimileaseavgifter avseende ej uppsägningsbara operationella leasingavtal		
Ska betalas inom 1 år	11 816	18 153
Ska betalas inom 1-5 år	9 246	19 742
Ska betalas senare än 5 år	0	70
	21 062	**37 965**

20230925042225

Not 5 Anställda och personalkostnader

Medelantalet anställda

	2022 Antal anställda	2022 Varav män	2021 Antal anställda	2021 Varav män
Sverige	932	76%	888	76%

	2022	2021
Löner och andra ersättningar		
Styrelse och verkställande direktör	3 058	6 383
Övriga anställda	688 973	635 003
	692 031	**641 386**

Något tantiem till styrelse och verkställande direktör utgår ej.

Pensions- och övriga sociala kostnader		
Pensionskostnader för styrelse och verkställande direktör	604	614
Pensionskostnader för övriga anställda	243 530	114 057
Övriga sociala kostnader enligt lag och avtal	250 649	215 870
	494 783	**330 541**

	2022-12-31	2021-12-31
Inga utestående pensionsförpliktelser till styrelse och verkställande direktör finns		
Könsfördelning bland ledande befattningshavare		
Andel kvinnor i styrelsen	13%	13%
Andel män i styrelsen	87%	87%
Andel kvinnor bland övriga ledande befattningshavare	56%	44%
Andel män bland övriga ledande befattningshavare	44%	56%

Not 6 Inköp och försäljning mellan koncernföretag

	2022	2021
Andel av årets totala inköp som skett från andra företag inom koncernen	16%	15%
Andel av årets totala försäljning som skett till andra företag inom koncernen	100%	100%

Not 7 Av- och nedskrivningarnas fördelning per funktion

	2022	2021
Kostnad sålda varor och tjänster	-771 798	-721 027
FoU- och administrationskostnader	-3 244	-3 625
	-775 042	**-724 653**

Not 8 Ränteintäkter och liknande resultatposter

	2022	2021
Utdelning på andelar i dotterföretag	4 481	3 367
Ränteintäkter från koncernföretag	1 037	309
Övriga ränteintäkter	8	0
Ersättning enl. Toll Manufactoring avtal	11 504	17 255
	17 030	**20 932**

20230925042226

Not 9 Räntekostnader och liknande resultatposter

	2022	2021
Räntekostnader till koncernföretag	-22 642	-17 742
Övriga räntekostnader	-679	-596
	-23 321	**-18 338**

Not 10 Bokslutsdispositioner

	2022	2021
Lämnat koncernbidrag	-38	-9
Skillnad mellan bokförd avskrivning och avskrivning enligt plan	-25 458	41 868
	-25 496	**41 858**

Not 11 Skatt på årets resultat

	2022	2021
Aktuell skatt	-6 190	-52 094
Skatt hänförlig till tidigare års redovisade resultat	159	0
Uppskjuten skatt	-25 762	25 762
Summa redovisad skattekostnad	**-31 793**	**-26 332**

Avstämning av effektiv skattesats

Redovisat resultat före skatt	**154 512**	**249 410**
Skatt på redovisat resultat enligt gällande skattesats (20,6%):	-31 829	-51 378
Skatteeffekt av ej avdragsgill upp- och nedskrivning	0	0
Skatteeffekt av övriga ej avdragsgilla kostnader	-885	-1 389
Skatteeffekt av ej skattepliktiga intäkter	1 787	1 561
Skatt hänförlig till tidigare års redovisade resultat	159	0
Skatt på resultatandel i dotterbolag	-1 025	-887
Uppskjuten skatt relaterat till framtida skattereduktion på investeringar 2021	0	25 762
Redovisad skattekostnad	**-31 793**	**-26 332**
Effektiv skattesats	20,6%	10,6%

Not 12 Licenser samt liknande rättigheter

	2022-12-31	2021-12-31
Ingående anskaffningsvärden	515 592	515 592
Årets anskaffningar	0	0
Utgående ackumulerade anskaffningsvärden	**515 592**	**515 592**
Ingående avskrivningar	-471 868	-461 271
Årets avskrivningar	-10 596	-10 597
Utgående ackumulerade avskrivningar	**-482 464**	**-471 868**
Utgående redovisat värde	**33 128**	**43 724**

20230925042227

Not 13 Byggnader och mark

	2022-12-31	2021-12-31
Ingående anskaffningsvärden	2 560 728	2 488 043
Årets anskaffningar	3 870	73 758
Försäljningar/utrangeringar	-23 178	-1 073
Utgående ackumulerade anskaffningsvärden	**2 541 420**	**2 560 728**
Ingående avskrivningar	-1 608 352	-1 527 042
Försäljningar/utrangeringar	5 074	819
Årets avskrivningar	-82 373	-82 129
Utgående ackumulerade avskrivningar	**-1 685 650**	**-1 608 352**
Utgående redovisat värde	**855 770**	**952 376**

Not 14 Maskiner och andra tekniska anläggningar

	2022-12-31	2021-12-31
Ingående anskaffningsvärden	16 006 802	15 104 346
Årets anskaffningar	461 373	986 116
Försäljningar/utrangeringar	-94 988	-83 659
Utgående ackumulerade anskaffningsvärden	**16 373 188**	**16 006 802**
Ingående avskrivningar	-10 237 142	-9 736 545
Försäljningar/utrangeringar	107 906	82 618
Årets avskrivningar	-621 104	-583 215
Utgående ackumulerade avskrivningar	**-10 750 340**	**-10 237 142**
Utgående redovisat värde	**5 622 848**	**5 769 660**

Not 15 Inventarier, verktyg och installationer

	2022-12-31	2021-12-31
Ingående anskaffningsvärden	101 957	139 426
Årets anskaffningar	1 306	4 443
Försäljningar/utrangeringar	0	-41 912
Utgående ackumulerade anskaffningsvärden	**103 263**	**101 957**
Ingående avskrivningar	-94 316	-128 386
Försäljningar/utrangeringar	0	41 710
Årets avskrivningar	-4 611	-7 640
Utgående ackumulerade avskrivningar	**-98 928**	**-94 316**
Utgående redovisat värde	**4 335**	**7 640**

Not 16 Pågående nyanläggningar

	2022-12-31	2021-12-31
Vid årets början	573 876	915 680
Årets anskaffningar	1 168 139	722 513
Överfört till anläggningstillgångar	-923 843	-1 064 316
Vid årets slut	**818 172**	**573 876**

20230925042228

Not 17 Periodbundet underhåll

	2022-12-31	2021-12-31
Ingående anskaffningsvärden	353 928	353 928
Årets anskaffningar	457 294	0
Försäljningar/utrangeringar	-304 369	0
Utgående ackumulerade anskaffningsvärden	**506 853**	**353 928**
Ingående avskrivningar	-335 711	-294 640
Försäljningar/utrangeringar	303 607	0
Årets avskrivningar	-56 358	-41 071
Utgående ackumulerade avskrivningar	**-88 462**	**-335 711**
Utgående redovisat värde	**418 391**	**18 217**

Not 18 Andelar i koncernföretag

	2022-12-31	2021-12-31
Ingående anskaffningsvärden	20 955	20 955
Årets omvärdring av aktier och andelar	0	0
Utgående redovisat värde	**20 955**	**20 955**

Not 19 Specifikation av andelar i koncernföretag

Namn	Kapital-andel	Rösträtts-andel	Antal andelar	Bokfört värde
Etenförsörjning i Stenungsund AB *556258-6536 Stenungsund*	80%	80%	40 000	4 000
Borealis Group Services AS, *991 488 677 Bamble, Norge*	100%	100%	1 000	8 150
Fastighets KB Stenungsund-Munkeröd 1:72 (Komplementär) 969667-1107 Stenungsund	100%	100%	0	8 805
				20 955

Dotterbolagen har ej konsoliderats med moderbolaget utan konsolideringen har gjorts i Borealis AG med säte i Wien, Österrike. Borealis konsolideras från oktober 2020 i OMV-gruppen.

Not 20 Andelar i intresseföretag och övriga fordringar

	2022-12-31	2021-12-31
Ingående anskaffningsvärden	83 364	79 076
Årets anskaffningar	0	50
Årets resultatandel	4 264	4 237
Utgående ackumulerade anskaffningsvärden	**87 628**	**83 364**
Utgående redovisat värde	**87 628**	**83 364**

Namn	Antal andelar	Kapital-andel	Rösträtts-andel	Bokfört värde	Intäktsförd utdelning
PetroPort Holding AB *556825-4725 Stenungsund*	25 000	50%	50%	87 578	0
Industrins räddningstjänst i Stenungsund AB *556825-4725 Stenungsund*	12 500	25%	25%	50	0
				87 628	**0**

Övriga långfristiga fordringar	**2022-12-31**	**2021-12-31**
Andel i föreningen Hållbar Kemi i Stenungsund	20	20

20230925042229

Not 21 Uppskjuten skatt

Temporära skillnader föreligger i de fall tillgångars eller skulders redovisade respektive skattemässiga värden är olika. Temporära skillnader avseende följande poster samt underskottsavdrag har resulterat i uppskjutande skattefordringar och -skulder.
Under 2021 infördes ett tillfälligt stöd som innebär möjlighet till skattereduktion kommande år baserat på genomförda investeringar. Borealis bedömer att stöde kommer utnyttjas vid årets beskattning och har därför återfört en tidigare redovisad uppskjuten skattefordran.

Uppskjutna skattefordringar	**2022-12-31**	**2021-12-31**
Framtida skattereduktion baserad på genomförda investeringar	0	25 762
Summa	**0**	**25 762**

Uppskjuten skatteskuld	**2022-12-31**	**2021-12-31**
Övriga skattepliktiga temporära skillnader	11 173	11 173
Summa	**11 173**	**11 173**

Not 22 Övriga fordringar

	2022-12-31	**2021-12-31**
Skattekonto/moms/punktskatt	45 711	28 620
Momsfordran	65 319	46 718
PRI-pensioner	19 526	16 416
Fordran försäkringsersättningar	0	345 047
Övriga fordringar	2 240	1 204
	132 796	**438 004**

Not 23 Förutbetalda kostnader och upplupna intäkter

	2022-12-31	**2021-12-31**
Förutbetalda försäkringspremier	13 650	11 356
Förutbetalda licenskostnader	43 456	0
Övriga förutbetalda kostnader	3 092	5 780
	60 199	**17 136**

20230925042230

Not 24 Obeskattade reserver

	2022-12-31	2021-12-31
Ackumulerade överavskrivningar Byggnader och mark	13 089	17 811
Ackumulerade överavskrivningar Maskiner och inventarier	5 116 040	5 085 861
	5 129 129	**5 103 671**

Not 25 Avsättningar

	2022-12-31	2021-12-31
Pensioner och liknande förpliktelser		
Belopp vid årets ingång	724 228	702 692
Årets avsättningar	142 561	21 536
	866 789	**724 228**
Härav tryggat enligt Tryggandelagen	**863 420**	**719 881**
Övriga avsättningar		
Belopp vid årets ingång	0	61
Under året avsatt/ianspråktagna belopp	0	-61
	0	**0**

Not 26 Långfristiga skulder

	2022-12-31	2021-12-31
Förfaller mellan 2 och 5 år efter balansdagen		
Skulder avseende förskottsbetald hyra	12 000	16 000
Långfristiga personalprogram och övriga skulder	5 094	3 629
	17 094	**19 629**

Not 27 Övriga kortfristiga skulder

	2022-12-31	2021-12-31
Emissionsrättigheter	476 250	516 960
Personalens källskatt	15 960	15 763
Övriga poster	316	948
	492 527	**533 671**

Not 28 Upplupna kostnader och förutbetalda intäkter

	2022-12-31	2021-12-31
Upplupna semesterlöner (inkl. sociala avgifter)	155 288	147 868
Upplupna arbetsgivaravgifter	15 132	14 222
Upplupna personalkostnader	101 031	107 372
Upplupna projekt- och driftkostnader	135 606	97 933
Upplupen fastighetsskatt	0	2 092
Förutbetalda bidrag och projektintäkter	41 349	11 414
Övriga förutbetalda intäkter	10 982	10 982
	459 389	**391 883**

20230925042231

Not 29 Ställda säkerheter

	2022-12-31	2021-12-31
Fastighetsinteckningar - relaterat till hyresavtal Grace	127 000	127 000
Summa ställda säkerheter	**127 000**	**127 000**

Not 30 Eventualförpliktelser

	2022-12-31	2021-12-31
Garantiåtaganden		
PRI Pensionsgaranti	17 268	14 398
Övriga eventualförpliktelser	67	87
	17 336	**14 485**

Not 31 Nyckeltalsdefinitioner

Rörelsemarginal
Rörelseresultat i procent av nettoomsättningen

Justerat eget kapital
Eget kapital med tillägg för obeskattade reserver som reducerats med uppskjuten skatt.

Avkastning på eget kapital
Resultat efter finansiella poster i procent av genomsnittligt justerat eget kapital

Soliditet
Justerat eget kapital i procent av balansomslutning

Not 32 Händelser efter räkenskapsårets utgång

Rysslands invasion av Ukraina fortgår. Ledningen för Borealiskoncernen fortsätter att utvärdera situationen för att vidta nödvändiga åtgärder, i enlighet med all gällande lagstiftning och i förekommande fall de sanktioner som införts av USA, UK och EU.

20230923043232

Borealis AB
556078-6633

Not 33 Förslag till resultatdisposition

Styrelsen föreslår att till förfogande stående medel (kronor)

Balanserat resultat	97 771 304
Årets resultat	122 718 238
	220 489 542
disponeras så att	
utdelas till aktieägarna	
i ny räkning överföres	220 489 542

Stenungsund den 28 mars ~~2022~~ 2023

Anders Fröberg
Ordförande

Marcus Kierkegaard
Verkställande direktör

Wolfram Krenn
Styrelseledamot

Thomas Van De Velde
Styrelseledamot

Patrik Andersson
Arbetstagarrepresentant

Anna Rydh
Arbetstagarrepresentant

Jerker Lindström
Arbetstagarrepresentant

Vår revisionsberättelse har lämnats den 4/6 2023

PricewaterhouseCoopers AB

Helena Pegrén
Auktoriserad Revisor

20230925042333

Revisionsberättelse

Till bolagsstämman i Borealis Aktiebolag, org.nr 556078-6633

Rapport om årsredovisningen

Uttalanden

Vi har utfört en revision av årsredovisningen för Borealis Aktiebolag för år 2022.

Enligt vår uppfattning har årsredovisningen upprättats i enlighet med årsredovisningslagen och ger en i alla väsentliga avseenden rättvisande bild av Borealis Aktiebolags finansiella ställning per den 31 december 2022 och av dess finansiella resultat och kassaflöde för året enligt årsredovisningslagen. Förvaltningsberättelsen är förenlig med årsredovisningens övriga delar.

Vi tillstyrker därför att bolagsstämman fastställer resultaträkningen och balansräkningen för Borealis Aktiebolag.

Grund för uttalanden

Vi har utfört revisionen enligt International Standards on Auditing (ISA) och god revisionssed i Sverige. Vårt ansvar enligt dessa standarder beskrivs närmare i avsnittet Revisorns ansvar. Vi är oberoende i förhållande till Borealis Aktiebolag enligt god revisorssed i Sverige och har i övrigt fullgjort vårt yrkesetiska ansvar enligt dessa krav.

Vi anser att de revisionsbevis vi har inhämtat är tillräckliga och ändamålsenliga som grund för våra uttalanden.

Styrelsens och verkställande direktörens ansvar

Det är styrelsen och verkställande direktören som har ansvaret för att årsredovisningen upprättas och att den ger en rättvisande bild enligt årsredovisningslagen. Styrelsen och verkställande direktören ansvarar även för den interna kontroll som de bedömer är nödvändig för att upprätta en årsredovisning som inte innehåller några väsentliga felaktigheter, vare sig dessa beror på oegentligheter eller misstag.

Vid upprättandet av årsredovisningen ansvarar styrelsen och verkställande direktören för bedömningen av bolagets förmåga att fortsätta verksamheten. De upplyser, när så är tillämpligt, om förhållanden som kan påverka förmågan att fortsätta verksamheten och att använda antagandet om fortsatt drift. Antagandet om fortsatt drift tillämpas dock inte om styrelsen och verkställande direktören avser att likvidera bolaget, upphöra med verksamheten eller inte har något realistiskt alternativ till att göra något av detta.

Revisorns ansvar

Våra mål är att uppnå en rimlig grad av säkerhet om huruvida årsredovisningen som helhet inte innehåller några väsentliga felaktigheter, vare sig dessa beror på oegentligheter eller misstag, och att lämna en revisionsberättelse som innehåller våra uttalanden. Rimlig säkerhet är en hög grad av säkerhet, men är ingen garanti för att en revision som utförs enligt ISA och god revisionssed i Sverige alltid kommer att upptäcka en väsentlig felaktighet om en sådan finns. Felaktigheter kan uppstå på grund av oegentligheter eller misstag och anses vara väsentliga om de enskilt eller tillsammans rimligen kan förväntas påverka de ekonomiska beslut som användare fattar med grund i årsredovisningen.

En ytterligare beskrivning av vårt ansvar för revisionen av årsredovisningen finns på Revisorsinspektionens webbplats: www.revisorsinspektionen.se/revisornsansvar. Denna beskrivning är en del av revisionsberättelsen.

Rapport om andra krav enligt lagar och andra författningar

Uttalanden

Utöver vår revision av årsredovisningen har vi även utfört en revision av styrelsens och verkställande direktörens förvaltning för Borealis Aktiebolag för år 2022 samt av förslaget till dispositioner beträffande bolagets vinst eller förlust.

Vi tillstyrker att bolagsstämman disponerar vinsten enligt förslaget i förvaltningsberättelsen och beviljar styrelsens ledamöter och verkställande direktören ansvarsfrihet för räkenskapsåret.

20230925042344

Grund för uttalanden

Vi har utfört revisionen enligt god revisionssed i Sverige. Vårt ansvar enligt denna beskrivs närmare i avsnittet Revisorns ansvar. Vi är oberoende i förhållande till Borealis Aktiebolag enligt god revisorssed i Sverige och har i övrigt fullgjort vårt yrkesetiska ansvar enligt dessa krav.

Vi anser att de revisionsbevis vi har inhämtat är tillräckliga och ändamålsenliga som grund för våra uttalanden.

Styrelsens och verkställande direktörens ansvar

Det är styrelsen som har ansvaret för förslaget till dispositioner beträffande bolagets vinst eller förlust. Vid förslag till utdelning innefattar detta bland annat en bedömning av om utdelningen är försvarlig med hänsyn till de krav som bolagets verksamhetsart, omfattning och risker ställer på storleken av bolagets egna kapital, konsolideringsbehov, likviditet och ställning i övrigt.

Styrelsen ansvarar för bolagets organisation och förvaltningen av bolagets angelägenheter. Detta innefattar bland annat att fortlöpande bedöma bolagets ekonomiska situation, och att tillse att bolagets organisation är utformad så att bokföringen, medelsförvaltningen och bolagets ekonomiska angelägenheter i övrigt kontrolleras på ett betryggande sätt. Den verkställande direktören ska sköta den löpande förvaltningen enligt styrelsens riktlinjer och anvisningar och bland annat vidta de åtgärder som är nödvändiga för att bolagets bokföring ska fullgöras i överensstämmelse med lag och för att medelsförvaltningen ska skötas på ett betryggande sätt.

Revisorns ansvar

Vårt mål beträffande revisionen av förvaltningen, och därmed vårt uttalande om ansvarsfrihet, är att inhämta revisionsbevis för att med en rimlig grad av säkerhet kunna bedöma om någon styrelseledamot eller verkställande direktören i något väsentligt avseende:

- företagit någon åtgärd eller gjort sig skyldig till någon försummelse som kan föranleda ersättningsskyldighet mot bolaget
- på något annat sätt handlat i strid med aktiebolagslagen, årsredovisningslagen eller bolagsordningen.

Vårt mål beträffande revisionen av förslaget till dispositioner av bolagets vinst eller förlust, och därmed vårt uttalande om detta, är att med rimlig grad av säkerhet bedöma om förslaget är förenligt med aktiebolagslagen.

Rimlig säkerhet är en hög grad av säkerhet, men ingen garanti för att en revision som utförs enligt god revisionssed i Sverige alltid kommer att upptäcka åtgärder eller försummelser som kan föranleda ersättningsskyldighet mot bolaget, eller att ett förslag till dispositioner av bolagets vinst eller förlust inte är förenligt med aktiebolagslagen.

En ytterligare beskrivning av vårt ansvar för revisionen av förvaltningen finns på Revisorsinspektionens webbplats: www.revisorsinspektionen.se/revisornsansvar. Denna beskrivning är en del av revisionsberättelsen.

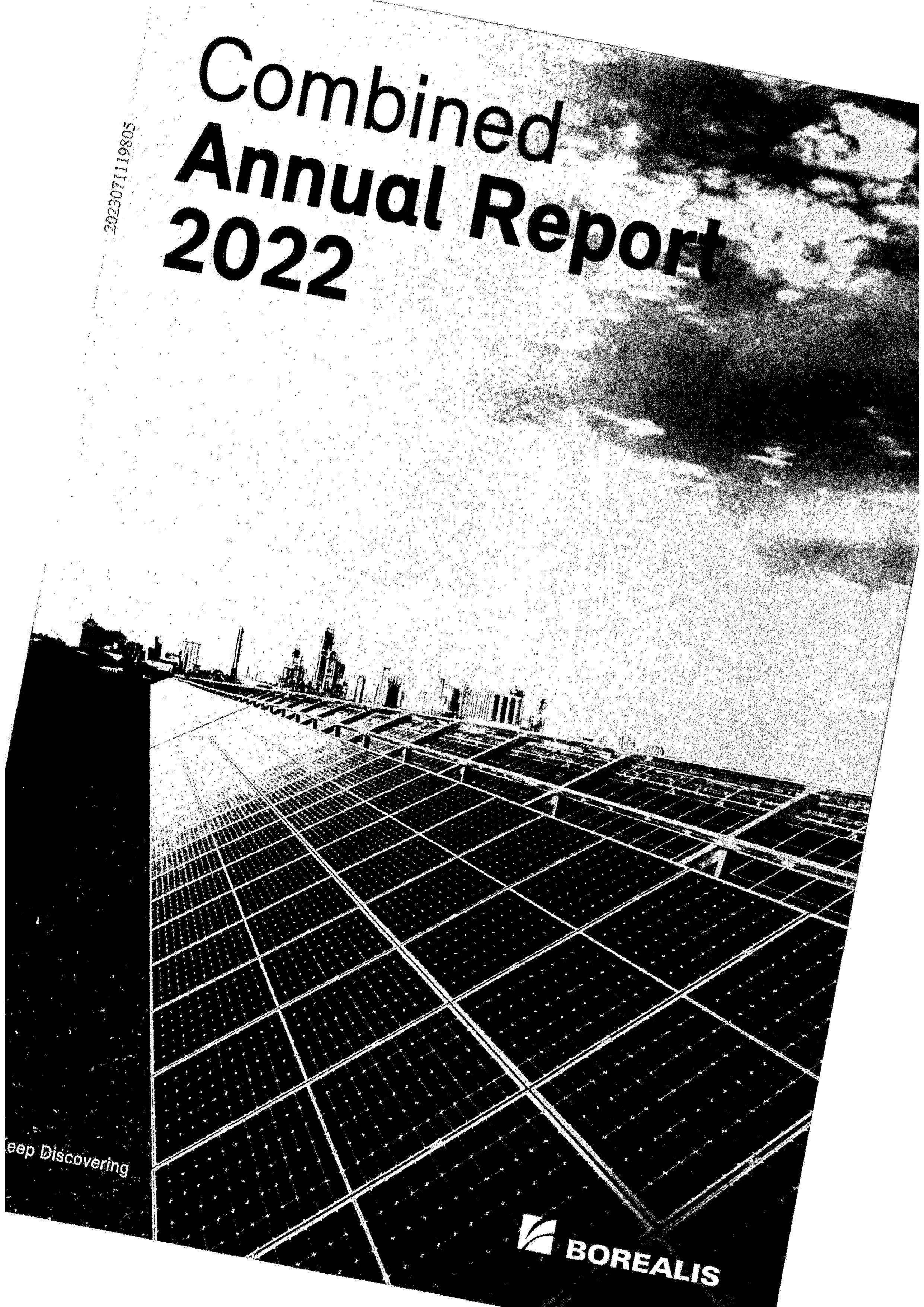
Göteborg den 6 april 2023

PricewaterhouseCoopers AB

Helena Pegrén
Auktoriserad revisor

20230711119805

Combined Annual Report 2022



Borealis at a Glance

~7,600

2.9 Total Recordable Injuries (TRI)

75%

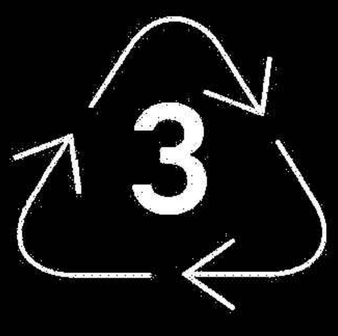
25%

Borouge –

advanced and circular polyolefins solutions, base chemicals and fertilizers

#2

128



Bayport Polymers (Baystar™) –

High-level, simplified overview. Data includes all of Borealis' business units (Polyolefins; Hydrocarbons; Fertilizers, Melamine and Technical Nitrogen Products). Employee number refers to headcount (not full-time equivalents, as reported until 2021).

20230711119806

Contents

Introduction 4

Reviewing 2022 4
Five-Year Comparison of Key Figures 4
Key Financial and Non-financial Metrics 6
Milestones 2022 9

About Borealis 10
Statement of the Supervisory Board 10
Executive Board 14
Borealis Strategy 2030 16
Our Values 18
An Interview with Borealis' CEO Thomas Gangl and CFO Mark Tonkens 20
Borealis Worldwide 26
Our Business 28
Global Growth Projects 34
About the Kallo Case 35

Non-financial Report 37

About the Non-financial Report 38

Sustainability Management 40
Sustainability Management 40
Public Affairs 48
Borealis Social Fund 52

Corporate Governance 56
Ethics & Compliance 69
People & Culture 76
Innovation 90
Digital Transformation 95
EU Taxonomy 98

Sustainability Focus Areas 103
Health & Safety 103
Circular Economy 119
Energy & Climate 125

Environmental Management 135

Procurement 145
Procurement of Feedstock, Electricity and Utilities 145
Procurement of Raw Materials, Packaging, Technical Supplies and Services 149
Logistics 154

Confirmation by the Executive Board 160
Independent Limited Assurance Report on the Consolidated Non-financial Report 2022 161

Financial Report: Consolidated Financial Statements including Group Management Report 163

Auditor's Report 164
Group Management Report 170
Consolidated Financial Statements 182
Notes to the Consolidated Financial Statements 189
Statement of the Executive Board according to Section 124(1)(3) of the Vienna Stock Exchange Act 275
Report of the Supervisory Board of Borealis AG 276

Annex 277

Table of Figures 278
ESG Risks and Opportunities 280
Overview of Material Topics 292
EU Taxonomy KPIs 293
GRI Content Index 300

Cover Image: Borealis' new photovoltaic park in Schwechat, Austria.
Gender Disclaimer: For reasons of better readability and easier comprehension, the male form used refers equally to all gender identities (without any judgemental distinction).

Reviewing 2022

Five-Year Comparison of Key Figures

→ See detailed background explanation of the performance in the respective chapter

		2022 excl. NITRO [1]	2022 Incl. NITRO [1]	
Income and profitability				
Total sales and other income	EUR million	9,613	12,225	
Operating profit	EUR million	703	1,081	
Operating profit as percentage of total sales and other income	%	7	9	
Net profit	EUR million	1,613	2,111	
Return on capital employed, net after tax	%	–	19	
Cash flow and investments				
Cash flow from operating activities	EUR million	602	898	
Investments in property, plant and equipment	EUR million	544	667	
Cash and cash equivalents	EUR million	2,226	2,242	
Financial position				
Balance sheet total	EUR million	–	14,685	
Net interest-bearing debt	EUR million	–	-70	
Equity attributable to owners of the parent	EUR million	–	9,785	
Gearing	%	–	-1	
Health, Safety & Environment [2]				
Total Recordable Injuries (TRI) [3] a. Old definition b. New definition [4]	number/million work hours	 – 2.6	 – 2.9	
EU ETS CO_2 emissions	kilotonnes	1,355	3,377	
Primary energy consumption	GWh	14,923	21,364	
Flaring performance	tonnes	39,955	39,955	
Waste generation	tonnes	82,425	92,383	
Water withdrawal	m^3 million	407	657	
Number of employees	full-time equivalents [7] headcount [8]	– 5,631	– 7,649	

1) NITRO: Borealis Fertilizers, Melamine and Technical Nitrogen Business excl. Rosier. For further details, please refer to note 8. Discontinued Operation and Other Changes in the Notes to the Consolidated Financial Statements // 2) Environmental data might be subject to minor adjustments due to ongoing audits and missing third-party data at the time of closing of this report. // 3) Rosier is excluded from TRI 2022 excl. NITRO. // 4) Definitions have been adjusted in 2021 to be aligned with OMV definitions. A comparison to previous years is only possible with 2020. // 5) Severe upsets led to significant emergency flaring during shutdowns; further there was a lack of recycling capacity. // 6) The main reason for the increase is the integration of the plastics recycling company mtm plastics GmbH and mtm compact GmbH into the monthly group reporting. // 7) Full-time equivalents considers part-time employed staff only as 0.5. // 8) Number of employees is presented in headcount instead of full-time equivalents since 2022. A comparison to previous years is only possible with 2021.

i As described in the Notes to the Consolidated Financial Statements, Borealis is in the process of its divesting Fertilizers, Melamine and Technical Nitrogen Products business unit (Borealis NITRO). This has resulted in the "discontinued operation" classification in the Consolidated Financial Statements. Accordingly, turnover, capital expenditure and operating expenditure, as presented in the chapter EU Taxonomy (→ chapter EU Taxonomy, p. 98), do not include the nitrogen business unit (except Rosier as this is not part of the NITRO divestment process). **All non-financial information for the reporting period 2022 is reported separately.**

20230711119807

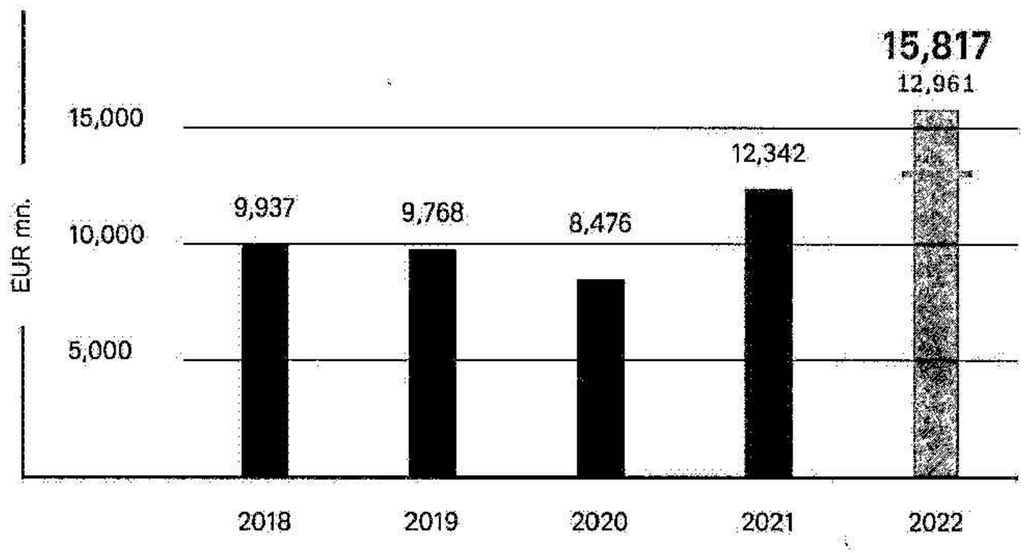
2021 Incl. NITRO [1]	2020 Incl. NITRO [1]	2019	2018
10,153	6,937	8,103	8,337
1,517	351	605	496
15	5	7	6
1,396	589	872	906
19	8	11	13
967	1,083	872	517
660	614	376	326
1,551	83	83	50
12,985	10,583	10,118	9,949
223	1,833	1,569	1,327
8,176	6,417	6,445	6,421
3	29	24	21
–	1.7	1.6	1.3
2.3	3.9	3.4	–
3,878	4,050	4,625	4,302
21,730	22,340	25,831	24,476
38,538	42,543 [5]	27,619	26,273
102,023	97,905	86,109 [6]	53,713
735	755	750	675
6,934	6,920	6,869	6,834
7,508	–	–	–

Key Financial and Non-financial Metrics

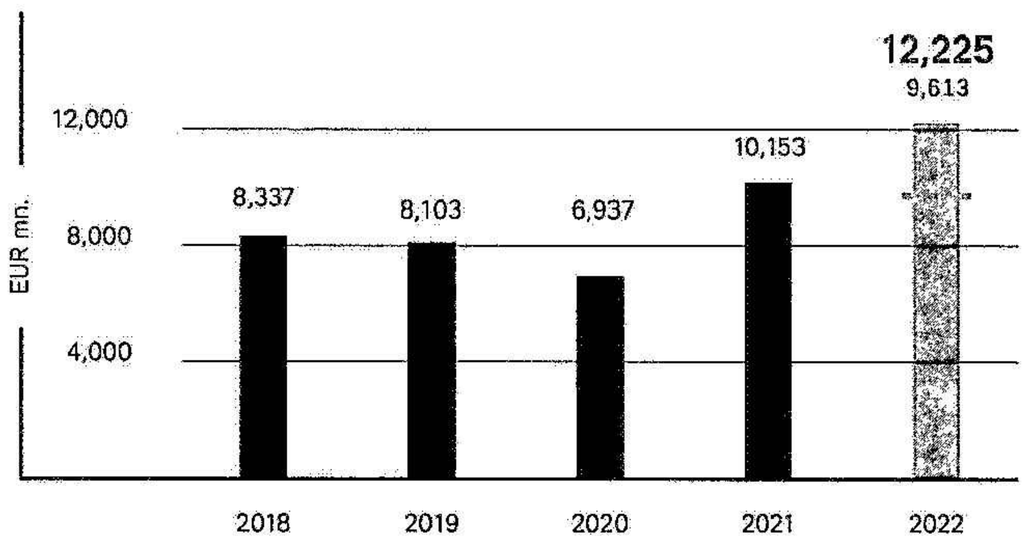
Borealis NITRO (Fertilizers, Melamine and Technical Nitrogen Business) data is included.

Borealis NITRO data is excluded.

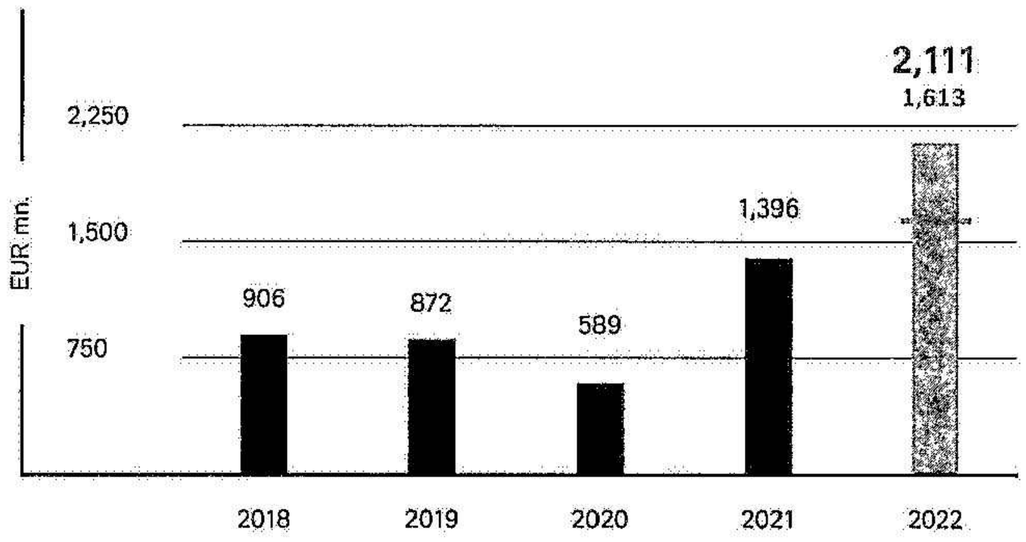
Total Sales [1)]



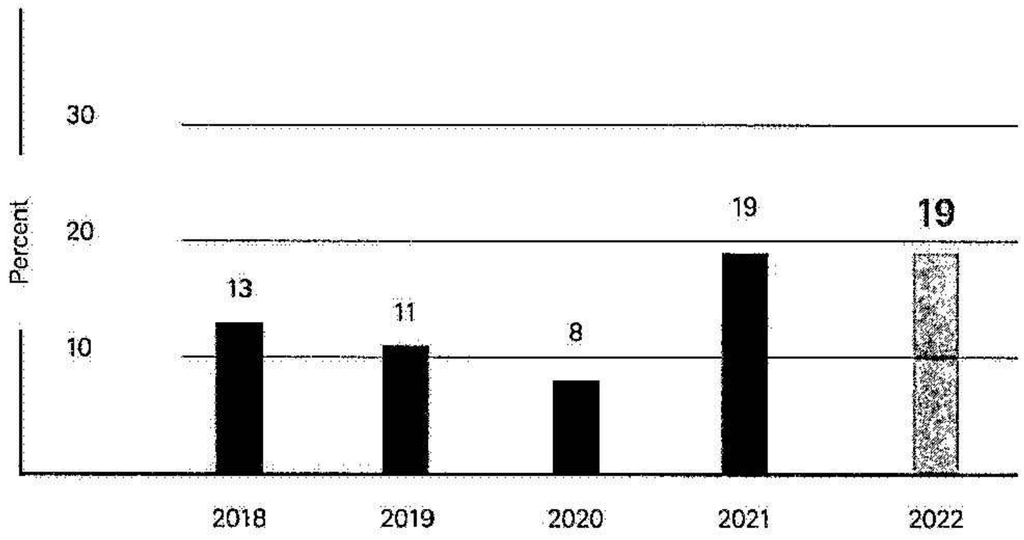
Total Sales and Other Income



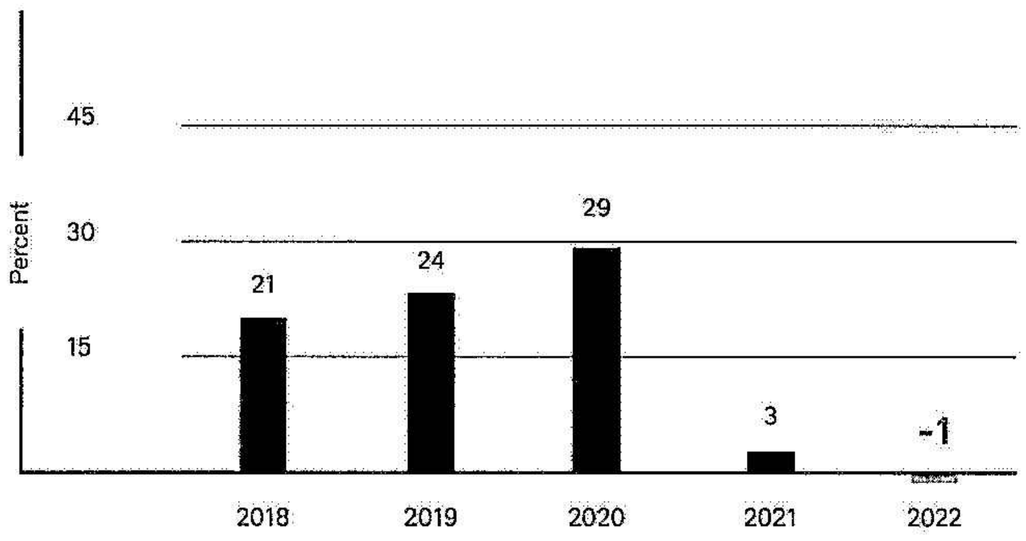
Net Profit



ROCE



Gearing



i

As described in the Notes to the Consolidated Financial Statements, Borealis is in the process of its divesting Fertilizers, Melamine and Technical Nitrogen Products business unit (Borealis NITRO). This has resulted in the "discontinued operation" classification in the Consolidated Financial Statements. Accordingly, turnover, capital expenditure and operating expenditure, as presented in the chapter EU Taxonomy (→ chapter EU Taxonomy, p. 98), do not include the nitrogen business unit (except Rosier as this is not part of the NITRO divestment process). **All non-financial information for the reporting period 2022 includes Borealis NITRO.**

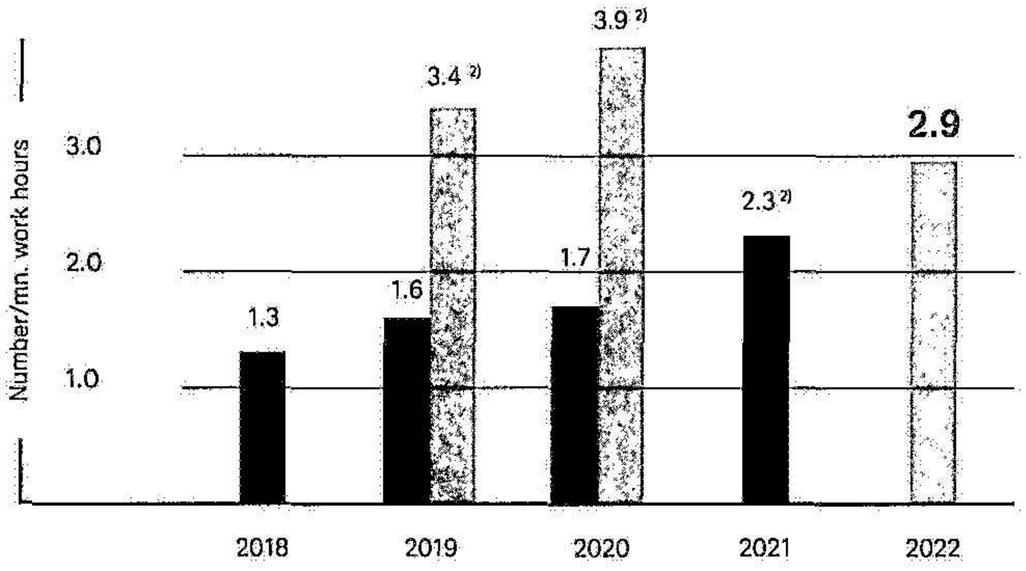
1) Total net sales of Borealis and pro-rata sales of at equity-consolidated companies.

20230711198038

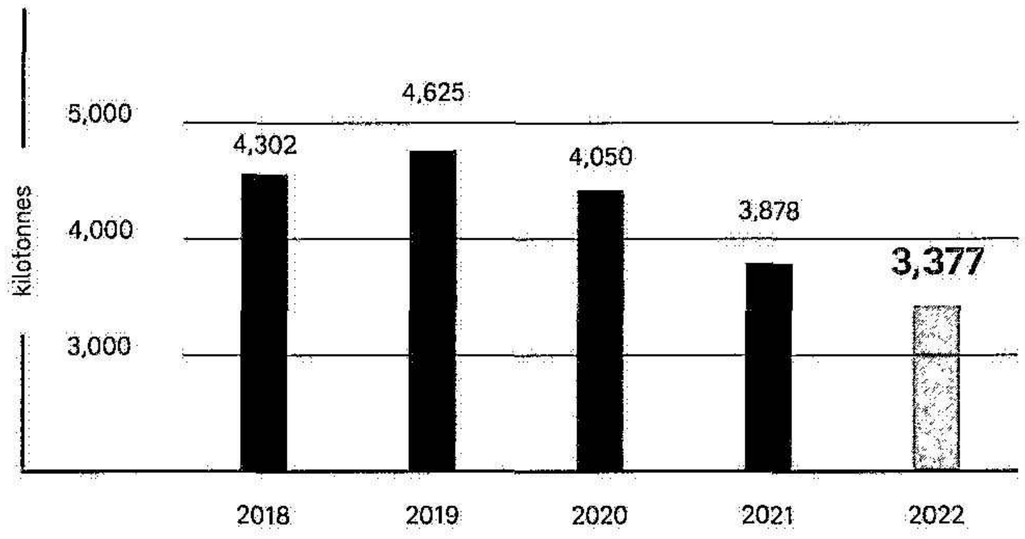
❶ Borealis Nitro (Fertilizers, Melamine and Technical Nitrogen Business) data is included.

⟹ Recalculated TRI-rate according to new OMV definitions (to be compared with 2021 and 2022 only).

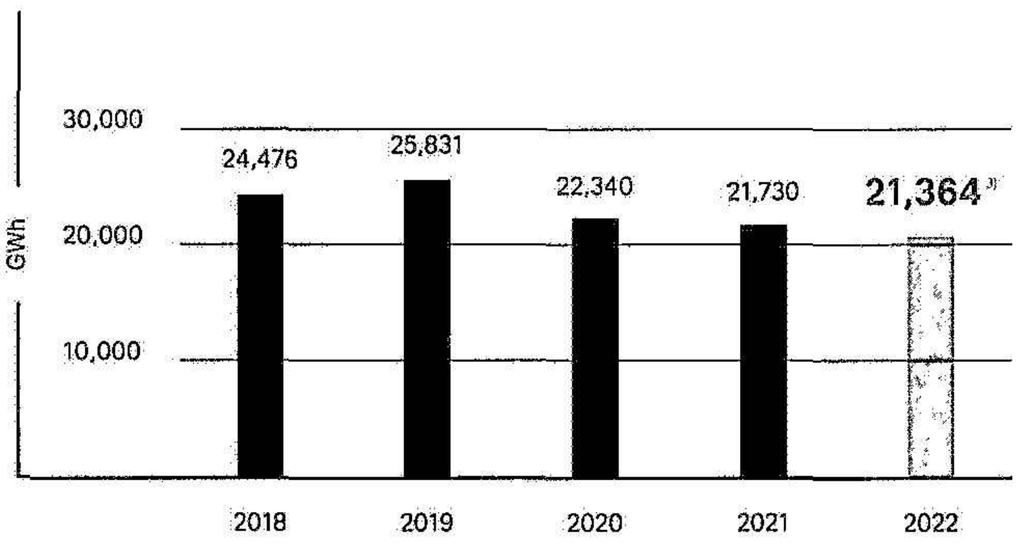
Total Recordable Injuries (TRI) [1]



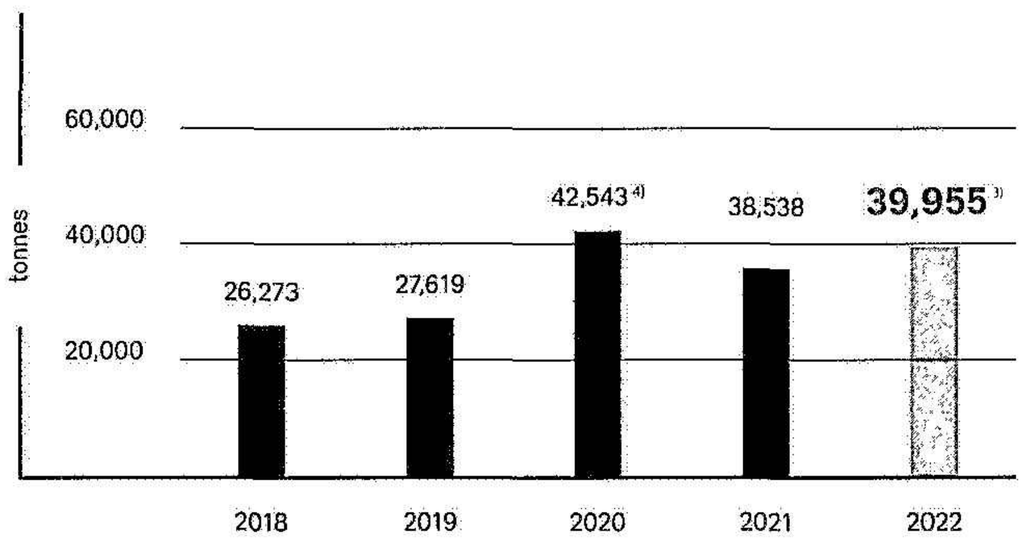
EU ETS CO_2 Emissions



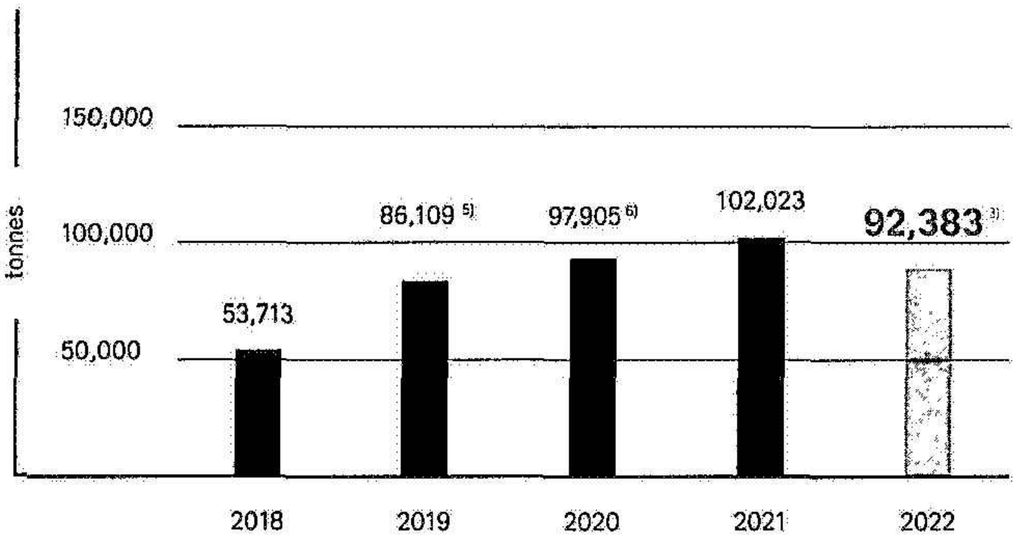
Primary Energy Consumption



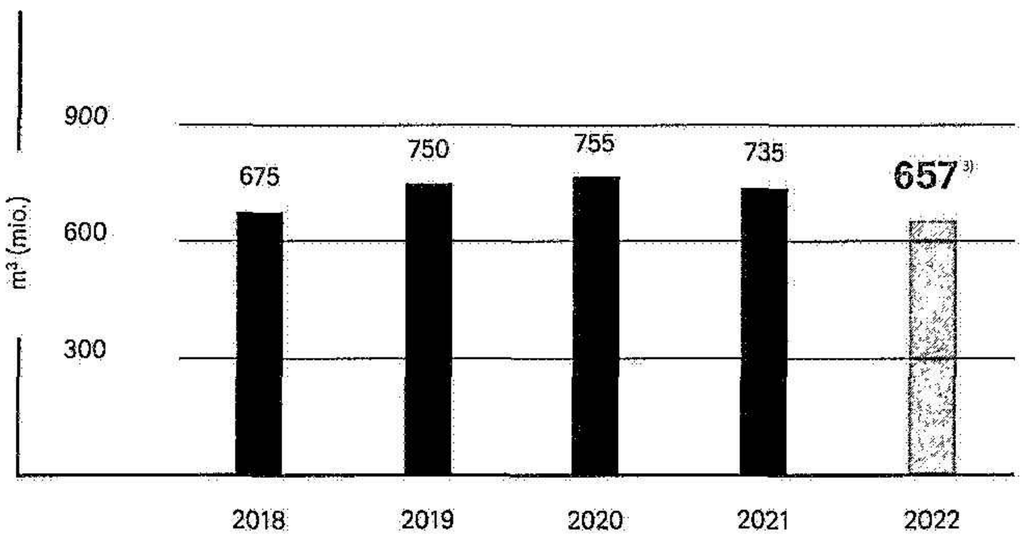
Flaring Performance



Waste Generation



Water Withdrawal



1) Includes own employees and contractors // 2) Definitions were adjusted in 2021 to be aligned with OMV definitions. A comparison to previous years is therefore not possible. // 3) Environmental data might be subject to minor adjustments due to ongoing audits and missing third-party data at the time of closing of this report. // 4) Severe upsets led to significant emergency flaring during shutdowns; furthermore, there was a lack of recycling capacity. // 5) The main reason for the increase is the integration of the plastics recycling company mtm plastics GmbH and mtm compact GmbH into the monthly group reporting definitions. // 6) Value has been recalculated in retrospect due to ongoing audits and missing third-party data at the time the last report was finalised.

"Ours is a cyclical industry, and we expect the market to remain challenging over the next two years. Yet despite the headwinds, we are resolute in our aim to expand globally and drive the transformation towards circularity. Both strategic aims have sustainability at their core, and both entail re-inventing essentials for sustainable living."

Thomas Gangl, CEO

20230711119809

Milestones 2022

Safety first – new "B-safe" programme kicked off to further improve safety performance

---

Highest ever achieved net profit of EUR 2.1 billion achieved in environment of geopolitical strife, rising inflation, market volatility, and lingering pandemic effects

---

Launch of Borealis Strategy 2030, an evolution centred on sustainability, geographic expansion and company transformation

---

Borouge IPO was the largest ever on the Abu Dhabi Securities Exchange, raising over USD 2 billion in gross proceeds for a 10% float

ADNOC acquired 25% stake in Borealis previously held by Mubadala, further deepening and extending a strong partnership

---

Global growth projects progressed: ground-breaking ceremony for Borouge 4, successful start-ups of Borouge PP5 plant and the Baystar™ ethane cracker

---

Launch of groundbreaking Borstar® Nextension Technology for tailored, performance-based polyolefins based on unique combination of Borstar® and single-site catalysts manufactured at newly-built Borealis plant in Porvoo, Finland

"Innovate, Collaborate, Accelerate" at the K 2022: launch of multiple applications across diverse sectors, many based on The Bornewables™, Borcycle™ C, or Borcycle™ M grade portfolios

---

Projected six-fold increase by 2025 in annual production capacity of circular products to be enabled by new commercial-scale Borcycle M advanced recycling plant in Austria and the Borvida™ portfolio of circular base chemicals, among other endeavours

---

Ambitious decarbonisation efforts boosted via new power purchase agreements for wind, photovoltaic, and hydropower as well as the first industrial-scale green hydrogen project

About Borealis

Statement of the Supervisory Board

Changes to Shareholder Structure and Supervisory Board
As of November 2022, the Abu Dhabi National Oil Company (ADNOC) acquired the 25% share in the Borealis Group previously held by Mubadala. The Supervisory Board welcomes this development, which will further strengthen the strong bond between Borealis and ADNOC, and help intensify global expansion efforts. We anticipate constructive and fruitful co-operation with ADNOC and the OMV Group to assure the present and future success of Borealis as a leading international provider of innovative and circular polyolefins-based solutions.

As of February 2022, Saeed Al Mazrouei was appointed as the new Vice Chairman of the Supervisory Board; Alvin Teh joined the Supervisory Board, succeeding Musabbeh Al Kaabi. Subsequent to the shareholder change from Mubadala to ADNOC in November 2022, Khaled Salmeen superseded Saeed Al Mazrouei as Vice Chairman of the Supervisory Board. Khaled Al Zaabi joined the Supervisory Board, replacing Alvin Teh.

Safety
The Total Recordable Injury Rate (TRIR) per million working hours of 2.9 reported in 2022 falls short of the 2.3 TRIR recorded in 2021. While a TRIR of 2.9 remains world-class for the industry, further improvements must be made to reach the "Goal Zero" objective of no accidents or incidents whatsoever. The Supervisory Board trusts that the "B-safe" programme currently being rolled out across the Group will obtain the desired results.

Financial Results
In 2022, demand for Borealis polyolefins – particularly in the energy, healthcare and mobility sectors – remained solid, yet volumes were lower due to the global recession caused by the war in Ukraine, rising inflation and the lingering effects of the pandemic, including lockdowns in China. Borealis Polyolefins sales volumes were approximately 10% lower than in 2021, at 3.54 million tonnes, due to lower demand in the consumer products segment. In the first half year, polyolefin margins gradually dropped from the historic highs of 2021, with the descent accelerating around the third quarter. Low operating rates in the final quarter led polyolefin margins to recover slightly by year's end, yet remained lower than at the start of 2022. While the Polyolefins operating profit declined from EUR 1,186 million in 2021 to EUR 526 million in 2022, the strong showing in the first half of the year produced an overall solid result.

The olefin industry margin declined at the beginning of the year to a low in March, rose in response to healthy demand in the turnaround season, and peaked in summer. In the second half of the year, the global recession lowered demand, thus narrowing the margin.

Borealis Base Chemicals delivered an operating profit of EUR 243 million, down from the EUR 309 million reported in 2021. Despite an increase in indicator margins, the financial result was negatively impacted by the Stenungsund cracker turnaround, less favourable sourcing costs due to the war in Ukraine, and lower demand, particularly in the second half of 2022.

Borealis Fertilizers sales reached 3.21 million tonnes in 2022 versus the 3.91 million sold in 2021. The decline is the result of lower demand due to high gas prices, and competitively priced urea imports to Europe. Melamine sales also decreased, from 143 thousand tonnes in 2021 to 84 thousand tonnes in 2022, due in large part to the combined effects of Chinese imports and the global economic downturn as of the third quarter.
Operating profit was supported by a strong contribution from the Borealis nitrogen business unit, and especially from Fertilizers, in which prices remained healthy despite soaring natural gas prices. Melamine faced sluggish demand and collapsing prices, particularly in the second half of the year.

The reduction in the operating result was nearly completely offset by an increase in the Borealis joint venture contributions, from EUR 595 million in 2021 to EUR 1,001 million in 2022. Borouge business performance was impacted by softer demand and lower sales prices. The Baystar™ result suffered from the full depreciation charge after the start-up of the cracker and its slow ramping up due to operational challenges. However, the positive one-off effects of the successful Borouge IPO, which contributed EUR 604 million to the result, and the remeasurement gain of EUR 266 million from the disposal

20230711981810

group related to the ongoing divestment of the nitrogen business unit, helped compensate for the lower business result. The net profit of EUR 2,111 million is the highest ever achieved by Borealis.

Acquisitions and Divestments
Borealis recently acquired a majority shareholding position in Renasci N.V., having gradually increased its share from 10% in 2021, to around 27% in November 2022, and subsequently to 50.01% as of January 2023. Belgium-based Renasci is a provider of innovative recycling solutions and a key strategic partner in the area of chemical recycling.

The divestment process of the Borealis nitrogen business is nearing completion. A binding offer received from EuroChem in February was rejected shortly thereafter, following assessment of the consequences due to the war in Ukraine and accompanying sanctions in place. In June, Borealis received a binding offer from leading European player AGROFERT that assessed the business on an enterprise value basis at EUR 810 million. Pending regulatory approval, closing is expected for the first quarter of 2023.

In June, Borealis increased its shareholding in Rosier S.A. from 77.47% to 98.09% after converting EUR 55 million into equity of Rosier S.A. In September, Borealis and the YILDRIM Group's YILFERT Holding signed an agreement for the acquisition of Borealis' shares at a valuation of EUR 35 million. Borealis completed the divestment process on 2 January 2023 by divesting all formerly owned shares in Rosier S.A.

Borouge Initial Public Offering (IPO)
Borouge, the strategic joint venture founded by Borealis and ADNOC in 1998, became the largest-ever IPO in Abu Dhabi after being listed on the Abu Dhabi Securities Exchange (ADX) in June 2022, drawing USD 83 billion in orders and raising over USD 2.0 billion in gross proceeds. The Supervisory Board congratulates Borouge on this landmark IPO, which underscores ADNOC's role as a growth enabler in the UAE, and solidifies Abu Dhabi's position as a favoured destination for global investors. Borouge is poised to play an even greater role in driving growth for the Borealis Group in the Middle East and Asia.

Corporate Strategy and Purpose
Following a year of transformation under the new ownership structure in 2021, Borealis launched in 2022 the Borealis Strategy 2030, a strategic evolution centred on sustainability. It is supported by two main pillars, geographic expansion and company transformation, and sets new and more ambitious targets for decarbonisation and the production capacity of circular products, such as recycled and renewable-based polymers as well as renewable hydrocarbons, including the ISCC Plus-certified Borvida™ portfolio of circular base chemicals launched in 2022. The customer-centric approach to speeding the transformation to a circular economy of plastics is expressed in the strategy's purpose, "Re-inventing Essentials for Sustainable Living".

Global Growth Projects
Despite geopolitical strife and a challenging macro-economic environment, Borealis has made good progress on its largest global growth projects in 2022. Two joint ventures, Borouge and Baystar, are crucial to fulfilling its strategic aim of doubling polyolefins production capacity in Middle East and Asia and North

Alfred Stern
Chairman

Khaled Salmeen
Vice Chairman

Reinhard Florey
Board Member

Martijn Arjen van Koten
Board Member

Khaled Al Zaabi
Board Member

America by 2030. Ground was broken in February 2022 for Borouge 4. This new, USD 6.2 billion facility located at the Borouge complex in Ruwais (UAE) will help ensure the reliable supply of differentiated polyolefins to customers in Middle East and Asia, and will also supply feedstock to the adjacent TA'ZIZ Industrial Chemicals Zone. The fifth polypropylene (PP) unit, PP5, was also started up in February. It increases total Borouge PP capacity by over 25%, to 2.4 million tonnes per year. The new PP5 leverages the proprietary Borstar® technology to deliver greater quantities of polymer-based material solutions for the infrastructure, energy, agriculture, healthcare, mobility and advanced packaging markets.

The Baystar joint venture with TotalEnergies brings Borstar to North America for the first time, and is currently the largest Borealis growth project on this continent. The new ethane-based steam cracker with an annual production capacity of one million tonnes of ethylene was successfully started up in July 2022, and currently supplies feedstock to Baystar's existing polyethylene (PE) units. It will also supply ethylene to the new, 625,000 metric-tonne-per-year Borstar® PE unit after completion and ramping up.

While progress was made in the first half of 2022 at the new world-scale propane dehydrogenation plant (PDH) in Kallo (Belgium), construction was halted after misconduct on the part of the site's contractor, IREM, was uncovered. Borealis suspended, then terminated all contracts with IREM and its subcontractors due to non-compliance with fundamental contractual principles. On-site work resumed in October after a re-tendering process. Start-up of the new PDH plant is expected in the second half of 2024. Borealis has zero tolerance for non-compliance in all aspects of its operations and has since implemented extensive controls and monitoring measures to ensure full future compliance.

Plastics Circularity

Borealis is at the forefront in driving the industry transformation to circularity. In addition to boosting its current annual production capacity of circular products to 1.8 million tonnes by 2030, Borealis aims to ensure that by 2025, 100% of its consumer products will be recyclable, reusable, and/or made using materials from renewable sources. The Company's dedication to circularity is best embodied in its EverMinds™ platform, which unites value chain partners and other stakeholders in innovation and collaboration. A large number of polymer-based applications designed for eco-efficiency were launched in 2022: grades from the Bornewables™ portfolio of premium circular polyolefins were used in value-chain collaboration to develop rigid food packaging, plastic bottles, PE-X and PP-RCT pipes, and even a baby pacifier. Other novel applications include PE monomaterial pouch solutions and flexible packaging formats incorporating ever-higher levels of post-consumer recyclate.

Borealis is picking up the pace in mechanical recycling. Planning is underway for the construction of an advanced recycling plant on a commercial scale in Schwechat (Austria) to supplement its three existing polyolefin recycling operations in Europe. With an annual production capacity of over 60 kilotonnes, the plant will be based on the proprietary Borcycle™ M technology. Providing larger volumes of high-quality recyclate to the market is essential to closing the loop on plastics circularity.

The transformational Borcycle™ C technology uses chemical recycling to turn plastic waste streams into virgin-level grade materials suitable for demanding applications, such as in healthcare and food packaging. At present, the pyrolysis oil used in the chemical recycling process is sourced from Renasci N.V. A feasibility study for the erection of a new chemical recycling unit at Borealis' production facilities in Stenungsund (Sweden) is currently underway. These activities augment ongoing co-operation with OMV and its patented ReOil® technology.

20230711198111

Value Creation through Innovation
The groundbreaking Borstar® Nextension Technology, a step change for performance-based polyolefins, was launched in 2022. This universal solution combines Borstar technology and single-site Borstar Nextension catalysts (manufactured at a new Borealis plant in Porvoo, Finland) to improve the properties of PP, and to enable production of an abundant range of tailored polyolefins. The Nextension Technology encourages design for recycling because it delivers monomaterial solutions that can replace conventional multi-layer applications.

The Borealis Group employs around 500 scientists and researchers working primarily at the Innovation Headquarters in Linz (Austria) and the two innovation centres in Stenungsund and Porvoo. Value creation through innovation is best evidenced by the growing number of Borealis Group patents. Borealis maintains its leadership among Austrian companies when it comes to patent filings, with 128 new priority patents filed at the European Patent Office in 2022.

Energy and Climate: Driving Decarbonisation
Two key goals guide decarbonisation efforts: reducing Scope 1 and Scope 2 emissions from 5.1 million tonnes per year (from a 2019 baseline) [1] to 2 million tonnes by 2030; and ensuring that by 2030, 100% of the electricity used in the Polyolefins and Hydrocarbons businesses is of renewable origin. Three new, long-term power purchase agreements (PPA) were signed in 2022 to supply wind energy to help power Borealis' production operations in Finland, Sweden and Belgium; and the first-ever hydropower PPA to augment the electricity supply for Schwechat operations. Two new photovoltaic arrays have also been erected to power portions of the Group's operations in Linz and Schwechat. In September, Borealis announced that it had initiated a joint industrial-scale project with energy company VERBUND to use green hydrogen to produce fertilizers, melamine and technical nitrogen products.

Economic Development and Outlook for 2023
Safety must remain the top priority for the Borealis Group. The Supervisory Board renews its call for heightened vigilance with respect to health and safety on the job. We have full confidence that measures such as the "B-safe" programme will produce even better safety results, and in particular a lower number of total recordable injuries (TRI).

The Supervisory Board congratulates the Borealis Executive Board, its senior management and all Borealis Group personnel for their efforts in achieving a record net profit under challenging market conditions. However, due to a confluence of geopolitical, economic, and market forces, we expect the general business environment to become more, rather than less, challenging over the next several years. We are confident that the strong foundation of Borealis – its people, safety and innovation mindsets, and customer-centric orientation – will continue to support sustainable business growth, particularly in the circular sphere. By staying true to its commitment to re-inventing essentials for sustainable living, Borealis will continue to provide innovative chemical and plastics solutions which add value to society and our everyday lives.

Vienna, 28 February 2023
Supervisory Board

1) *Emission reduction targets calculated on the basis of a 2023 divestment of the Borealis nitrogen business comprising fertilizers, melamine and technical nitrogen products.*

Executive Board

Thomas Gangl
Chief Executive Officer
Appointed in April 2021
Male / Austrian national

Prior to joining Borealis as new CEO in April 2021, Thomas Gangl was a member of the OMV Executive Board and in charge of Refining & Petrochemical Operations at OMV from 2019. In his 20 years at OMV, Thomas Gangl helped shape the company's refining and petrochemicals business. He played a crucial role in laying the foundation of the OMV circular economy strategy, most notably by establishing chemical recycling at OMV. Since starting in 1998 as a process engineer, his OMV career positions include General Manager of OMV Deutschland GmbH and Senior Vice President, Business Unit Refining & Petrochemicals.

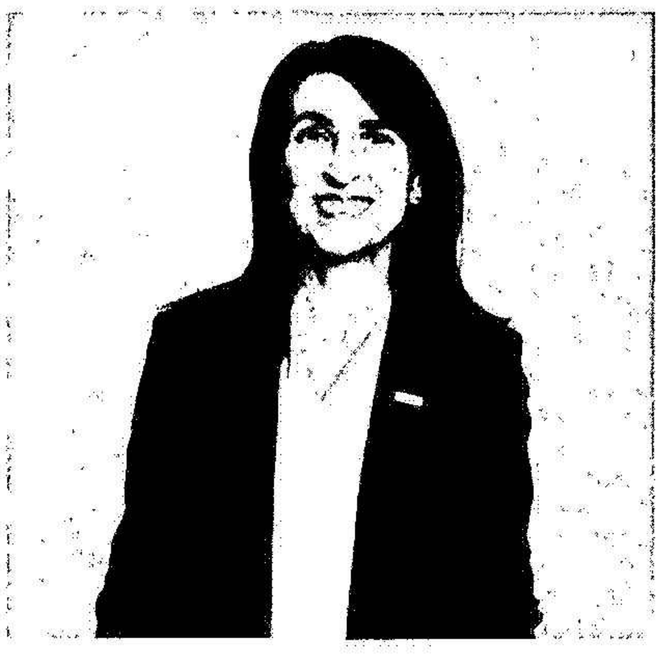
Significant external positions
- Borouge PLC; Vice Chairman of the Board of Non-Executive Directors
- World Energy Council Austria (WEC); Vice President of the Board of Non-Executive Directors
- Austro-Arab Chamber of Commerce; Member of the Board of Non-Executive Directors
- World Business Council for Sustainable Development (WBCSD); Member of the Board of Non-Executive Directors
- Industriellenvereinigung Wien; Member of the Board of Non-Executive Directors
- Österreichischer Verband CREDITREFORM (ÖVC); Member of Advisory Council

Mark Tonkens
Chief Financial Officer
Appointed in April 2014
Male / Dutch national

Mark Tonkens joined Borealis in 2009. Before assuming the position as Borealis CFO in November 2014, he had served as Borealis Senior Vice President Group Controlling. Mark Tonkens came to Borealis after holding a number of senior management roles in the Royal Philips group, acting as CFO and Senior Vice President of major business units and country organisations around the globe, from the Netherlands and Greece in Europe, to Taiwan and Hong Kong in Asia.

Significant external positions
- Borouge PLC; Member of the Board of Non-Executive Directors
- Bayport Polymers PLC (Baystar); Member of the Board of Non-Executive Directors

20230711198 12



Lucrèce Foufopoulos-De Ridder
Executive Vice President Polyolefins, Circular Economy Solutions and Innovation & Technology
Appointed in January 2019
Female / dual Belgian-Swiss citizenship

Lucrèce Foufopoulos-De Ridder was appointed to the Borealis Executive Board as Executive Vice President Polyolefins, Circular Economy Solutions and Innovation & Technology in January 2019. She joined Borealis after a career of more than 20 years in the chemical and petrochemical industry, most recently at Eastman, where she served as Vice President & General Manager of the Rubber Additives business unit. Prior to that, Lucrèce Foufopoulos-De Ridder held a variety of positions at multinationals, including Dow Chemical, Rohm and Haas, Dow Corning and Tyco. She currently serves on the supervisory board of Royal Vopak.

Significant external positions
- Sika, Switzerland – Member of the Board of Non-Executive Directors
- Royal Vopak, The Netherlands – Member of the Board of Non-Executive Directors
- Borouge Pte. Ltd.; Member of the Board of Non-Executive Directors
- Plastics Europe – Vice President of the Steering Board, Chair of the Advocacy Committee

Wolfram Krenn
Executive Vice President Base Chemicals & Operations
Appointed in July 2021
Male / Austrian national

Wolfram Krenn was appointed Executive Vice President Base Chemicals and Operations and member of the Borealis Executive Board in July 2021. Immediately prior to joining Borealis, Wolfram Krenn had held the position of Senior Vice President for Refining Assets at OMV since 2019. Having started his career at OMV in 1998 as a process engineer, he gained international experience in production and operations as lead for OMV Petrom's Petrobrazi Refinery in Romania. In 2018, he was appointed Senior Vice President Site Management Schwechat, Austria.

Significant external positions
- TÜV Austria Holding AG; Member of the Supervisory Board

Philippe Roodhooft
Executive Vice President Joint Ventures & Growth Projects
Appointed in November 2017
Male / Belgian national

Philippe Roodhooft was appointed Executive Vice President Middle East and Growth Projects in November 2017, after having served since 2013 as Chief Operating Officer of Borouge ADP in the UAE. Prior to that, Philippe Roodhooft held Vienna-based senior management positions, including Senior Vice President Supply Chain and Product Management for Polyolefins, Senior Vice President Operations for the Borealis Group and General Manager for the Central European production sites.

Significant external positions
- Bayport Polymers LLC; Chairman of the Board of Non-Executive Directors
- Borouge Pte. Ltd.; Vice Chairman of the Board of Non-Executive Directors
- Borouge PLC; Member of the Board of Non-Executive Directors

Our Purpose

Our Vision

20230711198161

Borealis Strategy 2030

Geographical expansion
Become a fully global partner to our customers

We grow through Mergers & Acquisitions and selected builds in North America, Middle East and Asia. We leverage Borouge's market presence for growth in Asia.

Transformation
Evolve to fully customer-centric approach to offer advanced and sustainable material solutions

Circular Economy
We lead the transformation to a truly circular economy across all our applications.

Value Add
We invest in compounding and adjacencies to accelerate value creation through innovation.

Sustainability
We significantly reduce our CO_2 footprint

Strong Foundation
Build on safety, people and culture to sustain strong growth

Safety
Goal Zero guides our strategic aspiration to be among the safest companies in the industry.

People
People make it happen. We shape an experience where everyone can perform at their best and make a difference.

Innovation & Technology
Accelerate circularity, drive specialty growth and create more value in licensing and catalyst technology.

Performance Excellence
We focus on excellence across all activities. Utilise technology and digitalisation to drive efficiencies.

Our Values

Responsible

... is just a theory until you put it into action.

- We strive for zero incidents in health and safety.
- We consider our local and global responsibility for the environment in our decisions.
- We do business according to high ethical standards and lead by example.

Respect

... is just a word until you live its meaning.

- We trust and involve people and communicate openly, respectfully and in a timely manner.
- We collaborate, support and help each other to develop for the best of Borealis.
- We build on diversity for better results as "One Company".

20230711198114

Exceed

... is just a goal until it becomes your path.

– We win through excellence and deliver beyond expectations.
– We commit to making joint decisions and follow through.
– We give feedback and make "Connect-Learn-Implement" and "Continuous Improvement" *a natural way of working.*

Nimblicity™

... is just a concept until you make it your routine.

– We are fit, fast and flexible and seek smart and simple solutions.
– We encourage decisions at all levels of the organisation to increase ownership and speed to realisation.
– We welcome change and manage it to shape our future.

INTERVIEW WITH

Borealis' CEO and CFO, Thomas Gangl and Mark Tonkens

Around this time last year, many in the industry had anticipated the return to a "new post-COVID normal" after nearly two years of crisis. Thomas Gangl, as Borealis CEO, and Mark Tonkens, as Borealis CFO: has a new normality returned?

TG: If the "new normal" is crisis mode, then yes, to a certain extent! While we do expect this to change in the future, we anticipate that ongoing high volatility will become the norm.

MT: Just when we thought supply chains had stabilised and markets calmed, new crises emerged: the war in Ukraine and ensuing geopolitical conflict, but also the rising energy costs, interest rates, inflation, and of course the increasing urgency of the global climate crisis.

How is Borealis managing this seemingly perpetual crisis mode?

TG: Thanks to the resilience and perseverance of our people, Borealis is in a good place to manage these crises. We know that crises can take a toll, but they can also be catalysts for positive change. Our approach to preparing for the effects of crises in the long term is best described in our transformative Borealis Strategy 2030. Next to the strongest pillar in our foundation – our people – a second pillar is our safety mindset. Our aim is to be among the safest companies in our industry. While our TRI rate of 2.9 in 2022 is a slight deterioration versus 2021's TRI of 2.3, we have defined new and additional measures to reach our "Goal Zero" of no accidents or incidents whatsoever in 2023.

20230711198135

A third foundational pillar is our innovation and technology leadership in the industry, which is increasingly geared towards circular economy solutions. A prime example in 2023 was the launch of our ground-breaking Borstar® Nextension Technology. It sets new standards in performance and will facilitate design for recycling in polyolefins-based applications. We also introduced the Borvida™ portfolio of circular base chemicals containing ISCC Plus-certified sustainable content. Our evolving technologies Borcycle™ M for mechanical, and Borcycle™ C for chemical recycling, are breathing new life into end-of-life plastics. Our Bornewables™ portfolio of circular polyolefins has generated a host of exciting new products and applications with added value, many of which were launched under the motto "Innovate, Collaborate, Accelerate" at the K 2022 in October.

Mark Tonkens: from the CFO's perspective, please explain how Borealis intends to drive performance in times of crisis.
MT: Performance excellence in all our business areas and activities is the fourth pillar of the company foundation that drives our strategy. We are building on this strong foundation to be a customer-centric provider of advanced and more sustainable solutions for our global partners. One mark of excellence is being able to respond flexibly to expected market downturns. We have acted quickly to counteract the combined effects of a volatile macroeconomic environment, rising inflation, and geopolitical uncertainties by initiating the "Strong Foundation – Performance Excellence" programme, which has been designed from the bottom up in seven different workstreams. Our internal planning process drew on a due diligence-type approach to identify hundreds of improvement initiatives in diverse areas across the Group, from energy savings in production, to contract negotiations with suppliers. Because Borealis line managers "own" these initiatives, their implementation over the next two years will be all the more effective. We are confident that this programme will be instrumental in enabling us to reach our strategic objectives of increasing the volume of circular products and solutions and expanding global production capacity, all while significantly reducing our CO_2 emissions.

What, specifically, is Borealis doing to reduce its own emissions and improve its environmental footprint?
TG: Our decarbonisation efforts are targeted to reduce our current Scope 1 and Scope 2 CO_2 emissions by 60% by 2030. As Borealis leads the industry in transforming to a circular economy of plastics, we also foresee significantly lower Scope 3 emissions, which while not directly generated by Borealis are still a consequence of our activities. In order to increase the share of renewable energy sources used in our Polyolefins and Hydrocarbons businesses to 40% by 2025 – and to 100% by 2030 – Borealis has signed a number of long-term power purchase agreements with renewable energy suppliers across Europe. We are also picking up the pace in installing photovoltaic arrays adjacent to our production facilities. Borealis production operations in Sweden, Finland, Belgium, Austria, and Italy are already being powered in part by greener energy.

MT: Our emission reduction portfolio also includes clean energy partnerships, such as our joint project with Austrian energy company VERBUND for industrial-scale production of green hydrogen. We are exploring several carbon capture and storage partnerships, and expect projects to come on stream in the second half of the 2020s. One recent example of how we are using digitalisation to drive decarbonisation is our novel CO_2 emissions calculation tool, Neoni. It was designed by our in-house Borealis Digital Studio and provides our customers with cradle-to-gate data for over 500 polyolefins grades.

The joint venture Borouge in Abu Dhabi has been in the media spotlight over the past year. What can you tell us about Borouge and the growth projects taking place there?
TG: The decision taken with our JV partner ADNOC to float 10% of Borouge in February – shortly before the market environment became even more turbulent – ultimately produced the the largest-ever IPO in Abu Dhabi, drawing interest of around USD 83 billion. It was oversubscribed by a phenomenal 42 times in aggregate! The June IPO is one of the most memorable highlights of 2022 and crowns what has been a 25-year journey in which Borouge grew from a small company in Abu Dhabi, to a major international enterprise with a market capitalisation in excess of USD 20 billion.

MT: Overall, our Borouge JV continues to be a major growth driver. The new Borouge PP5 plant successfully started up in February and is now boosting the site's total polypropylene capacity by more than

Managing growth and transformation successfully is what will enable us to weather any storm. Thomas Gangl, CEO

25%. In February we also celebrated the groundbreaking for our massive Borouge 4 expansion, a key project in our growth portfolio. Borouge 4 will play a crucial role in meeting growing regional demand for polyolefins by supplying feedstock to the TA'ZIZ Industrial Chemicals Zone in Ruwais. By leveraging our Borstar technology and increasing production capacity, we are ideally positioned to deliver larger quantities of more sustainable and recyclable polyolefins-based solutions to a wide range of industries, from packaging to infrastructure. Like Borealis, Borouge has pledged to pursue a zero-waste circular economy and implement sustainable solutions for infrastructure and energy. We are pleased to report that the new Borouge 4 plant will eliminate continuous flaring altogether, and that we are exploring the feasibility of establishing a carbon capture unit on site to further reduce CO_2 emissions.

How have the Borealis Group's other major growth projects progressed in the past year?
TG: As outlined in the Borealis Strategy 2030, we intend to nearly double our global polyolefins production capacity by establishing a stronger market presence not only in the Middle East and Asia, but in North America as well. In July we reached an important milestone with Baystar™, our joint venture with TotalEnergies in Texas, with the start-up of the new ethane-based steam cracker. Once construction and ramping up of the new Borstar polyethylene unit is completed, we will have transformed a non-integrated business into an integrated one, and brought our proprietary Borstar technology to North America for the first time. Our customers and partners will now be able to meet demand for larger volumes of more specialised polyolefins-based products and solutions.

MT: This summer, construction was temporarily halted on the world-class propane dehydrogenation (PDH) plant expansion in Kallo, Belgium, after misconduct on the part of the site's contractor, IREM, was uncovered. Borealis has zero tolerance for any kind of misconduct, whether among Borealis employees or our contractors! We are committed to setting and maintaining benchmark standards for industrial construction works. Immediately after learning of the serious allegations against IREM, we terminated all contracts due to non-compliance with contractual principles. In a subsequent re-tendering process, the majority of works were awarded in August to contractor Ponticelli, which put in place comprehensive on-site worker monitoring. Now that work has resumed, we anticipate start-up of the new PDH plant during the second half of 2024.

The divestment process for the Borealis nitrogen business unit has been protracted. Can you give us on update on where things stand?
MT: The war in Ukraine and the sanctions imposed as a consequence have led to some delays. On careful deliberation, we declined the initial binding offer received from EuroChem in March and restarted the process. AGROFERT emerged in June as the best bidder in the next divestment round. While the transaction is subject to regulatory approval, closing is currently expected for the first quarter of 2023. We are exceedingly pleased

2023 9836

20230711198117

> ***World-scale growth projects such as Borouge and Kallo are essential for long-term success.*** Mark Tonkens, CFO

that our nitrogen business has found a new home within a growth-oriented company whose core business is nitrogen products and fertilizers. AGROFERT is a major player in the European fertilizer market with a strong commitment to the Borealis nitrogen business unit, including fertilizers, melamine and technical nitrogen products. We believe that this deal will ensure security of supply as well as the long-term development of the production facilities. The conclusion of this transaction enables Borealis to sharpen our focus on providing innovative and value-added solutions in the fields of advanced circular polyolefins and base chemicals.

Will growth continue for Borealis in turbulent times? Which endeavours are planned for the near future and beyond?

MT: Our strong balance sheet and cash flow enable us to continue on our path of sustained investment. World-scale growth projects such as Borouge 4 and Kallo are essential for long-term success. There are other major projects in the pipeline, including construction of a large advanced mechanical recycling plant based on Borcycle M in Schwechat, Austria. The results of a feasibility study for the establishment of a new chemical recycling unit at our production location in Stenungsund, Sweden, are expected shortly. And many of our other growth projects are playing an outsized role in advancing plastics circularity: for example, our new entity Recelerate is rethinking the way lightweight plastic waste is sorted and recycled in order to increase market volumes of high-quality recyclates. In sum, we are leveraging our strong customer partnerships and innovation leadership to create the kinds of value-added products the world needs to become more circular and sustainable.

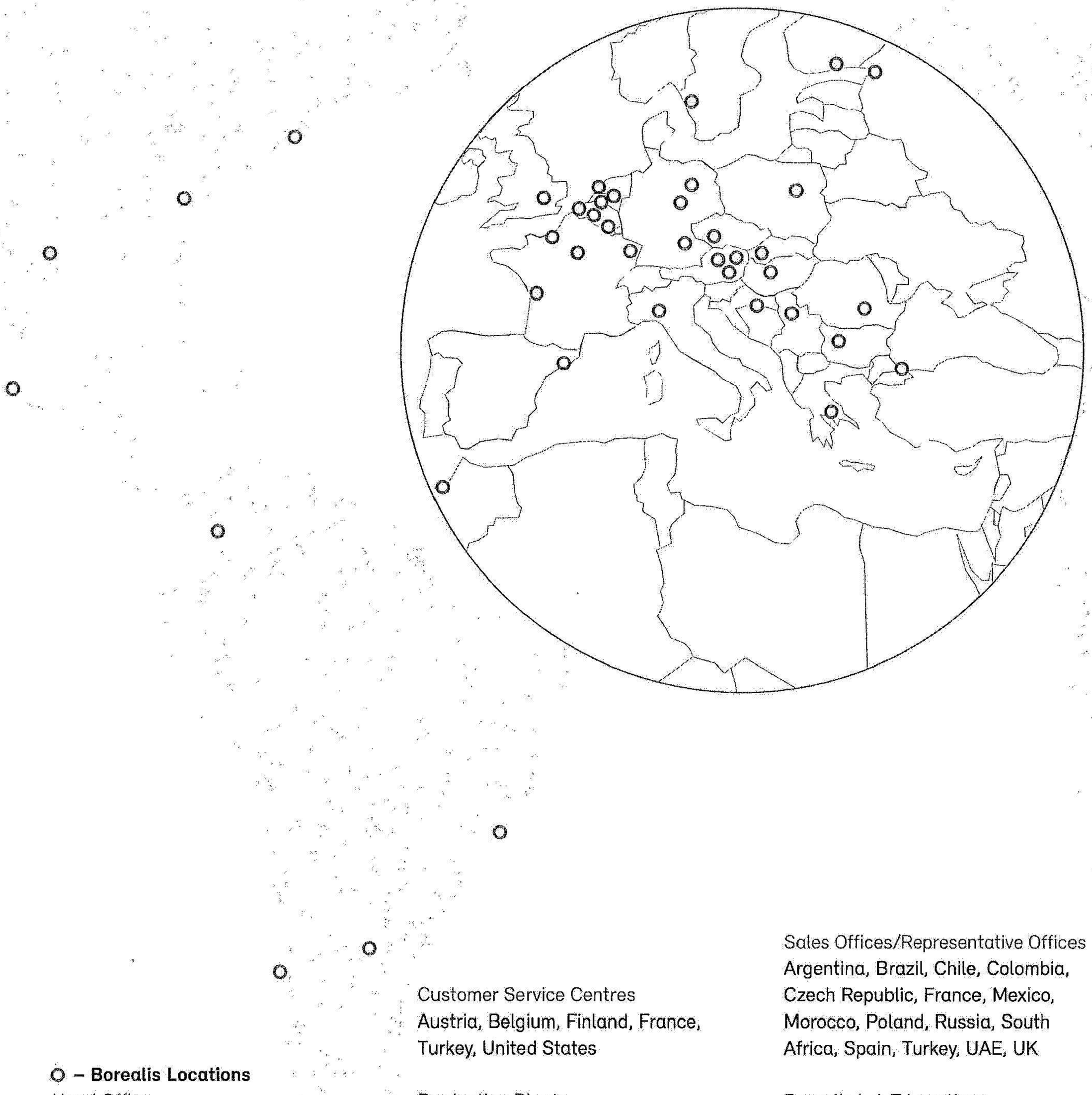
The last word goes to Thomas Gangl. Going forward, what is your outlook for 2023?

TG: Looking to 2023, we expect the general market environment to worsen. Ours is a cyclical industry, and we expect the market to remain challenging over the next two years. We must manage costs tightly in our core businesses. Yet despite these headwinds, we are resolute in our aim to expand globally and drive the transformation towards circularity. Both strategic aims have sustainability at their core, and both entail reinventing essentials for sustainable living. Managing growth and transformation successfully is what will enable us to weather any storm.

We also look forward to welcoming our new shareholders, ADNOC, who have recently acquired the 25% share in the Borealis Group previously held by Mubadala. Working together with both ADNOC and the OMV Group will be central to achieving sustained growth and successful transformation.

Yet Borealis owes the past and future success of our company to our people. We appreciate the effort it takes to persevere through multiple crises – and we laud your resilience. Your efforts are the key to our ongoing success.

Borealis Worldwide



○ – Borealis Locations

Head Office
Borealis AG
Trabrennstr. 6–8
A-1020 Vienna, Austria
Tel. +43 1 22 400 300
Fax +43 1 22 400 333
www.borealisgroup.com
info@borealisgroup.com

Customer Service Centres
Austria, Belgium, Finland, France, Turkey, United States

Production Plants
Austria, Belgium, Brazil, Finland, France, Germany, Italy, South Korea, Sweden, The Netherlands, United States

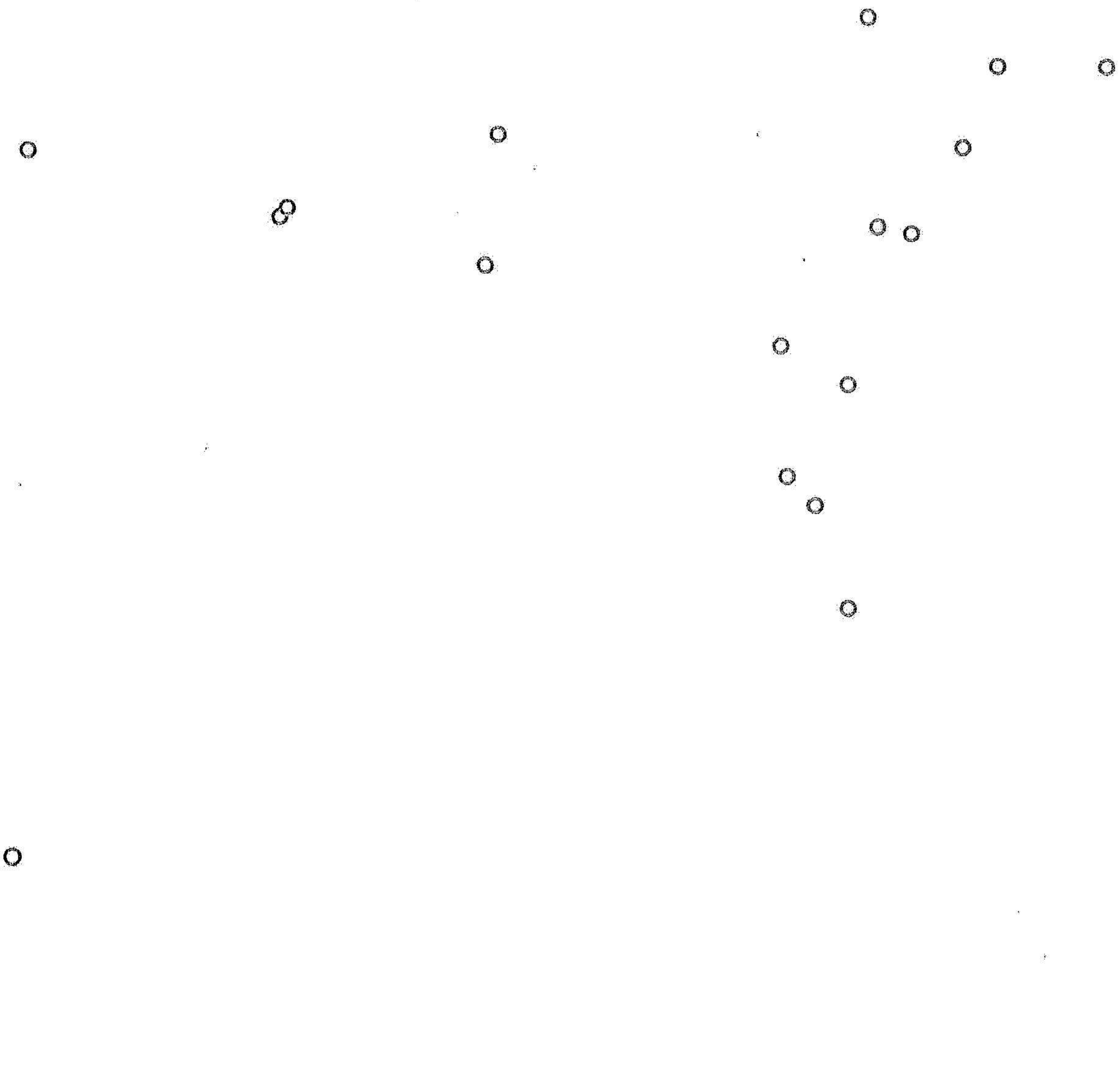
Innovation Centres
Austria, Finland, Sweden

Sales Offices/Representative Offices
Argentina, Brazil, Chile, Colombia, Czech Republic, France, Mexico, Morocco, Poland, Russia, South Africa, Spain, Turkey, UAE, UK

Borealis L.A.T Locations
Austria, Bulgaria, Croatia, Czech Republic, France, Greece, Italy, Hungary, Poland, Romania, Serbia, Slovakia

Borealis Rosier Locations
Belgium, The Netherlands

20230711198I8



O – Borouge Locations

Head Offices
Singapore, UAE

Innovation/Application Centres
China, UAE

Production Plants
China, UAE

Sales Offices/Representative Offices
China, Egypt, India, Indonesia, Japan, Singapore, Thailand, UAE, Vietnam

Logistics Hubs
China, Malaysia, Singapore, UAE

This graphic is for representational purposes only. Though it was prepared with the greatest possible attention to detail, simplified illustrations may have been applied.

Our Business

Borealis is one of the world's leading providers of advanced and sustainable polyolefin solutions and a European front-runner in polyolefins recycling. In Europe, we are a market leader in base chemicals and fertilizers. We leverage our polymer expertise and decades of experience to offer value adding, innovative and circular material solutions for key industries such as consumer products, energy, healthcare, infrastructure and mobility.

In re-inventing essentials for sustainable living, we build on our commitment to safety, our people, innovation and technology, and performance excellence. We are accelerating the transformation to a circular economy of polyolefins and expanding our geographical footprint to better serve our customers around the globe.

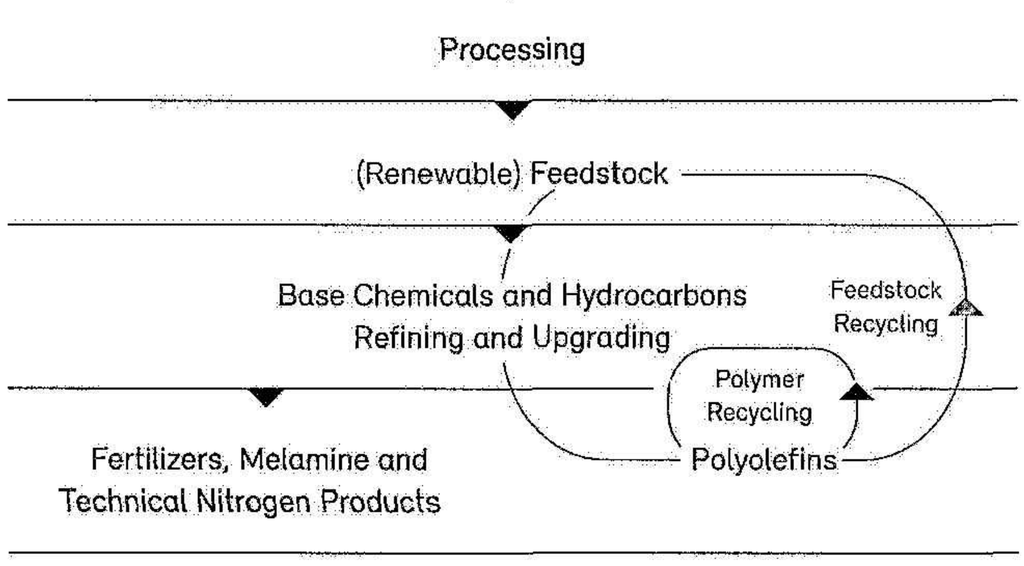
With head offices in Vienna, Austria, we employ ~7,600 employees and operate in over 120 countries. In 2022, we generated total sales and other income of EUR 12.2 billion and a net profit of EUR 2,111 million. OMV, the Austria-based international oil and gas company, owns 75% of our shares, while the remaining 25% is owned by Abu Dhabi National Oil Company, or ADNOC, based in the United Arab Emirates (UAE). We supply services and products to customers around the globe through Borealis and two important joint ventures: Borouge (with ADNOC, headquartered in the UAE); and Baystar™ (with TotalEnergies, based in the US).

Value creation through innovation is at the core of Borealis' strategy
Borealis continuously invests in its people, its Borstar® and other proprietary technologies and in its working processes, both internally and with external partners. The result is continuous technological improvement.

As a leading innovator in its industries, Borealis continuously identifies and anticipates unmet market needs to consequently develop the corresponding solutions. Using proprietary technologies, innovative tools and leveraging expertise acquired over many years, Borealis unlocks material's molecular properties and creates tailor-made products.

Borealis enhances this process with in-depth market knowledge, a cross-functional approach and an emphasis on open innovation.

Fig. 1: **Chemical production flow**



Industry Segments
Borealis clusters its businesses in three industry segments: Polyolefins, Base Chemicals and Fertilizers, Melamine and Technical Nitrogen Products.

Polyolefins
The value-adding polyolefin products manufactured by Borealis form the basis of many valuable plastics applications that are an intrinsic part of modern life. Advanced Borealis polyolefins have a role to play in saving energy along the value chain and promoting more efficient use of natural resources. Borealis works closely with its customers and industry partners to provide innovative and value-creating plastics solutions in a variety of industries and segments. These solutions make end products safer, lighter and more affordable and easier to recycle. In short: they enable more sustainable living.

Borealis offers advanced polyolefins for virgin and circular economy solutions, servicing these industries: Consumer Products, Energy, Healthcare, Infrastructure and Mobility.

20230711198819

Advanced polyolefins for virgin and circular economy solutions

Polymer Solutions

Borealis continually develops novel and performance-enhancing solutions, such as polymer modifiers (plastomers and elastomers), foam solutions and reinforced polyolefins for structural parts. These material solutions may be designed for new or existing applications.

In polymer modifiers, Borealis continues to expand its wide range of attractive solutions. The multitalented Queo™ brand helps bridge the performance gap between conventional plastics, such as polyethylene (PE), and conventional elastomers, like ethylene propylene diene monomer. Queo makes it possible to meet or even surpass the most demanding requirements in sealing, flexibility, compatibility and processability.

Borealis' high melt strength (HMS), polypropylene-based foamed products fulfil the varying and sophisticated needs of both converters and consumers in the packaging, automotive and construction industries. For example, foam solutions in packaging offer excellent recyclability, especially when compared to conventional alternatives. Furthermore, HMS polypropylene (PP) foam also offers weight reduction, heat stability (for microwaveable packaging) and good thermal insulation properties.

Borealis' reinforced polyolefins are novel, performance-enhancing material solutions. The wide range of PP compounds are globally available and help contribute to enhanced sustainability, for example, through improved cost and energy efficiency.

Circular Economy Solutions

Borealis Circular Economy Solutions is dedicated to discovering new opportunities for long-term business growth, primarily in the areas of mechanical recycling, chemical recycling (in collaboration with Borealis partners – OMV and Renasci), reuse, renewable feedstock and design for recyclability (DfR).

Over recent years, mechanical recycling has proven to be effective and it will likely remain the eco-efficient method of choice in the foreseeable future when implementing the principles of the circular economy. The circular economy opens up new ways to re-invent the economy in the interest of preserving natural capital and minimising waste. Another important aspect of eco-efficient waste stream management is DfR, which incorporates recycling principles into the design process itself, in order to achieve optimised circulation of material for recycling and reuse. To this end, Borealis is collaborating with value chain partners – designers, retailers, packaging producers and brand owners – to develop material solutions and concepts to improve end-of-life recyclability and the performance properties of recyclate material.

Industries served with these advanced polyolefin solutions

Consumer Products

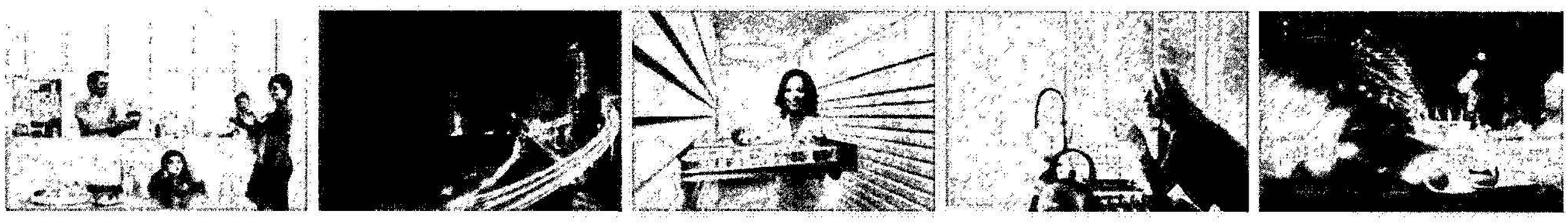
With over 50 years' experience in the industry, Borealis is an innovative and reliable supplier of superior polyolefin plastic materials used in advanced packaging, fibre and appliances.

Value-added packaging and fibre innovations play a role in safeguarding the quality and safety of consumer and industrial products, and also fulfil demand for enhanced functionality and convenience. Plastic food packaging, for example, helps protect and preserve food from farm to fork. Spoilage is avoided thanks to efficient filling systems and leak-resistant packaging. Food stays fresh longer and less must be thrown away. In addition, the consumer has a wider range of choices when it comes to convenient and appealing packaging formats.

Superior and proprietary Borealis technologies, such as Borstar™, also make advanced applications possible in flexible packaging (including lamination film, shrink film and stand-up pouches); rigid packaging (caps and closures, bottles, thin wall and transport packaging); and non-woven and technical fibres (filtration systems, hygiene products and technical textiles).

Fig. 2: **Industries served by Borealis' polyolefins applications**

With our advanced polyolefins for virgin and circular economy solutions, we serve these industries:



Advanced PP solutions offered by Borealis make white goods (such as washing machines, refrigerators, air conditioning units and more) and small appliances (such as toasters, ventilators and power tools) lighter yet more robust, and more energy efficient yet visually appealing.

Energy

Borealis is a leading provider of polyolefin compounds for the global energy industry. Step-change innovations based on the Borlink™ technology make electricity power grids more robust and reliable, eliminate wastage and help transport energy from renewable sources more efficiently and over longer distances. The broad range of sophisticated solutions includes extra high, high and medium voltage solutions for energy transmission, and low voltage solutions for energy distribution cable applications.

Safer wires and cables for the solar, automotive and construction industries are made possible by unique Borealis polymer manufacturing technologies. Borealis also has a proven track record of innovation in the area of flame retardant cables for these industries. Borealis offers a comprehensive range of communication cable solutions for advanced data, copper multipair, fibre optic and coaxial cables, all of which enhance the efficiency of data and communication networks.

Leading Borealis PP material solutions are used to produce capacitor film products. Meeting exceptional cleanliness standards, these materials help achieve outstanding electrical properties. Their consistent processing behaviour enables the production of extremely thin films.

20230711119820

Unique polymer and manufacturing technologies using Borlink, Visico™/Ambicat™, Borstar and Casico™ allow Borealis to offer innovative compounds tailored to specific customer needs.

With the launch of the new flagship solar brand Quentys™ in 2017, Borealis moved into the global solar industry. Pioneering new products based on Quentys are making solar energy more effective, affordable and long-lasting. For example, Borealis polyolefin encapsulant films improve the operational reliability of photovoltaic modules throughout the product lifetime. This results in better cost efficiency and thus greater viability for solar power.

Healthcare

Borealis offers reliable solutions that add value to healthcare, thanks to an impressive track record in Value Creation through Innovation and close co-operation with customers.

The growing Bormed™ polyolefins portfolio offers superior technical performance for medical devices, pharmaceuticals and diagnostic packaging. Borealis' innovations help make healthcare packaging and medical devices safer and more affordable, while improving usability – a key criterion in today's ageing society.

Healthcare products that have been enhanced by advanced polyolefins made by Borealis include, among others: medical devices, medical pouches, sachets, syringes, insulin injection devices, unbreakable transparent bottles and single-dose eye drop dispensers.

Importantly, as a global supplier, Borealis can ensure security of supply and provide technical support tailored to the specific and stringent requirements of the market.

Infrastructure

A trusted partner to the pipe industry for over 50 years, Borealis supplies advanced polyolefin pipe system materials to a wide range of infrastructure projects around the world. By offering more durable and reliable pipes, Borealis' step-change innovations continue to boost the sustainability of pipe networks by making them safer and more efficient. These improved networks also help eliminate wastage and loss, while at the same time offering energy savings.

Water and sanitation systems can be made more efficient and reliable by using proprietary Borealis materials. For example, when compared to conventional materials, modern PE systems reduce water losses by a factor of eight. Trenchless technology reduces installation costs by up to 60%.

Using its proprietary Borstar technology as a base, Borealis offers pipes used in many different industries: water and gas supply, waste water, drainage and sewage disposal and plumbing and heating.

For the oil and gas industry, Borealis provides reliable and high-quality solutions from one end of the pipeline to the other, including multi-layer coating solutions for onshore and offshore oil and gas pipelines.

Mobility

Borealis is a leading supplier of innovative polyolefin plastic materials for engineering applications in the mobility industry segment.

Proprietary Borealis technologies are lighter weight replacement solutions for conventional materials such as metal, rubber and engineering polymers. Borealis' material solutions help facilitate lightweight construction and thus play an important role in reducing carbon emissions. For instance, over the lifespan of an automotive application like a bumper, eight kilogrammes (kg) of carbon emissions can be avoided by using one kg of PP compounds. Borealis grades with post-consumer recycled (PCR) plastics content meet growing industry and end-user demand for high-quality materials that make better use of the planet's resources. By combining PCR and virgin material to produce high-end grades of consistent quality, fewer resources are used and less waste is generated over the lifetime of the product.

Borealis offers these leading-edge, lightweight polyolefins for a wide range of exterior, interior and under-the-bonnet applications, including bumpers, body panels, dashboards, door claddings, central consoles, pedal housings, cooling systems, battery trays and semi-structural body parts. Working closely with key value chain partners, Borealis continually develops novel materials for specific composite applications, such as structural carriers.

Base Chemicals

Hydrocarbons & Energy

Borealis produces a wide range of products for use in numerous industries, including phenol, acetone, ethylene and propylene. Borealis sources various feedstock, such as naphtha, butane, propane and ethane from the oil and gas industry. Through its olefin units, it converts these into the building blocks of the chemical industry: ethylene, propylene and C4 hydrocarbons (petrochemical derivatives consisting of butanes, butylenes and butadienes), among others. Steam crackers in Finland, Sweden and Abu Dhabi – the latter operated by Borouge – produce ethylene, propylene and C4 hydrocarbons, while propylene is also produced in a propane dehydrogenation plant in Kallo, Belgium. Feedstock and other olefins required for Borealis and Borouge polyolefin plants are either sourced from its owners or purchased on the market. A range of co-products from the steam cracking process, including butadiene, butene compounds and pygas, are also sold on international markets.

Phenol, benzene, cumene and acetone are produced in Finland and sold mainly to the adhesive, fibre, epoxy resin and polycarbonate industries. In the Nordic and Baltic regions, Borealis is the leading producer of phenol, which is used in adhesives, construction materials, carpets, CDs, DVDs, mobile phones and household appliances. Acetone is commonly used in solvents for paints, acrylics, fibres and pharmaceuticals.

In line with its ambition to proactively drive the transition to a circular economy, Borealis has also started to process renewable and chemically recycled feedstock.

20230711119821

Fertilizers, Melamine and Technical Nitrogen Products
Borealis produces and then distributes and supplies around five million tonnes of fertilizers and technical nitrogen products each year via its Borealis L.A.T distribution network. This comprises more than 60 warehouses across Europe and has an inventory capacity of over 700,000 tonnes.

Fertilizers
Efficient and effective use of fertilizers has become more essential than ever. The world's population is expected to rise from today's 7.6 billion to over 9.6 billion by 2050, and an increasing number of people will live in densely populated urban areas. As incomes in emerging nations rise, more meat is consumed and more grain must be produced to feed livestock. Biofuels also generate demand for increased yields. Because space for agricultural expansion is limited, yields must be optimised. At the same time, in many nations there is a heightened awareness of the need to promote fertilizers with low carbon footprints, maintain healthy soil environments and reduce run-off from fields.

The product portfolio comprises nitrogenous fertilizers, compound NPK fertilizers and speciality fertilizers with various formulas of primary and secondary nutrients as well as oligo elements. Non-European markets are serviced mainly via the Borealis Rosier distribution network.

Melamine
Borealis produces melamine at its plants in Linz, Austria, and at its facility in Piesteritz, Germany. Converted from natural gas, melamine has become an essential material for the global production of synthetic resins. Around 80% of Borealis' melamine production is destined for the wood-based panel industry, for example for decorative surface coatings of wood-based materials. Melamine also plays an important role in the manufacture of everyday objects used in the kitchen or around the house, for example, as one component used to make handles for pots and pans.

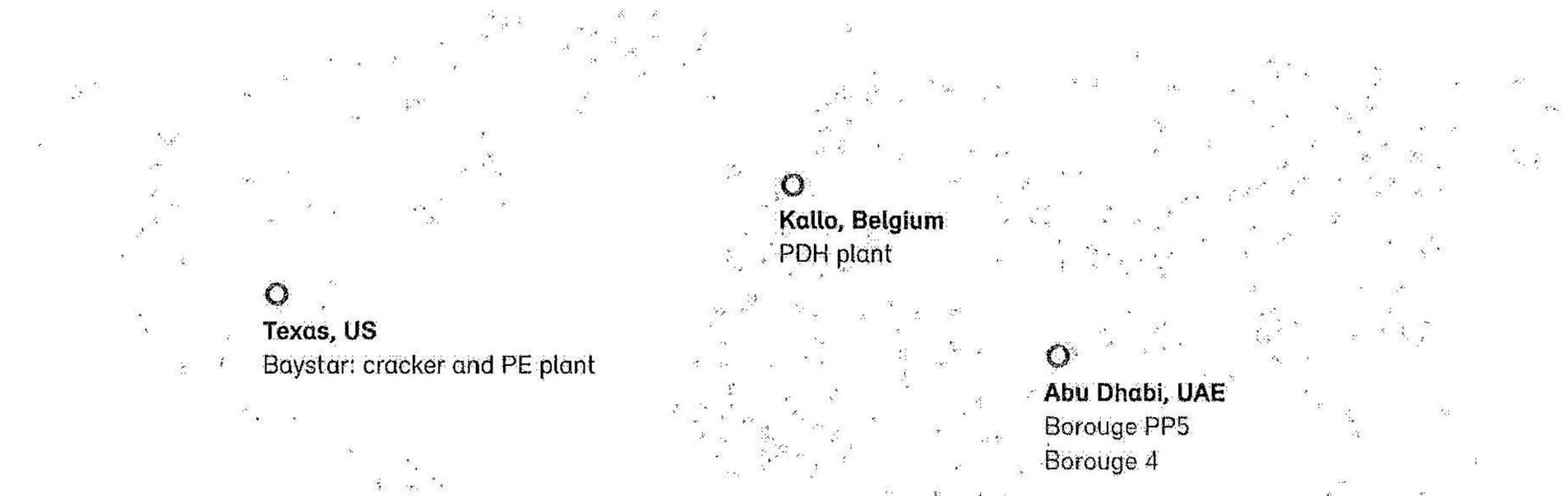
Technical Nitrogen Products
A broad range of technical nitrogen product solutions is derived from the raw materials urea, ammonia, ammonium nitrate and nitric acid.

AdBlue®
AdBlue, a high-purity aqueous urea solution, is used as a NO_x reduction agent for trucks, buses, tractors, construction machinery and diesel passenger cars.

Ammonia
A compound of nitrogen and hydrogen, ammonia has many uses: as a precursor or intermediate product in the production of nitrogenous materials; as a refrigerant in cooling systems; as a NO_x reduction agent; and as a hardening agent for metal surfaces.

Urea
Urea is a synthetically produced organic compound of ammonia and carbon dioxide. It is utilised in the production of melamine and the glues used in particle boards, but also as a raw material for resins and as a NO_x reduction agent.

Global Growth Projects



Bayport Polymers LLC (Baystar™)

- 50/50 joint venture with TotalEnergies
- Location: Texas, US
- 1,000 kilotonne per annum (kta) ethane cracker in Port Arthur, started up in 2022
- 625 kta Borstar® polyethelene (PE) plant in Pasadena
- Borealis Borstar – technology, which will be used in North America for the first time – will allow Baystar to produce enhanced polyethylene products for the most demanding applications

World-scale propane dehydrogenation (PDH) plant

- 100% Borealis ownership
- Location: Kallo, Belgium
- 740 kta propylene production
- PDH is a vital process step in the production of propylene from propane. As one of the most important building blocks in the entire chemical industry, propylene is the raw material used to produce PP, which in turn is one of the most widely used plastics
- Estimated start-up date: H2 2024

Borouge: Fifth polypropylene plant (PP5, part of the Borouge 3 expansion) // Borouge 4

Borouge was listed on the Abu Dhabi Securities Exchange in June 2022. ADNOC owns a majority 54% stake and Borealis holds a 36% stake in Borouge.

Borouge PP5

- 480 kta PP plant
- Production based on Borealis proprietary Borstar technology
- Integrated with the existing Borouge 3 complex, adding value to the surplus propylene available from Takreer's PDH unit
- Start-up celebrated in February 2022

Borouge 4

- One 1.5 million tonnes pa ethane cracker, to be the fourth cracker in Borouge's integrated petrochemical complex in Ruwais
- Two Borstar PE plants, each with a production capacity of 700 kta, using state-of-the-art Borealis Borstar third-generation (3G) technology
- One 100 kta cross-linked PE (XLPE)
- One Hexene-1 unit, producing co-monomers for certain PE grades
- In progress: in-depth study for carbon capture unit

20230711119822

About the Kallo Case

Alleged Human Trafficking Practices by (Sub)contractor at Propane Dehydrogenation Construction Site in Kallo, Belgium

In 2019, Borealis started constructing a propane dehydrogenation (PDH) plant in Kallo, Belgium. This is a mega project, representing an investment of more than EUR 1 billion.

As Borealis produces chemicals, its core competence is not building new plants, nor does the Group have the manpower to do this. Borealis has therefore outsourced 99% of the work to specialist engineering and construction companies.

After extensively screening the available contractors that specialise in this line of work, Borealis chose, amongst others, to engage IREM. Given the size and complexity of the project, Borealis also engaged Tecnimont as an EPCm (Engineering, Procurement & Construction Manager) for overall management and communication with all contractors including IREM.

During the original project setup, Borealis worked with around 20 significant contractors on the Kallo PDH site. On an average work day, up to 1,200 workers were on the site, the majority of which were contractors. Overall, about 1,000 of the workers were originally employed via the IREM companies and their subcontractors.

Borealis compensates its contractors based on unit rates for work done and not based on hourly rates for individual people working on the site, as is customary for these kinds of contracts. The contracts with Borealis' contractors for the construction site in Kallo have payment terms that are fully in line with Western European standards. The possibility of large scale social fraud at the PDH construction site in Belgium only became clear to Borealis after the Belgian authorities intervened in mid-July 2022. The real potential impact became clear even later, after particularly alarming reports in the press in relation to social fraud and the possibility of human trafficking.

In late July 2022, Belgian media started to report on alleged human trafficking practices conducted by the IREM group and their sub-contractors Anki Technologies and Raj Bhar Engineering at the Kallo site, involving exploitation, inadequate compensation, lack of social security and poor housing conditions. The media subsequently alleged that Borealis had been informed two months earlier about these large-scale human trafficking practices.

Borealis' internal checks have established that in May 2022, a Borealis employee was made aware for the first time of allegations of social malpractices in relation to one IREM worker and that this incident had been reported to the Social Inspectorate of Belgium. The Borealis employee obtained this information through a private social media channel and immediately took steps to validate the information.

Borealis' Response

Borealis has zero tolerance for any malpractice and puts stringent measures in place to mitigate related risks. The Group feels deeply sorry for the victims who have suffered maltreatment and disrespect of their basic human rights and has offered – to the extent legally allowed – its financial aid to support the organisations in charge, to provide them with physical and mental health support, safe shelter, help gaining official work permits or, if they prefer, relocating them.

Upon becoming aware that the authorities were investigating, Borealis immediately offered support and provided all requested information to the authorities, in full transparency.

After being informed of the alleged human trafficking practices by the IREM group and its subcontractors, Borealis took the following immediate measures.

The Group established a crisis management team led by the relevant Executive Board member Philippe Roodhooft, conducted thorough internal checks, launched audits and inspections of other contractors and took other actions to improve monitoring and speaking-up related to its contractors' business conduct.

Borealis also encouraged both internal and external stakeholders to use the Borealis Ethics Hotline, through which victims can also submit their grievances. All reports received via this Hotline were handled with the utmost priority and in line with legal requirements.

Borealis immediately suspended and later terminated all contracts with the IREM group companies, due to their non-compliance with the fundamental principles of contract. Borealis then retendered the contracts. Given the size of the contracts that Borealis had to terminate, more than 1,000 workers were affected and were unable to continue their work at the Kallo construction site.

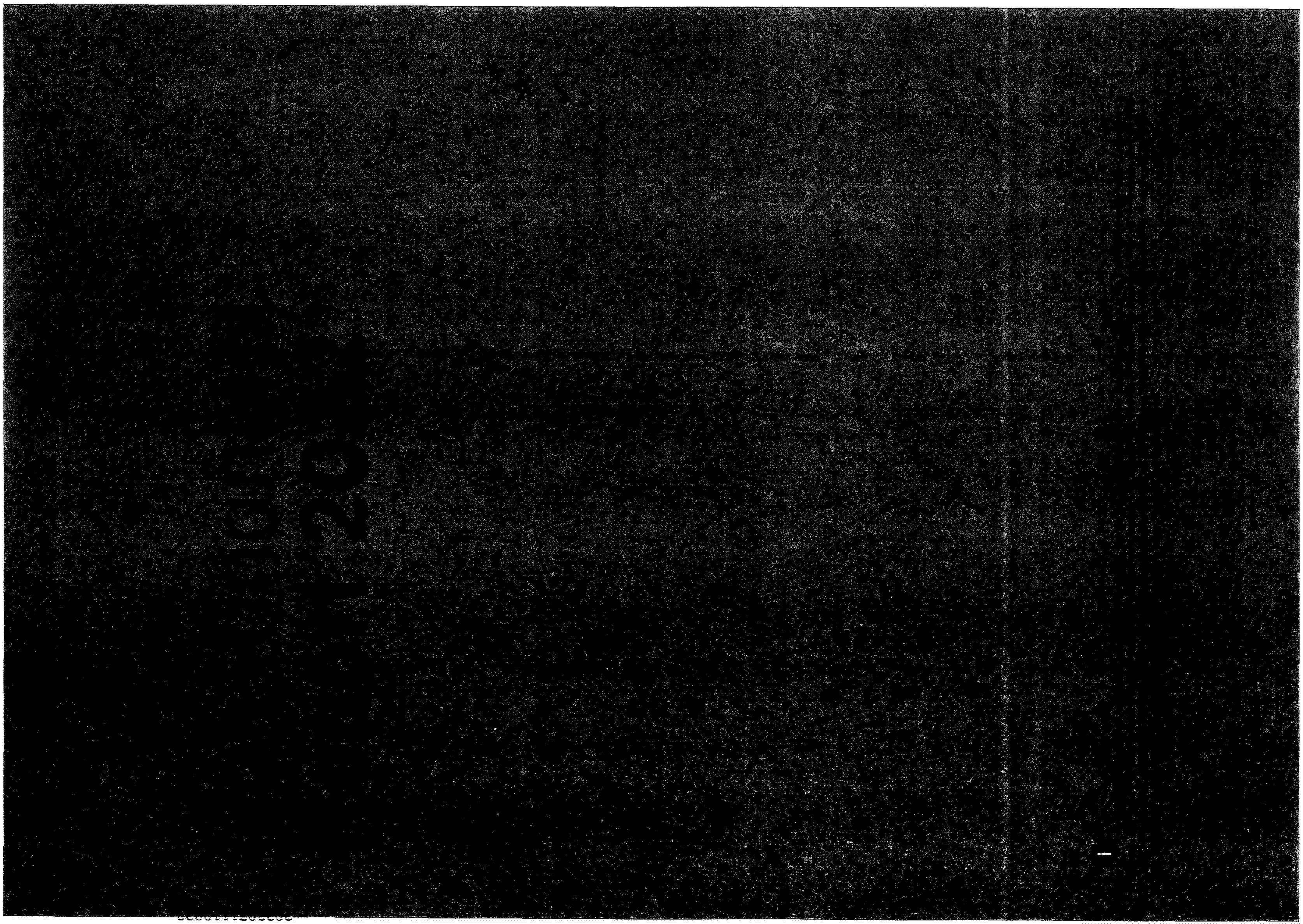
After careful consideration, Borealis awarded a major part of the remaining mechanical and piping works to the contractor Ponticelli and implemented thorough social controls at the Kallo construction site, to respect and value the workers there. Work on the construction site gradually increased from October 2022. The continuation of the project has allowed many workers to return to the site and will allow many more to return in the future, in strict compliance with legal requirements and in line with Western European standards.

Towards the end of 2022, Borealis awarded the remaining electrical and instrumentation construction works to Equans. At the same time, NAFTO was awarded further elements of the remaining mechanical and piping works. The plant is estimated to start up in the second half of 2024.

Keeping Stakeholders Informed
Borealis regularly provides transparent information to its employees and external stakeholders about the occurrences at the Kallo PDH construction site. Since the beginning of the incident, Borealis' employees have received regular updates through streamed live events hosted by the Borealis Executive Board, including live question and answer sessions, townhall meetings, briefing packages cascaded via line management and intranet news. External stakeholders have received information via media releases, media relations and direct information, for example through the sales and public affairs teams.

Actions Taken to Ensure Similar Incidents will not Happen Again
Based on the lessons learned, Borealis has strengthened, and will further strengthen, its processes and mitigation measures. After thorough analysis and consultation with subject matter experts and external consultants, Borealis has implemented the following improvements to set a new standard and prevent a similar incident from happening again.

- Social Compliance Management
  Borealis has created the new position of Group Social Compliance Manager, who reports directly to the Group Compliance & Ethics Officer. The new manager is responsible for monitoring the proper and legal business conduct of Borealis' contractors and all other supply chain partners, alongside colleagues from the compliance, procurement and internal audit functions. In addition to the Group function, Borealis has recruited a local Social Compliance Manager in Kallo and plans to also install local social compliance cells in other locations and significant projects. The scope of their responsibilities includes, amongst others, audits, spot checks, investigations, due diligence and vetting, contract review and coordination in the fields of procurement, health, safety and environment, legal, and the People & Culture business area.
- Speak-up campaign
  Borealis strengthened its speak-up campaign, to encourage reporting of suspected or witnessed misconduct. The campaign is specifically addressed to workers of contractors, who are invited to directly contact Borealis in case of such misconduct.
- Reinforcing project management
  Borealis has introduced a number of changes to further enhance the quality of its project management
- Improvement of processes
  The Group has further improved processes for vetting, due diligence and monitoring of supply chain partners, including enhanced due diligence requirements for contractors who assign personnel to Borealis' sites.
- Training
  Additional training has been provided and created awareness for internal project teams and contractors, to address the detected issues.



About the Non-financial Report

The Consolidated Non-financial Report 2022, as part of the Combined Annual Report 2022, has been prepared in accordance with the GRI Universal Standards 2021, as well as the legal requirements for the publication of a consolidated non-financial report (Section 267a of the Austrian Commercial Code). In 2021, Borealis joined the United Nations Global Compact (UNGC). This report also covers the ten universal principles of the UNGC.

The report provides information for the period from 1 January 2022 to 31 December 2022, following an annual reporting cycle. The last report, for the year 2021, was published in March 2022.

The Executive Board and Supervisory Board have reviewed and approved the material topics as part of the approval of the Sustainability Strategy and are also responsible for the final approval of the non-financial information.

The Consolidated Non-financial Report 2022 differentiates between the product segments Polyolefins, Hydrocarbons & Energy and Fertilizers, Melamine and Technical Nitrogen Products. This approach was chosen to make the sustainability impacts of the different product segments more transparent.

The COVID-19 pandemic had no significant influence on Borealis' Sustainability Strategy and the Group's sustainability goals have not been adjusted due to the pandemic.

A reference table connects the material topics, non-financial matters according to Section 267a (2) of the Austrian Commercial Code, the UNGC principles and the respective chapter in this report (→ Overview of Material Topics, Annex, p. 292). The GRI Content Index in the appendix of this Combined Annual Report outlines where specific GRI reporting elements and indicators are addressed in the report (→ GRI Content Index, p. 300).

Scope of the Non-financial Information
As described in the Notes to the Consolidated Financial Statements, Borealis is in the process of divesting the majority of its nitrogen business unit, including fertilizers, technical nitrogen and melamine products. As last year, this has resulted in the business being classified as a "discontinued operation" in the Consolidated Financial Statements. Accordingly, turnover, capital expenditure and operating expenditure, as presented in the chapter EU Taxonomy (→ chapter EU Taxonomy, p. 98), do not include the nitrogen business unit.

As a result of the divestment, this year the corresponding non-financial data are reported separately (HC&E/PO data including Rosier subsidiaries). In previous years, data was presented consolidated at Group level. Non-financial data are reported for those activities where Borealis is the operator or where Borealis has a stake of more than 50% and exerts controlling influence.

Exceptions
For HC&E/PO, the following exceptions are made:
- Procurement: Borealis Brasil S.A., Borealis Poliolefinas da América do Sul Ltda and Borealis Compounds Inc. are excluded from PO procurement data. Additionally, Ecoplast Kunststoffrecycling GmbH and DYM SOLUTION CO., LTD are excepted from Procurement of Raw Material;
- Logistics: Borealis Brasil S.A., Borealis Poliolefinas da América do Sul Ltda and Borealis Compounds Inc. are excluded from CO_2 emissions arising from shipment of PO products. DYM SOLUTION CO., LTD is also excluded from CO_2 emissions arising from shipment of PO products (with the exception of maritime shipment, which is included) and from total transported volumes;

20230711119824

- Occupational Health & Safety: Ecoplast Kunststoffrecycling GmbH, mtm plastics GmbH and mtm compact GmbH are excluded from the incident action completion rate;
- Environmental Management: DYM SOLUTION CO., LTD is excluded from all environmental indicators;
- Climate and Energy: DYM SOLUTION CO., LTD is excluded from all energy-related data;
- Corporate Governance: mtm plastics GmbH and mtm compact GmbH, Ecoplast Kunststoffrecycling GmbH and DYM SOLUTION CO., LTD are not included in Group Borealis Management System;
- Ethics & Compliance and People & Culture: DYM SOLUTION CO., LTD and mtm plastics GmbH and mtm compact GmbH are excluded from e-learning courses

Rosier and subsidiaries are excluded from the following non-financial PO/HC&E data, as the process of the data integration still has to be set up after the decision was taken to divest the majority of the nitrogen business unit:

- Procurement of Feedstock, Electricity & Utilities
- Procurement of Raw Material, Technical Suppliers & Services
- Procurement Logistics
- Taxonomy
- Occupational Health & Safety: Rosier is excluded, except for the overall TRI rate
- Corporate Governance
- Ethics & Compliance: Rosier is excluded from e-learning courses

The exclusions listed above are not material to the Group's total non-financial performance. However, Borealis will work on further increasing the scope of its non-financial reporting in future.

Changes from the Previous Report

For the first time, Borealis has prepared its non-financial report in accordance with the GRI Universal Standards 2021. In the course of this, the set of indicators reported was expanded, especially with regard to employees, ethics and supply chain. Processes to close the remaining data gaps have been initiated or will be initiated during the coming year. Furthermore, for 2022 Borealis is reporting both its eligibility according to the EU Taxonomy Regulation and its taxonomy alignment.

Otherwise, there were no material changes from the previous report. Restatements of data are indicated with footnotes in this report or in the GRI Content Index.

The Consolidated Non-financial Report 2022 has been subject to an internal quality review and key sections were audited with limited assurance by PwC Wirtschaftsprüfung GmbH. The assurance engagement was conducted in accordance with the International Standard on Assurance Engagements 3000 (revised), issued by the International Federation of Accountants. The Independent Limited Assurance Report on the Consolidated Non-financial Report describes the exact scope of the audit (→ Independent Assurance Report, p. 161).

For questions regarding sustainability or social responsibility, please contact → sustainability@borealisgroup.com.

Sustainability Management

Goals for 2022	Key Achievements of 2022
Launch Group Strategy 2030 with sustainability at its core	Group Strategy 2030 approved by Borealis Executive and Supervisory Boards and published in June 2022, including ambitious targets on emission reductions and stepping up the circular economy
Engage the Borealis organisation in the roll-out of the Group Strategy 2030 with specific focus on sustainability	Conducted internal conferences with Borealis leaders to engage on the strategy roll-out, followed by division and business unit/function specific workshops
Elevate sustainability on the Group's agenda by setting up the organisation appropriately	Carved out the Sustainability & Public Affairs team from Strategy & Group Development, with the team reporting directly to the Chief Executive Officer from 1 January 2022
Assess alignment with the EU Taxonomy and establish the required competence	Assessed Borealis' key activities against the EU Taxonomy criteria and created an EU Taxonomy Project Manager role, to build up competence and embed the requirements in Borealis' processes where needed
Establish a central competence centre for life cycle analysis (LCA)	Established the role of LCA Expert, to harmonise and coordinate LCAs and ensure continuous improvement of the methodologies applied

Borealis is committed to building a prosperous and sustainable future for all, by placing sustainability at the core of everything it does. This is expressed clearly in the Group's purpose statement "Re-inventing Essentials for Sustainable Living", a spirit shared across the OMV Group of companies.

Improving Borealis' sustainability performance will enable the Group to achieve its purpose, while at the same time ensuring growth and building on Borealis' robust foundations of safety, people and culture, innovation and technology, and performance excellence.

In 2022, Borealis launched its new Group Strategy 2030 with sustainability at its core, and set ambitious targets for reducing its impact on climate change, transforming towards a circular business, and continuously enhancing its health and safety performance.

Governance

Sustainability is an integral part of the Borealis Group Strategy and the OMV Group Strategy. The Borealis Executive Board is Borealis' highest governance body for sustainability. The Executive Board has delegated the routine management of social, environmental and economic issues to senior leaders in their respective functions and business divisions.

The Borealis Sustainability Function is led by the Director Sustainability & Public Affairs, who reports directly to the CEO. The Function leads the development of the Group's Sustainability Strategy, and supports Borealis' leaders with developing sustainability-driven roadmaps and activities and implementing them through capability building, expertise, consultancy and dedicated methodologies and tools. For key topics, such as energy and climate or microplastics, the Group has established committees or issue teams.

Each Group function reports on sustainability issues to the respective Executive Board member, including reporting on progress with activity implementation and related targets, seeking approval of budget and activity plans, as well as reporting key concerns, risks and opportunities.
→ chapter Corporate Governance, p. 56

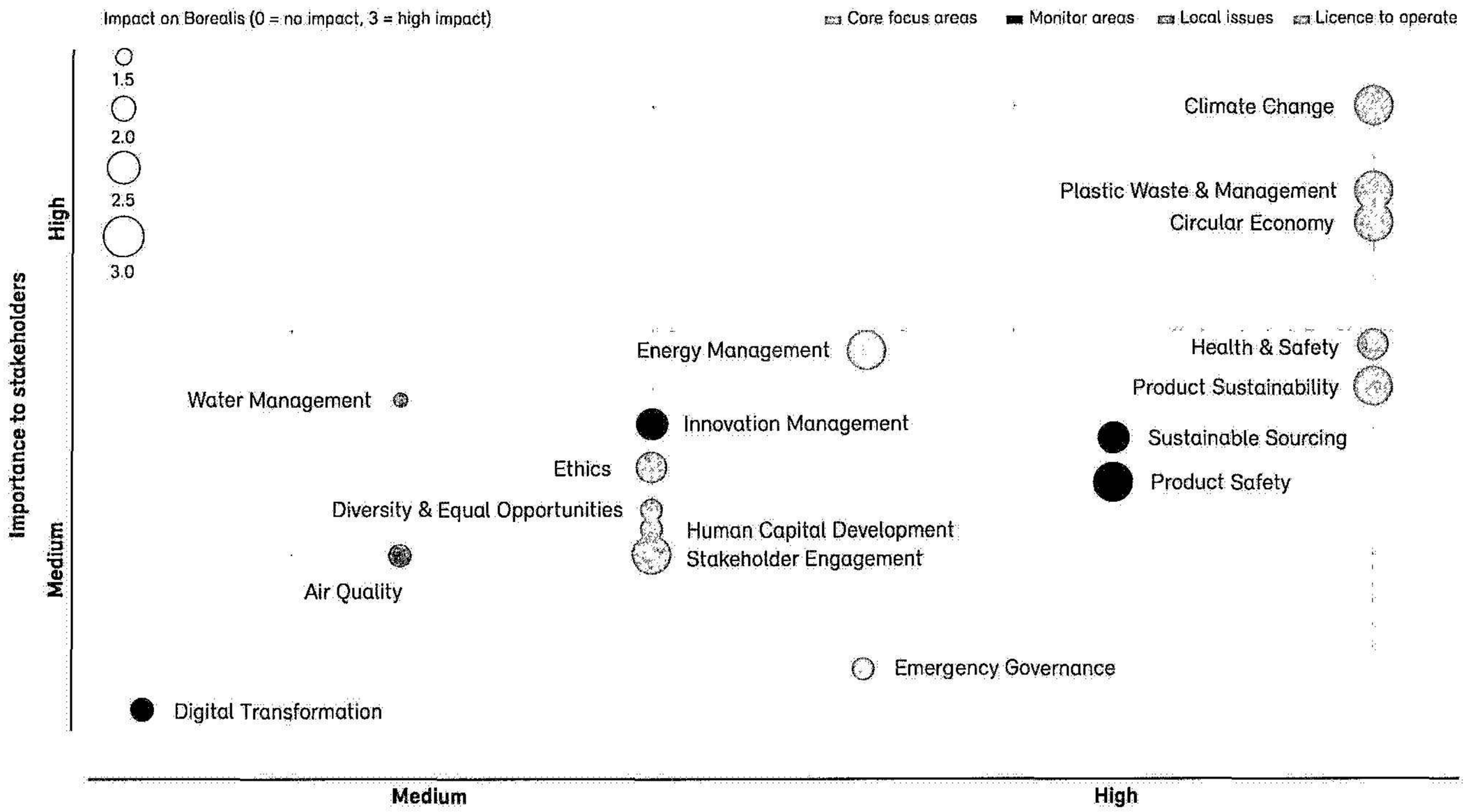
Stakeholder Engagement

As a responsible company that aims to lead the transformation towards circularity and climate neutrality, it is essential for Borealis to create a constructive and respectful dialogue with internal and external stakeholders. Only by doing so will Borealis achieve its vision and succeed in implementing its Group Strategy 2030, including its related sustainability goals.

Borealis therefore places great importance on regular exchanges with stakeholders, to learn about their views and concerns, listen to their expectations of Borealis, and communicate about the Group's activities in a transparent and informed manner. This helps Borealis to mitigate potential risks or leverage opportunities for co-operation in a timely way and to reflect the insights in the Group's materiality assessment.

20230711119825

Fig. 3: **Results from the Materiality Assessment 2019**



Borealis' business activities and sustainability issues involve a diverse and complex range of stakeholders at a global, national and regional level, with different interests and concerns. The Group therefore uses a broad range of engagement channels, driven by Borealis' respective functional departments.

Mapping and prioritising Borealis' stakeholders is a continuous and dynamic process. Borealis regularly runs stakeholder mapping and related issue, risk and opportunity assessments at Group level and at all of its major locations. The Borealis Management System details the processes for the Group's materiality and stakeholder assessments and its community-related issue and risk management. These processes were updated in 2020 to comply with the requirements of ISO 50001 and ISO 45001.

At the same time, individual departments carry out stakeholder and issue mappings for specific market and application segments. The output is a stakeholder map that indicates the importance of the stakeholder to Borealis (low/medium/high).

At Group level, stakeholder mapping and engagement is the responsibility of the respective business areas, such as Procurement, People & Culture, Innovation and Public Affairs. At a local level, this is the responsibility of Location Leaders.

The Group's next materiality assessment is planned for 2023 and Borealis intends to roll out an improved systematic stakeholder mapping and engagement process in preparation for this. → *chapter Public Affairs, p. 48*

Determining Material Sustainability Topics
To integrate stakeholder views and concerns and develop its sustainability roadmap, Borealis regularly conducts sustainability materiality assessments, in compliance with the legal requirements related to the disclosure of non-financial information in Austria (Nachhaltigkeits- und Diversitätsverbesserungsgesetz; NaDiVeG), as well as Global Reporting Initiative (GRI) Standards.

The first systematic assessment of this kind was carried out in 2013, followed by a refresh in 2019 which mainly reconfirmed the previous results. The assessment is repeated

at regular intervals and a follow-up assessment was planned for 2022. Due to resource constraints, the need to prioritise supporting the development of the new Group Strategy and the need to meet the new requirements imposed by GRI 2021, this project has been postponed to 2023. In the interim, Borealis has cross-referenced the material topics from the 2019 assessment with the required topics in the GRI 2021 Oil & Gas Sector standard and ensured all the corresponding requirements have been included in this report. No changes have been made to the list of material topics during 2022.

In the materiality assessment carried out in 2019, 17 sustainability aspects that are relevant for the chemical industry were assessed to understand their economic, environmental and social impact (both on Borealis and by Borealis). Relevant internal and external stakeholder groups were interviewed or assessed via desktop research, including customers, suppliers, brand owners, employees, NGOs, regulators and investors. The assessment was conducted with an external consultant, to maintain an objective and independent view.

The process consisted of four phases:
1. Defining & Collecting
2. Analysing & Comparing
3. Integrating & Validating
4. Concluding & Accelerating

For each topic, the Group defined four levels of response:
- **Focus:** core issues for Borealis
- **Monitor:** important sustainability issues to monitor
- **Local:** issues that are to be managed at local level
- **Licence to operate:** issues that are considered necessary for the Group to manage on a day-to-day basis

The following four materiality topics were identified as being the most important to Borealis and its stakeholders, and were subsequently acknowledged by the Executive Board and defined as "Core focus areas for sustainability acceleration":

1. Climate Change is the most highly rated topic, in terms of Borealis' impact on climate change and the importance to all stakeholders.

2. Circular Economy is one of the main drivers transforming plastics and chemicals industry business models and increasing their sustainability. It provides Borealis with opportunities to differentiate itself from other companies in the industry.

3. Plastic Waste & Management is an issue of high importance for Borealis, at both corporate and operational level. Proactive engagement by Borealis reaffirms its commitment to zero plastics leakage into the environment.

4. Product Sustainability and Product Safety are key drivers for developing and improving the sustainability of Borealis' products, to minimise stress on the environment and protect public health.

In addition, three topics have been designated as "monitor elements". These are sustainability topics for Borealis, which the Group must monitor and continuously improve:

1. Responsible Sourcing: Seeking responsible procurement is key to suppliers' adherence to Borealis' ethical standards, supplying sustainable raw materials and renewable energy as well as to the Group's ability to accelerate the transformation towards a circular economy and carbon neutrality.

2. Innovation Management: Innovation is at the heart of Borealis, providing the Group with opportunities to further differentiate itself from its industry peers, in respect of technological capabilities and research and development investments that lead to innovative and sustainable solutions.

3. Digital Transformation: Increasing digitalisation will be a transformational enabler for Borealis to deliver its strategy to 2030. Digitalisation will increase productivity, improve the customer experience and, in particular, accelerate the transformation towards a circular economy and CO_2 neutrality for the Group.

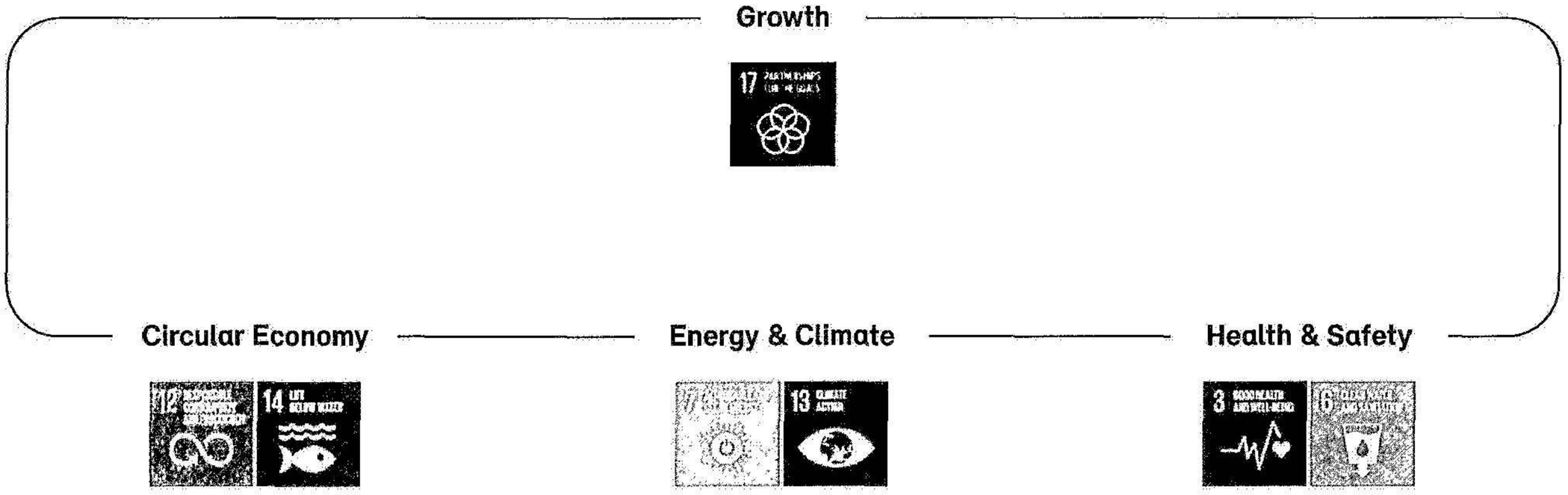
Air quality and water management were identified as "local issues" which require attention at an operational level, in conjunction with national authorities, laws and regulations, while all the topics categorised under "licence to operate" are fully integrated into Borealis' corporate culture and management processes and do not require specific additional focus at Group level.

Sustainability Framework and Targets

Following the 2019 materiality assessment, Borealis' Sustainability Framework is built around three focus areas. These are: Health & Safety, Circular Economy and Energy & Climate. The fourth pillar, Growth, is seen as

2023-07-11 19:19:26

Fig. 4: **Borealis' Strategic Sustainability Framework**



1) REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals

enabling prosperity for Borealis and society and supports implementation of the Group's plans in the three focus areas. To ensure the realisation of the Group's strategy and its sustainability ambitions, Borealis has set the following long-term goals, in addition to the goals it defined and communicated earlier.

Greenhouse Gas Emissions Goals

Borealis aims to reduce its Scope 1 and Scope 2 emissions from 5.1 million tonnes (base year 2019) to less than 2 million tonnes by 2030. The emission reduction portfolio includes increased use of electricity from renewable sources throughout the decade, as well as carbon capture projects, which will come on stream in the second half of this decade. The reduction target also includes the announced divestment of Borealis' nitrogen business, which comprises fertilizers, technical nitrogen products and melamine.

Circular Economy Goals

In 2019, Borealis processed around 64 kilotonnes of circular products in Europe. By 2025, Borealis is targeting a capacity increase of circular product solutions to 600 [1] kilotonnes. These include recycled and renewable polymers and chemicals, as well as renewable hydrocarbons. By 2030, the capacity of circular products and solutions is set to reach 1.8 [2] million tonnes globally, turning today's plastic waste into a valuable resource to be reused. Moving from a linear towards a circular economy will also significantly reduce the Group's Scope 3 [3] greenhouse gas emissions.

1) 2) Global capacities including non-consolidated Joint Ventures (Borouge) / 3) Scope 3 are indirect GHG emissions that are a consequence of company activities but occur from sources outside or not controlled by the company.

Energy Consumption Goals
In 2022, around 28% of the electricity Borealis used in its own operations was derived from renewable energy sources, such as wind and solar power. By 2025, the share of renewables in the electricity mix will increase to 40%. By 2030, 100% of the electricity used in Borealis' Polyolefins and Hydrocarbons operations will be of renewable origin. Furthermore, the Group aims to achieve zero non-emerging flaring, and continues to strive towards zero loss of plastic pellets from its operations.

Health & Safety Goals
Borealis will continue to work towards its Goal Zero targets of achieving zero work-related and process safety incidents or accidents. In addition, the Group strives to proactively substitute substances of concern.

Group Scorecard: Incentivising the Organisation to Drive Sustainability
In 2020, a sustainability KPI was added to the Group Performance Scorecard, reinforcing the importance of sustainability performance to Borealis' successful development and growth. In 2022, this KPI was further strengthened and refined, to fit the new Group Strategy 2030. It consists of GHG emission reduction (addressing Scope 1), renewable energy sourced (addressing Scope 2) and circular volumes produced (addressing Scope 3). Sustainability is also reflected in scorecards for the various business groups. For the Polyolefins business, the scorecard includes occupational and process safety, as well as the delivery of the circular economy strategy. For the Hydrocarbons & Energy business, the scorecard includes renewable electricity sourcing, safety incidents including supply chain, and delivering on circular economy milestones. For Fertilizers, Melamine, and Technical Nitrogen Products, the scorecard includes occupational and process safety incidents.

A set of sustainability-related KPIs was also integrated into the Bonus Incentive Plan (BIP) where a sustainability KPI is one of ten KPIs on the Group scorecard, and the Long Term Incentive Plan (LTIP) (→ chapter People & Culture, p. 76). For the LTIP, the relative weighting of sustainability aspects was significantly increased in 2022, from 10% in the 2021–23 plan to 30% in the 2022–24 plan, to incentivise Borealis' leaders to drive the transformation towards sustainability. In addition to circular products sold, renewable electricity sold, reduction of GHG emissions, diversity was added as a KPI to the LTIP.

Sustainability Rating
In 2014, Borealis participated for the first time in the EcoVadis annual sustainability assessment. EcoVadis is a global platform that uses one of the most accepted methodologies for assessing a company's sustainability, providing trusted business sustainability ratings and helping companies to evaluate and continuously improve their sustainability performance, including their customers and suppliers. In 2022, Borealis received a scorecard rating of 77 points. However, due to the incident in Kallo, Belgium (→ About the Kallo Case, p. 35), EcoVadis re-evaluated its rating and consequently Borealis lost its Platinum status.

Outlook
In 2023, Borealis will continue to reinforce its commitment to supporting the Group's sustainable development. In addition, Borealis will further enhance the implementation of its Group Strategy 2030 with a particular focus on sustainability by:
- refreshing the Materiality Assessment and Matrix;
- finetuning the roadmaps for strategy implementation (in particular Scope 1 and 2 emission reduction and the increased production capacity for circular volumes);
- further assessing opportunities to reduce Scope 3 emissions;
- developing the Group's approach to future non-financial reporting requirements, to ensure conformity with EU requirements and prepare to move from a combined to an integrated Annual Report; and
- amplifying public affairs advocacy, to support the increase of recycled plastics in packaging; and
- implementing new elements potentially being introduced to the EU Taxonomy;
- preparing for the implementation of the Corporate Sustainability Reporting Directive and European Sustainability Reporting Standards, which are mandatory from the 2024 reporting year; and
- establishing a biodiversity management framework, together with OMV Group, and enhancing knowledge and awareness of this topic in the organisation.

20230711119827

Fig. 5: **Stakeholder Engagement**

Stakeholder Group	**How we engage**	***Key topics of interest*** for the stakeholder and Borealis	***How we respond*** Examples of engagement in 2022	**Chapter**
Customers & Value Chain Partners	– Customer visits – Customer feedback and satisfaction surveys – Customer webinars – Trade fairs and conferences – Meetings, workshops and working groups at industry associations – Co-operation and partnerships to co-develop products and solutions – Responding to customers' ESG questionnaires	– Product price, availability, quality and safety – Supply reliability and customer service – LCAs, carbon footprint of Borealis products, and in particular circular product portfolio – Value chain co-operation and joint innovation – Borealis' sustainability strategy and commitments	– Customer webinar on emission reduction and circular economy; individual follow-up workshops or sessions with customers – Participation in the annual EcoVadis sustainability assessment – Welcoming customers and partners at the Borealis booth at K-Fair 2022 in Düsseldorf, Germany	– Innovation – Product Safety – Procurement of Raw Materials, Packaging, Technical Suppliers and Services – *Circular* Economy – Energy & Climate
Suppliers	– *Borealis Supplier Relationship* Management Programme – Supplier assessments/audits (TfS) – Workshops, training sessions – Annual industry conventions – Co-operation with selected suppliers (such as sourcing of renewable feedstock) – Collaboration on risk mitigating actions for substances of concern	– *Reliable and sustainable supply* of raw materials – Advancing sustainability and the circular economy – Lower environmental footprint – Compliance with environmental and social standards – Adherence to the Borealis Supplier Ethics Code of Conduct	– *Borealis Sustainability Supplier* Day in 2022, with more than 30 key suppliers – 2022 Logistics days in Borealis L.A.T. to discuss topics such as safety, sustainability and digitalisation – Discussions on obtaining CO_2 emission data on every product Borealis purchases, to define Scope 3 GHG data	– *Procurement* of Feedstock, Electricity and Utilities – Procurement of Raw Materials, Packaging, Technical Suppliers and Services – Logistics – Ethics & Compliance – Circular Economy – Energy & Climate
Industry & Trade Associations	– Membership in numerous national, EU and global associations – Active participation in working groups and board meetings – Associations' conferences – Participation in webinars	– Participating in policy debates – Exchanging expertise and experience – Monitoring trends and developments – Industry transformation towards a circular economy and climate neutrality	– Hosted site visit to the Beringen (Belgium) location, including neighbouring waste incineration and mechanical recycling facilities, to demonstrate the concepts of industrial symbiosis and circular economy to a trade association and a consultancy. – Supported Cefic and Plastics Europe in developing an Operation Clean Sweep (OCS) reporting scheme and a third-party audit and certification scheme	– Public Affairs – Circular Economy – Energy & Climate
Employees	– Regular performance reviews and feedback between employees and line managers, including development, training plans and wellbeing aspects – Involvement and information sessions through the intranet, townhall meetings, annual Executive Board (ExB) tour, CEO webinars, etc – Regular employee "Pulse Check" surveys – Idea management on the intranet and local idea boxes – Organisation of Safety Days, to stress its importance and create awareness	– Company vision, strategy, targets and performance – Individual and team contribution to the Group's success, as well as sustainability topics – Safe and healthy workplace – Work-life balance – Career opportunities – Equal and fair remuneration – Opportunity to engage/ inclusiveness – Job security	– Conducted Pulse Check in Autumn 2022, with 77% of employees participating and an overall engagement rate of 51% – Held a joint Diversity, Equity and Inclusion (DE&I) month in October 2022 with OMV, including panel discussions, keynote speakers, a theatre play and experience exchanges – Presented Borealis Excellence Awards in April 2022, for employees who significantly contributed in areas such as innovation, customer solutions, commercial excellence, HSE, and OPEX	– People & Culture – Occupational Health & Safety

Stakeholder Group	How we engage	Key topics of interest for the stakeholder and Borealis	How we respond Examples of engagement in 2022	Chapter
Works Councils	– Regular meetings and annual conference with Executive and Senior Management, works councils and the Corporate Co-operation Council (CCC), which became the European Works Council in 2022	– Employee health, safety and wellbeing – Working conditions, environmental measures such as OCS, process improvements – Transparent and early information, as well as involvement in key decisions – Opportunity to provide input and raise concerns	– Held CCC conference in 2022, focusing on work-life balance and how to make this happen	– People & Culture – Occupational Health & Safety
Local Communities	– Ongoing dialogue with communities through channels best suited to local needs, including face-to-face meetings with community representatives and local authorities, newsletters, Open Door Days and site tours – Regular assessment of potential social and environmental impact on the communities	– Employment and infrastructure investments – Potential impact on local communities such as emissions (flaring), spills (pellet loss), noise or traffic – Grievance mechanism	– Beringen (Belgium): Family Day for all employees and their families – Stenungsund (Sweden) and Porvoo (Finland): neighbourhood newsletters – Linz (Austria): Inauguration of a recycling exhibition; Presentation of "Ocean Eye" Escape Box in the Linz	– Ethics & Compliance – People & Culture – Environmental Management
Governments and Regulators	– Sharing Borealis' views on upcoming policies and regulations, their opportunities and potential challenges in their practical application – Interaction at EU and national level through different channels, such as: face-to-face meetings, public consultations, regular reporting to local authorities (as required by law) as well as site visits	– Sustainable finance, Taxonomy and sustainability reporting – Borealis' targets and performance regarding climate change and circular economy – Reduction of pellet loss – Product safety and sustainable chemicals – Compliance with laws and regulations	– Participation in public consultations – Participated in the Circular Plastics Alliance (CPA), convened by the European Commission – Engaged with governments, regulators and value chain, endorsing the Business Coalition for a Global Plastics Treaty – Participated in meetings with EU stakeholders on sustainable carbon cycles, packaging, circular economy criteria for taxonomy, workshops on microplastics and carbon neutrality	– Corporate Governance – Ethics & Compliance – EU Taxonomy – Circular Economy – Energy & Climate
Owners	– Regular Supervisory Board meetings, including sub-committees – Regular Owners' Controllers meetings – Annual Senior Leaders meetings – Individual face-to-face interactions at executive level, project level or expert level	– Group strategy and business plan – Group policies – Remuneration, including for the Executive Board and Senior Management – Internal and external audits – Internal controls and risk management – Financial reporting	– Held five ordinary Supervisory Board meetings, preceded by five Owners' Controllers meetings – Three ordinary Audit Committee meetings – Three ordinary Remuneration Committee meetings – Regular Executive Board meetings	– Corporate Governance – ESG Risks and Opportunities – People & Culture – Ethics & Compliance – Financial Report
Investors and Capital Providers	– Borealis Annual & Interim Financial Reports – Borealis Bankers & Investors Days – Participation at treasury, funding and investor relations forums and associations – Face-to-face meetings with Borealis' Senior and Executive Management	– Sustainable finance/Taxonomy – Creditworthiness – Borealis' growth strategy – ESG strategy, commitments, performance, risks and opportunities and their management – Provision of regular, transparent and comparable company information	– Bankers visit to K-Fair – Investor calls in conjunction with the Baystar external financing – Investor calls in conjunction with the Borouge IPO – Coverage of Borealis in the OMV Group Capital Market Day and Annual General Meeting	– Sustainability Management – EU Taxonomy – ESG Risks and Opportunities – Innovation – Financial Report

20230711119828

Stakeholder Group	How we engage	Key topics of interest for the stakeholder and Borealis	How we respond Examples of engagement in 2022	Chapter
Academia and Science	– Collaboration around open research and scientific studies – Participation in symposia, panel discussion, working groups and advisory committees – Participation in think tanks	– Generating scientific background and knowledge to advance circular economy and climate change – Fostering and accelerating R&D, to develop solutions such as carbon capture and storage, green hydrogen and renewable feedstock	– Joint science and research projects in Austria, Finland and Sweden – Borealis Student Innovation Award – Scholarship programmes sponsored by Borealis – Supporting Open Chemistry Labs	– Circular Economy – Energy & Climate – Environmental Management – Innovation
Media	– Frequent interaction via established channels, including: media briefings and press conferences, one-to-one interviews, press releases and publication of Annual Report	– Borealis' strategy and financial results – Product launches and other strategic company news – Borealis' sustainability performance, with regards to the circular economy and climate change – Borealis' views and opinions on relevant sustainability, industry and company issues	– Press conference at K-Fair with 28 international trade media editors, and subsequent interviews with different media outlets – Twice-yearly project and business updates, with the CEO and CFO holding one-to-one interviews	– Sustainability Management – Circular Economy – Energy & Climate – Innovation – Financial Report
Non-Governmental Organisations	– Round table discussions – Face-to-face dialogue at events and conferences – Collaboration projects and memberships such as with Ellen MacArthur Foundation (EMF) – Reporting Borealis' circular economy performance and progress	– Borealis' sustainability strategy and performance, transparent reporting – Borealis' activities and views on sustainability aspects such as plastic waste, recycling, single-use plastics, climate change, chemicals safety and renewable feedstock – Social impact and compliance	– Participated in the creation and meetings of the Business Coalition for a Global Plastics Treaty convened by WWF/EMF – Provided input to sustainability reports such as the NPEC's "Reuse – Rethinking Packaging" book	– Public Affairs – Circular Economy – Energy & Climate – Product Safety
General public	– Leveraging media release publications/news via LinkedIn and Twitter – Leveraging circular economy topics via Borealis' EverMinds social media channels – Promoting audio-visual materials (mainly videos) through YouTube	– Safe product use, chemicals safety – Plastic waste and pollution – Climate change – Recycling and circular economy	– Promoted via social media the endorsed EMF/WWF Business Coalition on the UN Plastics Treaty – Piloted social media in Finland, with customised topics	– Circular Economy – Energy & Climate – Product Safety – Innovation – Digital Trans-formation

Public Affairs

Goals for 2022	Key Achievements of 2022
Participate in round table discussions and public consultations regarding upcoming EU legislation	Provided input to several draft regulations, such as the revision of the Waste Framework Directive (WFD), the Microplastics Pollution Regulation, the revision of the REACH Regulation and the Eco-design for Sustainable Products Regulation (ESPR)
Participate in the negotiations towards a UN Treaty on Plastics Pollution	First plastics producer to endorse the Business Coalition for a Global Plastics Treaty, convened by the Ellen MacArthur Foundation and the WWF
Collaborate with stakeholders to advance the circular economy of plastics	Worked in value chain associations to advance regulation that will support the faster transition to a circular economy, through broad stakeholder acceptance of key issues such as design for recycling, mandatory recycled content and uptake of bio-based plastics

Borealis aims to play a pivotal role in transforming its business and the industry from a linear business model to a circular and climate neutral one. Well-designed legislation and regulation can help the industry to accelerate this transformation and to provide solutions to challenges such as resource efficiency, climate change, waste reduction, increased product safety and plastic waste.

To fulfil its Group purpose of "Re-inventing essentials for sustainable living", deliver progress for its customers and bring a circular and carbon-neutral future closer, Borealis needs to understand the policy and regulatory environment at national, international and EU levels, as well as the expectations of key stakeholders in the value chain and civil society. Borealis aims to create a constructive dialogue and to contribute its knowledge and insight to discussions about its activities and performance, and how regulation and legislation can support businesses in their transformation to more circular and more sustainable models. This helps policymakers to create more impactful policies, which in turn will help the industry to support the overall EU strategy for a greener Europe.

Borealis engages with relevant stakeholders at EU and national levels, as well as through its membership of industry associations such as Plastics Europe, the Polyolefin Circular Economy Platform (PCEP), Fertilizers Europe and industry specific groups such as Europen (the European Organisation for Packaging and the Environment).

Borealis also collaborates with stakeholders such as non-governmental organisations (for example, the Ellen MacArthur Foundation) to better understand and address societal concerns, including those on climate change, the circular economy and chemicals safety, which are also key focus areas for the European Commission. → chapter Sustainability Management, p. 40

Governance

Borealis' Public Affairs function is part of the Sustainability & Public Affairs Department, reporting directly to the CEO. The Head of Public Affairs' responsibilities include:

- preparing and leading an effective EU advocacy strategy, managing European-wide regulation and policy, as well as actively contributing to the development of an effective UN Treaty to Stop Plastic Pollution;
- actively monitoring, analysing and reporting on relevant EU regulations and policy developments;
- building sustainable relationships with key stakeholders;
- coordinating and optimising the Group's participation in industry associations, forums and platforms to support implementation of the Group business strategy and stakeholder engagement;
- coordinating the Group's positions on key issues and opportunities relevant to Borealis' business and its key stakeholders, including alignment with OMV Group; and
- coordinating the Group's Public Affairs activities through the two Public Affairs Coordination Teams (PACT) – PACT Locations and PACT Circular Economy & Climate.

The PACTs ensure regular follow-up on issues relevant to governments, authorities, regulators and NGOs. The PACT Circular Economy & Climate meets monthly with colleagues who have expertise in priority topics, such as the circular economy, climate, energy, sustainable finance and sustainable products. PACT Locations holds bi-monthly meetings with the leaders of each location, to discuss issues arising from the Group's operations or at a national policy level.

20230711119829

Both meetings are chaired by the Head of Public Affairs and are designed to openly share information on upcoming EU and national policy, identify arising issues, prioritise and coordinate public affairs activities and define and implement proactive public affairs activities that support the Group 2030 Strategy.

Borealis also develops its positions on public affairs issues by consulting the wide range of expertise available across the business, from operations and sales to product stewardship, innovation and health, safety and the environment. This input is gathered via the PACTs.

Sustainability & Public Affairs regularly interacts with the Borealis Executive Board members, sharing results from its stakeholder engagement and reporting concerns. In addition, Executive Board members directly participate in dialogue with the Group's key stakeholders, such as at round table dialogues with NGOs, or are themselves Board members of industry associations, such as Plastics Europe.

Memberships

Borealis' significant memberships include the following organisations and associations (in alphabetical order). A significant membership is one where Borealis either has a seat on the board or is a very active participant.

EU-Level Associations
- EUROPEN (European Organisation for Packaging and the Environment)
- PCEP (Polyolefins Circular Economy Platform)
- Plastics Europe
- PRE (Plastics Recyclers Europe)
- Fertilizers Europe
- IFA (International Fertilizer Industry Association)

National Associations
- Essencia (Federation for Chemistry and Life Sciences Industries, Belgium)
- FCIÖ (Fachverband der Chemischen Industrie Österreichs, the Association of the Austrian Chemical Industry)
- IV (Vereinigung der Österreichischen Industrie, the Federation of Austrian Industries)
- *Kemianteollisuus ry (The Chemical Industry Federation* of Finland)
- WKO (Wirtschaftskammer Österreich, the Austrian Federal Economic Chamber)
- IVA (Industrie Verband Agrar, German Agrochemical Industry Association)
- France Chimie
- UNIFA (Union des Industries de la Fertilisation, the association of the French fertilizer industry)

Non Governmental Organisations and Co-operation Bodies
- CEFLEX (A Circular Economy for Flexible Packaging)
- Ellen MacArthur Foundation
- Business Coalition for a Global Plastics Treaty
- WBCSD (World Business Council for Sustainable Development)
- WPC (World Plastics Council)
- WSUP (Water & Sanitation for the Urban Poor)
- UN Global Compact
- RCI (Renewable Carbon Initiative)

The following memberships were moved from Borealis to OMV Group during 2022, with Borealis remaining a member as part of the OMV Group:
- Cefic (European Chemical Industry Council)
- TfS (Together for Sustainability)

Activities 2022

Circular Economy, Climate and Energy

During 2022, Borealis provided further input to the EU Circular Economy Action Plan (CEAP), including contributing to public consultations, mainly through industry associations. Borealis also responded directly to public consultations on the revision of the Waste Framework Regulation (WFD), measures to reduce microplastic pollution and the revision of EU legislation on registration, evaluation, authorisation and restriction of chemicals (REACH).

The Group also continued to work with its industry associations and the European Commission on revising legislation, with a focus on access to waste for Borealis' recycling operations, driving uptake of recycled and renewable plastics in products, ensuring credible chain of custody systems to provide trust in recycled and renewable plastics, developing reuse markets, increasing design for recycling and policies related to achieving the goal of the European Climate Law to reach net zero by 2050.

Borealis helped to implement the Circular Plastics Alliance (CPA) and represented Europe on the Steering Committee of this value chain initiative, which is hosted by the European Commission. Furthermore, the Group also

Fig. 6: **EU policy initiatives affecting Borealis' business**

Circular Economy

- Recycled plastics in food contact materials
- Waste shipment regulation
- Packaging, packaging waste regulation
- Construction products regulation
- Eco-design for sustainable products regulation
- Policy framework for bio-based plastics
- Implementation of single use plastics directive
- Waste framework directive
- End-of-life vehicles directive
- Sustainable carbon cycles
- End-of-waste criteria for plastics

Energy & Climate

- EU Emission Trading System
- Carbon Border Adjustment Mechanism
- Renewable Energy Directive
- Hydrogen
- Emergency market measures for gas and electricity
- Carbon removal certification
- Transition pathway to a sustainable future for petrochemicals industry

Health & Safety

- REACH
- Chemicals hazard classification
- Measures to reduce microplastic pollution
- Industrial Emissions Directive

Growth

- Implementation of taxonomy regulation
- National taxes on plastic products
- Corporate Sustainable Reporting Directive

European Union

provided input to the European Commission's Joint Research Centre project to develop end-of-waste criteria for plastics.

Borealis remained active in the Ellen MacArthur Foundation's Global Commitment and welcomed the news that the UN member states were in favour of a resolution for a global treaty on plastic pollution at the UNEA 5.2 in March 2022, which Borealis had been supporting. Borealis was the first plastics producer to endorse the Business Coalition for a Global Plastics Treaty, which will advocate for global action to stop pollution by creating a circular economy for plastics.

In 2021, the European Commission proposed a sweeping set of legislative reviews and new regulations known as the Fit for 55 package, to meet the goals of the European Green Deal and transform the EU to a climate-neutral economy by 2050. Throughout 2022, Borealis supported the discussion of these policies via its associations, in particular Plastics Europe and Cefic, to ensure a transition pathway to a sustainable future for the European petrochemicals industry.

In 2022, the Ukraine war resulted in an unprecedented energy crisis in Europe. Borealis engaged with its value chain and policymakers to develop regulatory measures to address this crisis, while staying true to the sustainability goals of the European Green Deal.

Health & Safety

Throughout 2022, Borealis continued to play an active role in discussions on how to implement the objectives of the EU's new Chemical Strategy for Sustainability (CSS), to ensure that products are sustainable by design and to work towards zero pollution.

Increasing numbers of substances are being scrutinised under EU REACH for their hazardous effects and risks related to their use. Some of these substances are critical to Borealis' products or to their production process, and any change in regulation will have a substantial impact on its business with the value chain, potentially requiring substantial investments and research and development efforts. Borealis therefore actively follows up these developments in order to be well prepared, and engages to inform policymakers, to ensure measures follow a cost-benefit approach and do not lead to competitive disadvantages versus non-EU supplies. Borealis also explored with the value chain the need to recognise new feedstocks for chemicals and plastics under the EU chemicals legislation, in order to support the transition to a circular economy built on sustainable carbon from recycled plastics, biomass and carbon capture.

In addition, Borealis actively participated in discussions on new rules for the safe use of recycled plastics in food contact materials and articles. In October 2022, a new

20230711119830

EU regulation entered into force which strengthens the legal basis for bringing recycled plastics into food contact materials, helping Borealis to close the loop without endangering human health and safety.

French Law on Fertilizer Storage
In August 2020, a large quantity of ammonium nitrate exploded in the Port of Beirut (Lebanon), causing more than 200 deaths and 7,000 injuries. To prevent a similar accident occurring in France, the French authorities want to improve the safety of fertilizer storage and are studying how much to decrease the maximum quantity that can be stored, which will affect the customers of Fertilizers. These discussions are detailed and are looking to determine, for example, whether it is necessary to distinguish between fertilizers stored in big bags or in bulk, and whether fertilizers containing calcium sulphate should be considered separately.

Non-Financial Reporting Requirements and Sustainable Finance
Throughout 2022, Borealis continued to closely monitor the policy developments on the EU Taxonomy, in particular the relevant screening criteria for the circular economy and other environmental indicators. The Group also closely followed the development of the update of the EU Corporate Sustainability Reporting Directive (CSRD) and the related European Sustainability Reporting Standard (ESRS) being developed by the European Financial Reporting Advisory Group (EFRAG). Preparations are ongoing to adhere to these updated reporting obligations, which will gradually come into force.

Microplastics
The Group supports regulatory measures to prevent plastic leaking into the environment and is fully committed to zero pellet loss. Borealis participates in working groups at Cefic and Plastics Europe in developing an OCS (Operation Clean Sweep) reporting scheme, as well as a third-party audit and certification scheme, and piloted it in two of its plants in Belgium. (→ chapter Environmental Management p. 135)

Borealis also follows the regulatory developments on authorisation and restriction under REACH, such as the draft restriction on synthetic polymer, which is planned to be adopted during 2023. Borealis supported working groups at Cefic and Plastics Europe in informing this process and also actively participated in the Commission's public consultation on the planned regulation on unintentionally released microplastics. The draft restriction foresees a ban on placing intentionally added microplastics on the market but derogates the use of plastic pellets on industrial sites. However, there are planned supply chain communication and reporting obligations to the European Chemicals Agency (ECHA) that will apply to Borealis' polyolefin products.

Borealis will engage, via the Business Coalition for a Global Plastics Treaty, to ensure that best practice in avoiding pellet loss is shared and encouraged at the international level.

In line with the Group's Ethics Policy, Borealis strictly follows political corporate governance practices in public affairs and does not join political parties or make financial contributions to them or their candidates.

Outlook
In 2023, Borealis Public Affairs will continue to support initiatives driving a carbon-neutral circular economy, such as:
- the revisions of the Packaging and Packaging Waste Directive, the End-of-Life Vehicles Directive and the Waste Framework Directive;
- the revision of EU chemicals policy to support innovation in sustainable products;
- the implementation of the Single Use Plastic Directive, to establish how to measure and report chemically recycled plastics in products;
- the development of rules on environmental claims made to consumers and how to substantiate these to support faster uptake of recycled and renewable chemicals and materials;
- the development of policies to support the target of 20% non-fossil carbon in products by 2030, including carbon removal certification, carbon capture and storage and carbon capture and use;
- the development of a regulation for non-intentionally generated microplastics; and
- the development of the UN Treaty to Stop Plastics Pollution.

Borealis Social Fund

Goals for 2022
Project STOP: Complete implementation in the city of Muncar, Indonesia, and hand over to the local government
Project STOP: Establish a non-profit foundation to increase growth and partnership opportunities, as well as access to additional grants and funds
Borealis Social Fund Focus Area "Growing Talent": Continue programme, fostering education, and initiate new projects
Emergency Relief: Support organisations helping the victims of the war in Ukraine

Key Achievements of 2022
Project STOP handed over to the city authorities in February 2022 and scale-up over the wider Banyuwangi region started
Project STOP Foundation established and registered in April 2022 in Austria
Continued and extended the Group's long-term partnerships in Austria, Finland, Sweden and the UAE
Provided significant donations to selected NGOs in Austria, for their work related to the war in Ukraine

Businesses can only grow sustainably in a healthy environment and stable society. To foster its role as a socially responsible company, Borealis established the Borealis Social Fund in 2008.

Each year, a portion of the Group's net profit is dedicated to the Fund, based on clearly defined allocation rules. Any external or internal stakeholder can submit a project to the Sustainability Team, which validates the proposal and makes recommendations to the CEO, who has responsibility for the Fund and selects and approves all projects. Sponsorships above EUR 0.5 million per project per year also need the approval of the Chairman or Vice Chairman of the Supervisory Board.

To maximise the impact of its engagement and to align Borealis' social engagement activities with the Company's Purpose and its Strategy 2030, with its strong focus on sustainability, the Group has defined three areas of social engagement that directly contribute to the UN Sustainable Development Goals (UN SDGs).

Waste and Resource Efficiency
SDG 14: Life Below Water

- supporting research and innovation;
- helping to establish efficient and low-cost circular waste management systems in emerging and developing countries, to drive the circular economy; and
- raising awareness and encouraging behaviour change.

Water
SDG 6: Clean Water and Sanitation

Energy
SDG 7: Affordable and clean energy

- providing access to safe drinking water and reliable, affordable renewable energy;
- supporting the preservation of water resources; and
- raising awareness and promoting best practices.

Education and Social Integration
SDG 4: Quality Education

- nurturing interest in chemistry and science;
- supporting education on sustainability to meet future challenges; and
- integrating marginalised and underprivileged people.

20230711119831

Waste and Resource Efficiency: Project STOP

Environmental pollution due to littering is a global challenge. According to the OECD's Global Plastic Outlook, of the 353 million tonnes of plastic produced in 2019, 22 million tonnes leaked into the environment. The problem arises because only 9% of plastic is recycled, with about 50% landfilled, 19% incinerated and 22% being dumped or burned uncontrolled in the open. While all regions will see an increase in plastic waste, it is expected to more than quadruple in Asia and Africa by 2060, due to population growth and rising living standards. Mismanaged waste is adversely affecting the region's ocean ecosystems, livelihoods, human health and sustainable development more broadly. The solution is the transformation towards a circular economy. A key enabler is to stop waste leakage at the source, by establishing low-cost, efficient and circular waste management systems.

Project Highlights 2022

To tackle plastic littering in high-pollution areas of South-East Asia, Borealis initiated Project STOP and launched it in partnership with Systemiq in 2017. The project works hand-in-hand with city governments to create effective circular waste management systems.

The concept behind Project STOP is that sustainable transformation can only be achieved by applying a holistic approach that addresses all system failures at once. The project's systemic approach therefore works on all levels, including setting up a waste collection and sorting system across the entire city, building the necessary infrastructure, establishing a sustainable financing model, strengthening institutional capacity and the regulatory environment, rolling out behaviour change campaigns including beach clean-ups, providing technical expertise and support in project management, and recycling valorisation. Project STOP collects plastic as well as all organic and inorganic waste fractions, ensuring that none of the valuable material ends up in the environment. Moreover, it creates community benefits, including new full-time jobs in waste management and a reduction in the harmful impact of mismanaged waste on public health, tourism and fisheries.

The first city partnership was established in 2018 in Muncar, Indonesia, and Project STOP now operates two additional city partnerships, in Pasuruan, also on the island of Java, and Jembrana, on the north coast of Bali. The project reached a major milestone in 2022, as the Muncar city partnership was handed over and is now managed solely by the local government and the community. To ensure the Muncar system continues to function effectively, a comprehensive education programme was developed to train municipal employees and the Project STOP team will remain available for support and advice. The project implementation in the cities of Pasuruan and Jembrana is planned to be completed during 2023.

While current collection and sorting costs are covered by the sale of materials and waste collection service fees, it is crucial that the system can be scaled up and sustainably financed in the long term. This means continuing to increase the value of waste, creating a market for recycled materials and fostering a circular economy. To reinforce the financing model and create a financially robust system, Project STOP has started work on implementing novel financing instruments, such as plastic credits.

Project STOP's ambition is to develop a blueprint model and share its know-how, to enable as many stakeholders as possible to replicate its approach in other regions. The knowledge gained from the three city partnerships is now allowing the project to scale up across Banyuwangi, a Regency with around 1.7 million inhabitants, while being even faster and more cost- and resource-efficient to implement. Meeting targets set by Project STOP for expansion requires an additional EUR 12 million over the next two years, on top of funding already committed by the private and public sectors.

The entire expansion is planned to be complete by 2025/26. Once this point is reached, Project STOP will have provided waste collection services to up to 2 million people, established over 1,000 new full-time jobs and enabled the annual collection of 230,000 tonnes of waste, including 25,000 tonnes of plastic.

In April 2022, Borealis founded the Project STOP Foundation, a non-profit organisation based in Austria. The Foundation aims to further increase Project STOP's governance, growth and partnership opportunities, as well as access to additional grants and funds.

Achievements by end of 2022

- *333 new full-time jobs created in waste collection, sorting, organic processing and management and administration;*
- *303,940 people provided with waste collection services for the first time in their lives; and.*
- *41,002 tonnes of waste (including 5,092 tonnes of plastic) collected, sorted and further processed.*

Water and Energy: Water for the World

Access to water and energy are fundamental to quality of life, as they affect the ability of poor families to obtain sufficient food and protect their health, as well as limiting the livelihoods and educational opportunities available to them. Drought is a particular problem, as it damages food supplies in some of the world's poorest countries and leaves people hungry and malnourished.

Energy services are also a basic requirement for good health, whether they are enabling the supply of clean water for hygiene purposes or powering healthcare facilities. This makes energy key to preventing diseases and fighting pandemics: the human cost and global recovery from COVID-19 could be significantly worse if hospitals and communities have no access to power.

The United Nations estimates that worldwide, one in three people lack safe drinking water and two-fifths do not have basic hand-washing facilities. This is especially the case in remote, rural areas. In addition, 789 million people – or 13% of the global population – are living without access to electricity and 3 billion people rely on wood, coal, charcoal or animal waste for cooking and heating.

In response, since 2007 Borealis and Borouge have provided solutions through Water for the World, a joint programme to address the global water and energy challenge in rural and urban communities, with a focus on South-East Asia and Africa. The programme cooperates with a range of non-profit organisations and supports numerous projects across Asia and Africa, including in China, Ethiopia, India, Kenya, Nepal, Morocco, Myanmar and Pakistan, benefiting over one million people since its inception.

Strengthening and Extending the Water Supply to around 25,000 People in Beira, Mozambique

Since 2008, Borealis has had a strategic partnership with WSUP (Water & Sanitation for the Urban Poor), a non-profit organisation committed to providing sustainable water and sanitation solutions for poor urban communities across Africa and Asia.

Mozambique is one of the poorest countries in the world, with 50% of the country's urban population living below the national poverty line (source: Water and Sanitation for the Urban Poor). Only 25% of Mozambique's urban residents have access to piped water or experience an intermittent water supply daily, and some parts of the water supply network receive either no water at all or at very low pressure. This ongoing problem was exacerbated by Cyclone Idai in 2019, and subsequent flooding. This substantially damaged Beira's already fragile water supply network and the city is now struggling to provide clean water and sanitation services for its residents.

Working alongside the utility company, FIPAG, WSUP identified the neighbourhoods of Maraza and Chota as most in need of an improved water supply. Borealis decided to support WSUP's engagement, providing both financial and in-kind support.

Achievements by end of 2022

- *25,000 people benefitting from an improved water supply and service levels, as well as increased hygiene awareness;*
- *a 19 kilometre water network has been constructed and extended with reliable, long-life and low-maintenance water pipes, using Borealis' HDPE PE100 pipe material;*
- *FIPAG's technicians and staff have increased capacity in pipe welding, low-income customer service provision and non-revenue water operations, such as leak detection, repairs and billing anomalies.*
- *Since its inception, Water for the World has reached out to more than one million people.*

Education and Social Integration: Growing Talent

Young people's education, innovation skills and critical minds will determine whether society finds innovative solutions to complex global sustainability challenges, such as climate change, plastic waste and increasing migration.

20230711119832

Stimulating enthusiasm for science and chemistry at an early age means that today's young and inquisitive minds will become tomorrow's leading scientists and innovators. Furthermore, good quality education is a crucial enabler for integrating migrants and underprivileged people into society, as well as supporting equality and inclusiveness and maintaining a stable democracy.

Educational systems therefore need to adopt a framework and practices that enable young people to develop the right skills, so they can put their ideas into practice, think independently and ensure access to quality information for all. However, according to "Our world in data" (2021) around 58 million children, of the 787 million children of primary school age, do not have access to an adequate education, due to low public financing, poverty, war and many other socio-economic factors. The number increases when accounting for older children, adolescents and females.

Borealis therefore created Growing Talent. Projects include Borealis scholarships for migrants and underprivileged people, and improving access to applied chemistry and science, for example via open chemistry labs, children's summer camps, and innovative education institutions such as the Austrian ZOOM Children's Museum, the Science Centre Network, the Finnish Company Park and the Emirates National School in the UAE.

Hands-on Experience of Recycling: The Plastic Garage
Two young employees at Borealis' Innovation Centre in Linz, Austria, came up with an idea to educate people about the value and challenges of plastics recycling by installing a recycling machine in the Grand Garage, a professionally equipped workspace in Linz that makes more than 90 machines and digital technologies available to the public and in particular to students.

Borealis and EREMA have co-sponsored a space within the Grand Garage called Plastic Garage, where a small plastics recycling machine has been installed. The machine has been provided by plasticpreneur, which became part of the EREMA Group in 2022. Inaugurated in October 2022, the Plastics Garage provides a hands-on recycling experience, using the shredder along with extrusion and injection moulding machines. Workshops are offered for everybody aged six years and up, to explain how to operate the machines, the fundamentals of plastic recycling and topics such as the circular economy. Workshops on plastic recycling in theory and practice are also offered to schools. The Plastic Garage is an ideal place for young people to research and experiment, with the aim of inspiring future engineers.

Giving Young People an Insight into the World of Business: The Company Park
Borealis has partnered with Finnish organisation Economy and Youth TAT, which developed a miniature city called Company Park. This mimics a real society, based on various businesses such as companies or shops. The idea is to provide sixth and ninth graders in Finland with an insight into professional work life, by acting out roles such as sales manager, director or customer.

The students become acquainted with the responsibilities and challenges that each different function presents, such as having to negotiate with their peers because they are given the challenge of holding their stance. By acting out these roles, young people gain a better understanding of what real working life is like, which is typically hard to grasp when learning it only in theory.

Borealis represents the chemical industry in Company Park, where students role play selling plastic raw material to customers in selected countries and markets. The customers will demand high quality and sustainable products that need to be recyclable, so the stakeholders need to address the different challenges such as the circular economy and creating innovative solutions.

Achievement by end of 2022

- *In 2022, Growing Talent partnered with 12 organisations and conducted 14 projects, reaching out to around 120,000 people*
- *Since its inception, Growing Talent has reached out to close to 1 million people.*

Emergency Crisis Relief
Borealis stands in solidarity with those affected by the Russian invasion of Ukraine, which has caused thousands of verified deaths and displaced many people. When the war in Ukraine started at the beginning of 2022, Borealis immediately decided to support its victims through donations from the Borealis Social Fund. The following organisations have received a donation: Caritas, Red Cross, Volkshilfe, Hemayat and Stepic CEE Charity.

Corporate Governance

Goals for 2022	Key Achievements in 2022
Implement OMV regulations and new management system nomenclature	Implemented all applicable OMV regulations and a new, harmonised management system nomenclature
Prepare the organisation for splitting the matrix certificate, which is the joint ISO certificate valid across multiple locations, to reflect the divestment of Fertilizers, Melamine and Technical Nitrogen Products (TEN)	Successfully split the matrix certificate between Polyolefins/ Hydrocarbons & Energy and Fertilizers, Melamine and TEN
Establish additional resources to support circular products and solutions and develop recycling competences in the Quality function	One additional full-time role put in place to support the Borealis Circular Economy Solutions department, mtm and Ecoplast. Competence development by on-the-job training ongoing.
Cooperate with OMV, focusing on management system aspects, external audits (such as ISO) and system auditor training	Established regular co-operation and knowledge exchange via various internal channels and jointly pursued a training programme for new internal system auditors

Good corporate governance creates a system of management and control that is accountable, transparent and geared to creating sustainable, long-term value. It therefore serves the needs of all stakeholders who are interested in or impacted by Borealis, including employees, customers, suppliers, governments, capital markets and the general public. Borealis' approach to governance is documented in the Borealis Management System (BMS). Managing risks and opportunities is an integral part of the BMS, to ensure the Group continuously improves and identifies mitigating actions where needed.

The Group's governance is supported by compliance with industry-accepted standards, such as ISO. Being certified to these standards provides independent confirmation that Borealis applies best practices in its daily activities. Embedding ISO standards also requires Borealis to continuously improve, so it generates more value for customers and other stakeholders.

The Borealis Supervisory Board

The Supervisory Board (SVB) of Borealis AG consists of five members, three from OMV and two from ADNOC, Borealis' two shareholders. The members are elected by the Annual General Meeting. The SVB elects a chairperson and a vice chairperson. The SVB has two committees, namely the Remuneration Committee and the Audit Committee.

The SVB supervises Borealis' management, approves the Group's strategy, business plan and policies, and appoints the members of the Executive Board (ExB), including the Chief Executive Officer. Furthermore, it exercises all powers and authorities under Austrian law, in particular, the Austrian Stock Corporation Act (Aktiengesetz), the Articles of Association of Borealis AG and the Rules of Procedure. According to the Austrian Stock Corporation Act, in making their decisions, SVB members shall not pursue their own interests or those of persons close to them or related companies that conflict with the interests of the Company, or take advantage of business opportunities to which the Company is entitled. SVB members need to disclose potential conflicts of interest immediately to the Chairperson of the SVB. Possible consequences, to be decided on a case-by-case basis, can vary from banning the individual from participation, abstention from voting, restrictions on information sharing and transferring the matter to the SVB's committees.

In 2022, the SVB held five ordinary and two extraordinary meetings. Neither the SVB, the Executive Board nor the Audit Committee members held shares in Borealis or the majority of the shares in a holding company, thereby preventing any related conflicts of interest.

20230711119833

The Borealis Executive Board
The Executive Board consists of five members (one female and four males), including the CEO and CFO. Their areas of responsibility are as follows:

Chief Executive Officer
Thomas Gangl
– Chairman of the Executive Board
– People & Culture
– Corporate Communications, Brand & Reputation
– Strategy & Group Development
– Sustainability & Public Affairs
– Legal
– Group Health, Safety, Environment & Quality (HSEQ)
– Internal Audit
– Fertilizers, Melamine and Technical Nitrogen Products (TEN)

Chief Financial Officer
Mark Tonkens
– Finance & Controlling
– Programme and Project Management Office
– Procurement
– Tax, Treasury & Funding
– IT & Digitalisation

Executive Vice President Polyolefins, Circular Economy Solutions and Innovation & Technology
Lucrèce Foufopoulos-De Ridder
– Polyolefins Marketing & Sales
– Commercial Excellence
– Business Optimisation and Supply Chain
– Borealis Brasil
– Borealis North America
– Innovation & Technology
– New Business Development
– Circular Economy Solutions

Executive Vice President Base Chemicals & Operations
Wolfram Krenn
– Business Unit Base Chemicals
– Operations Polyolefins and Base Chemicals
– Technical Development & Engineering
– Plant Availability & Turnaround
– Manufacturing Excellence and Improvement

Executive Vice President Joint Ventures and Growth Projects
Philippe Roodhooft
– Joint Ventures
– Growth Projects from feasibility study onwards & Technical Support
– Borealis Middle East and US Representation Offices

The Executive Board meets at least 12 times a year, in an extended monthly meeting. In addition, the Executive Board holds shorter, bi-weekly approval sessions and also meets on an ad-hoc basis, if required.

Criteria for nominating and selecting the Executive Board
The SVB nominates and selects the Executive Board members, supported by the Remuneration Committee. The criteria include the competencies required for the role, experience, diversity including gender, age and nationality perspectives, as well as internal succession planning. While nationality, gender and age are considered in the Executive Board's composition, Borealis does not have related quantitative targets. Three nationalities are represented on today's Executive Board and members' ages range from 51 to 60. Their tenure with Borealis also varies and their terms of office range from 1.5 years to eight years.

To maintain continuity on the Executive Board, the end dates of their mandate periods also differ. Each year, the succession planning for all five Executive Board positions is reviewed and updated, after a bottom-up process to identify candidates.

The Executive Board conducts Borealis' business under its own joint responsibility. In fulfilling its responsibilities, the Executive Board makes the decisions and takes the measures necessary to conduct the Group's business.

The Executive Board's tasks include, without limitation, the following:

- to manage the Company and to organise and administer it according to Austrian law, the Articles of Association of Borealis AG, the resolutions of the SVB, the Rules of Procedure of the Executive Board, the budget and the business plan;
- to represent the Company according to Austrian law, its Articles of Association and the Rules of Procedure of the Executive Board of Borealis AG, and to implement the decisions of the shareholders' meeting and the SVB's meeting, respectively;
  - to organise and administer the Company's bookkeeping and financial, fiscal operations and other controls;
  - to implement appropriate insurance coverage of the Company, in line with the requirements mandated by the SVB;
  - to develop, propose and implement the strategy for Borealis and Borealis Group, in conjunction with and subject to the oversight of the SVB; and
  - to report to the Audit Committee at least once a year on the auditing plan and any material findings.

The Executive Board must immediately inform the SVB and the shareholders of all situations which are of material importance for the profitability or liquidity of the Borealis Group. The Executive Board meets regularly and on an ad-hoc basis when needed.

Each Executive Board member shall disclose to the SVB any material personal interests in transactions of the Company and Group companies as well as any other conflicts of interests. Furthermore, each Executive Board member shall also immediately inform the other Executive Board members. Should any matter to be decided in an Executive Board meeting refer to personal or economic interests of an Executive Board member, the relevant Executive Board member is excluded from exercising their voting right and the matter shall be decided by the non-conflicted members of the Executive Board.

Collective Knowledge, Skills and Experience on Sustainable Development

The Director Sustainability & Public Affairs and Executive and Senior Management functions continuously monitor emerging ESG developments and discuss them with the Executive Board members on a regular basis, using existing regular meetings and platforms. ESG consultants are invited to contribute with background information on specific topics and share updates of the latest developments and trends, as well as industry reports of relevance for Borealis.

Strategic projects, with or without external support, are also an effective way to continuously drive the collective knowledge, skills and experience of the Executive Board, as well as the leadership teams. A recent example is the development of the Group 2030 Strategy, where both internal and external experts provided key insights.

To intensify the dialogue with external stakeholders relevant for the key sustainability topics, in particular climate change and plastic waste, round tables were organised and moderated by the Borealis CEO. The round tables involved CEOs of companies in the value chain (suppliers, customers, retailers and brand owners), as well as adjacent industries and experts from academia. Attendees also included representatives of political stakeholders, universities, research centres and environmental initiatives, to get high-level insights into future trends and expectations.

Furthermore, a constructive dialogue with NGOs is important to understand their expectations and share updates on progress, best practices and future plans. The interaction is partly direct, but to a greater extent via OMV Group.

→ Fig. 7 ESG Governance Structure Part 1, p. 59: Executive Board member' responsibilities overseeing the organisation's management of impacts on the economy, environment and people; → Fig. 8 ESG Governance Structure Part 2, p. 60: Executive Board delegation of responsibilities to committees for overseeing the management of the organisation impacts on the economy, environment, and people.

20230711119834

Fig. 7: **ESG Governance Structure – Group functions responsible for the management of sustainability aspects**

Supervisory Board

Executive Board

Chief Executive Officer	Chief Finance Officer	EVP PO, CES & InnoTech	EVP Base Chemicals & Operations	EVP Joint Ventures & Growth Projects
Health, Safety, Environment & Quality	Procurement	Circular Economy Solutions & New Business Development	Energy & Feedstock Sourcing	Asset Technology (Borcyle™, CCU, cracker electrification)
Sustainability & Public Affairs	Tax, Treasury & Funding	Innovation & Technology	Manufacturing Excellence & Transformation (roadmap for decarbonisation)	Industrial Digitalisation
Internal Audit	IT & Security	Transformation Office	New Business Development (Renewable Feedstock)	Circular Polyolefin Solutions Projects
Strategy & Group *Development*	Digitalisation Programme *(Digital Studio)*	Product Asset & Supply *Chain Management* (Logistic Sourcing)	Operations Polyolefins *and Base Chemicals*	Projects (technology *selection and execution)*
Legal & Compliance & Ethics	Finance & Controlling	Polyolefins Marketing & Sales	Technical Development & Engineering	Joint Ventures (drive sustainability in Borouge and Baystar)
People & Culture (Remuneration, Employee Acquisition & Development, Transformation, DE&I)	Programme and Project Management Office	Commercial Excellence	Plant Availability & Turnaround	
Corporate Communications, Brand & Reputation		Business Optimisation and Supply Chain		
		Borealis North America & Brasil		

EVP: Executive Vice President

Fig. 8: **ESG Governance Structure – Committees & Councils responsible for management of sustainability aspects**

Audit Committee — **Supervisory Board** — **Remuneration Committee**

Executive Board

Chief Executive Officer	**Chief Finance Officer**	**EVP PO, CES & InnoTech**	**EVP Base Chemicals & Operations**	**EVP Joint Ventures & Growth Projects**
Quality Committee/ Chair: Director HSEQ	Raw Materials & Packaging Buying Team/Chair: Director Direct Procurement	CES Portfolio Meeting/ Chair: Head of CES Innovation Studio	Process Safety Committee/ Chair: EVP Base Chemicals & Operations	CES projects Growth Councils
Responsible Care Committee/Chair: Director HSEQ	Authority Schedule Owner: CEO	Innovation Portfolio Meeting/Chair: Head of Innovation Management	Energy & CO_2 Committee/ Chair: EVP Base Chemicals & Operations	Growth Projects/Studies Steering Committee
Product Stewardship Council/Chair: Director HSEQ	IT & Digitalisation Committee/Chair: CFO			Joint Venture Councils
Ethics Council/ Chair: Head of Group Compliance & Ethics	Pension & Benefits Council/ Chair: CFO			
Public Affairs Coordination Team/Chair: Director Sustainability & Public Affairs	Risk Coach Network/ Chair: CFO			
Climate Strategy Coordination Team/ Chair: Director Sustainability & Public Affairs				
Technology Council/ Chair: VP Innovation & Technology				

EVP: Executive Vice President

20230711119835

Remuneration of the Executive Board
Remuneration for Executive Board members consists of fixed and variable elements. The fixed element is the base salary, in accordance with their contract. The variable element comprises an annual bonus, which is a percentage of the annual base salary and is determined by performance against a defined set of key performance indicators (KPIs), and the Long Term Incentive (LTI) plan, which also includes KPIs. Other senior management remuneration also comprises a fixed base salary, annual bonus and the LTI plan. The contracts with the Executive Board member contain customary termination clauses and terms. These also include payments in case of termination – depending also on the reason for such termination – which are capped (i.e. foresee a maximum payout amount). Retirement benefits for the Executive Board and senior leaders are defined in their contracts. Contracts do not include clawback agreements. Within the annual bonus and the LTI plan, there are multiple KPIs connected to ESG, which have an impact on the level of payout. Executive Board criteria for the LTI plan include diversity targets and carbon emissions. The structure of bonuses and the LTI mean everyone from the Executive Board down is incentivised to ensure Borealis is sustainable. (→ chapter Sustainability Management, p. 40) The Remuneration Committee, independently evaluates the performance of Borealis' Executive Board members each year, based on the behaviours, values and KPIs set for them.

Where an Executive Board member is recruited from outside Borealis, he/she may receive a signing-on bonus. There is no Group-wide guideline for such payments and they are determined on a case-by-case basis.

Sub-Committees of the Borealis Supervisory Board
The Supervisory Board has established an Audit Committee and a Remuneration Committee and delegated the respective responsibilities to those sub-committees.

Remuneration Committee
The Remuneration Committee is authorised to determine the Executive Board members' remuneration, including the structure of the remuneration system and their actual achievement against targets. The terms of each member's remuneration are included in their contracts, which are discussed and approved by the Remuneration Committee. The Remuneration Committee is responsible for approving remuneration processes for Borealis as a whole.

The Remuneration Committee consists of at least three SVB members, two of them being nominated by OMV and one being nominated by ADNOC. It assists the SVB in fulfilling its oversight responsibilities of certain matters concerning the Executive Board members, as outlined in the Remuneration Committee Charter.

The Remuneration Committee deals with all matters concerning remuneration and the content of employment contracts with Executive Board members, taking into account input from shareholders as well as remuneration consultants. It is specifically authorised to approve the conclusion, amendment and termination of employment contracts with Executive Board members, as well as to decide on and approve:
- the Executive Board member's targets for each business year;
- whether other remuneration elements are to be granted to the Executive Board members; and
- the amount of any annual bonus, LTI and other remuneration elements.

The Remuneration Committee is also authorised to approve any remuneration project or programme which proposes a major change to the Group's remuneration principles, such as:
- Borealis' overall positioning versus market;
- eligibility and compensation target changes for annual bonus and LTI plans; and
- a shift in the overall retirement and risk insurance plan policy.

The Remuneration Committee held three ordinary meetings in 2022.

Audit Committee
The Audit Committee consists of at least three SVB members appointed by the entire SVB. It assists the Supervisory Board in fulfilling its oversight responsibilities as outlined in the Audit Committee Charter, including monitoring the:
- effectiveness of internal control, internal audit and risk management;
- integrity of the Company's financial statements;
- Company's compliance with legal and regulatory requirements, as relating to Audit Committee responsibilities;
- external auditor's qualifications, independence and performance; and
- performance of the Company's internal audit function.

Each Audit Committee member shall be independent, meaning that they shall not be a member of, or in any other way take part in, Borealis' day-to-day management. The Audit Committee held three ordinary and two extraordinary meetings in 2022.

Committees and Other Bodies Supporting Borealis' ESG Governance
To ensure sound governance and continuous improvement in key ESG areas, Borealis has set up cross-functional committees, councils and other functions which are overseen by Executive Board members.

Internal Audit Coordination Forum
The Internal Audit Coordination Forum is headed by the Director Internal Audit & Risk Management. It coordinates and aligns the approach for audits, and issues a consolidated audit programme. The Forum decides on the timing and sequence of audits in the locations and the resources assigned to them.

The permanent members of the Forum are:
- Director Internal Audit & Risk Management
- Director HSEQ
- Group Process Safety Expert
- Development Manager Group Quality
- Internal Auditor
- Group Insurance Officer
- Head of Global Logistics Sourcing, Base Chemicals and Operations
- Head of Optimisation & Supply Chain, Base Chemicals and Operations
- Process Owner Operations Assurance

Ethics Council
The Ethics Council is sponsored by the CEO and General Counsel, and chaired by the Group Compliance and Ethics Officer. It consists of senior leaders or senior representatives from Legal, Internal Audit, HSE and People & Culture, as well as from each business group. The council aligns the Group's approach to ethics and provides updates on compliance and ethics matters to ensure consistent Group-wide ethics standards. It also has the exclusive right to decide on important and strategic ethics-related matters, such as disciplinary actions, high-value sponsorships and conflicts of interest, which are binding for the Borealis Group.
The Group's Compliance & Ethics function has both preventative and controlling roles. It looks to prevent infringements of laws, ethical principles and compliance matters, and to mitigate risk, react to issues and implement lessons learned. The function is headed by the Group Compliance & Ethics Officer, who reports to the VP Legal & Compliance and also has a reporting line to the Audit Committee, which receives an annual report on compliance and ethics issues.

The Group Compliance & Ethics Officer is supported by a team of compliance managers and a network of more than 90 Ethics Ambassadors. The Ethics Ambassador network is a key tool for promoting and strengthening Borealis' ethics culture. The network has global coverage, with one ambassador at almost every location and across all hierarchy levels.

Borealis' Group Compliance & Ethics function has regular exchanges of information with its counterparts at the Group's owners, OMV and ADNOC. In addition, Group Compliance & Ethics regularly provides ethics-related information and updates to the CEO and the Audit Committee. In particular, this information includes major new projects, a report on substantiated unethical conduct, updates on training conducted and any other major developments. The function also consistently seeks guidance and advice from the Executive Board and the Audit Committee, to further enhance the effectiveness of the Compliance Management System.

20230711119836

Responsible Care Committee
Borealis has committed itself to advancing sustainable development, assessing the positive and negative consequences of its activities on People, Planet and Profit, and taking responsible decisions. The guiding principles for implementing these standards are set in the Responsible Care Policy. The Responsible Care Committee is sponsored by the CEO and chaired by the Director HSEQ, and includes as permanent members all of the Executive Board and the Director Sustainability & Public Affairs. The committee oversees implementation of the Group's Responsible Care Policy and programmes and monitors overall health, safety, energy and environmental performance against key performance indicators.

Climate Strategy Coordination Team
In 2022, Borealis established a Climate Strategy Coordination Team to drive its transformation to a net-zero business. The team is led by the Director Sustainability & Public Affairs, with the CEO as sponsor and the Executive Board as its Steering Committee. As sustainability is a core part of the Group Strategy, the topic is integrated into almost all areas of the organisation. The team is therefore cross-functional and brings together expertise and initiatives from throughout the Group in a focused way. The team is structured according to Borealis' emissions inventory and hotspots identified in the Group's Scope 1, 2 and 3 emissions, ensuring that the people responsible for these areas are connected and can drive change in a synchronised way, to maximise the impact for the Group. Following the identification of key drivers for Scope 3 emissions, the team is also starting to work on a roadmap for related emission reduction. This approach also fosters transparency and ownership, to enable Borealis to effectively execute its climate strategy. The Climate Strategy Coordination Team regularly reports progress to the Responsible Care Committee and the Energy & CO_2 Committee.

Energy & CO_2 Committee
Within Fertilizers, Melamine and TEN, energy and GHG emissions are governed by the Energy & CO_2 Committee, which is headed by the business's CEO. To align the energy management system across the business, Fertilizers, Melamine and TEN has an energy management team with a presence in each location. The Energy & Plant Optimisation Team is working to identify the business's full GHG reduction potential and create a roadmap to achieve it. The roadmap is part of the top ten priorities in the business's 2025 strategy and is overseen by its management team.

Product Stewardship Council
The Product Stewardship Council is responsible for managing product safety aspects. It is chaired by the Director HSEQ and brings together experts from across the Group, including areas such as Product Stewardship, Sustainability & Public Affairs, Ethics, Innovation & Technology, and operations, as well as all of Borealis' business sectors. This range of competencies ensures holistic risk assessments that consider market needs, legal and technological requirements and stakeholder views. The Council meets monthly and reports to the Responsible Care Committee. It defines and executes the Group's strategy for dealing with hazardous substances, identifying and addressing the biggest risks and opportunities that result from the use or substitution of hazardous substances. The team's decisions impact the innovation project portfolio, the Borealis Banned Substances List and existing uses of substances.

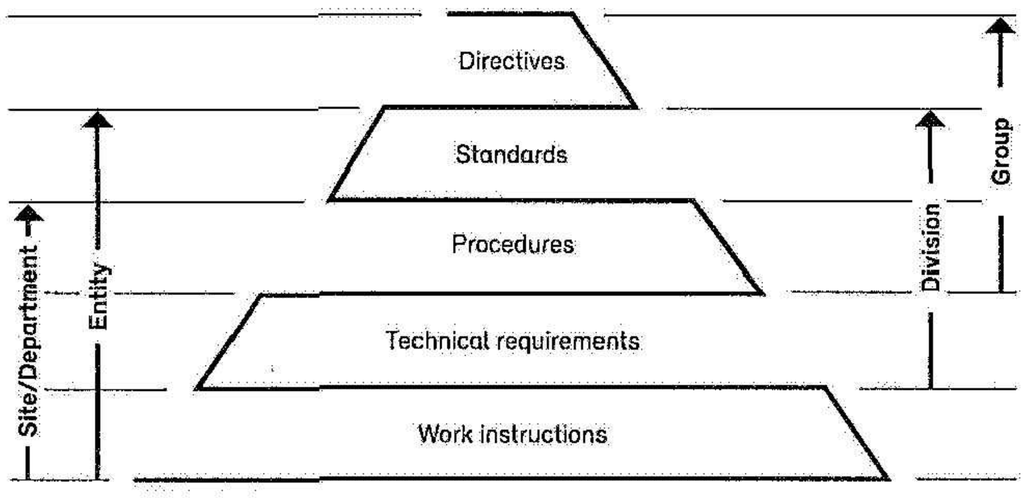
Quality Committee
The Quality Committee comprises all the Executive Board members and is sponsored by the CEO and chaired by the Director HSEQ. The committee sets the Group's quality management priorities and drives implementation of all quality management programmes and initiatives. It also evaluates the Borealis Management System's effectiveness and efficiency each year during the management review and develops continuous improvement actions. In particular, the committee discusses market requirements, customer feedback and changes to industry standards as input for improvement programmes.

Process Safety Committee
The Executive Vice President Base Chemicals & Operations chairs the Group-level Process Safety Committee. The Committee's members are directors and departmental leaders from all of the relevant operational streams: Group HSEQ, Manufacturing Excellence, Operations Polyolefins and Operations Hydrocarbons, and Project & Expert Support. Each production location also has its own health, safety and environment Assurance Team, chaired by a nominee appointed by local management. Its members come from different areas within the location, to ensure cross-learning and a link to Group developments.

Borealis Management System
Borealis' corporate governance model is based on its company values (Responsible, Respect, Exceed and Nimblicity™) and is supported by five corporate governance principles:
1. Borealis is managed as one cross-cultural Group;
2. the Borealis Executive Board (ExB) steers the Group through directional guidance and empowerment of its people;
3. Borealis is steered by centrally organised functions and businesses;
4. Borealis promotes a performance culture based on clear accountabilities for delivery; and
5. Borealis' leaders follow explicit processes and pursue transparent and effective decision-making.

The values and governance principles run through the Group at all levels and are the foundation for the Borealis Management System (BMS). The principles ensure a common understanding of leadership throughout the Group and establish effective organisational structures and control. Borealis is fully consolidated into the OMV Group with effect from 29 October 2020. The process of harmonising relevant BMS documents with OMV's governance principles began in early 2021 and was completed by July 2022. Consequently, most OMV Group regulations, consisting of Group Directives, Group Standards and Group Procedures, are now fully applicable in the Borealis Group of companies. In anticipation of the carve out of Fertilizers, Melamine and TEN, and the establishment of a separate management system for that business, its Group BMS documents were kept out of scope and were unaffected.

Fig. 9: **Regulation classes and their hierarchy**



In addition to implementing the OMV Group Regulations, Borealis introduced a new BMS nomenclature from 1 July 2022 (Fig. 9). This distinguishes between the different classes of regulations and the hierarchy levels within the Group.

The BMS includes both Group and location aspects, which together document the complete way of working at Borealis. The Group BMS is managed in a centrally controlled document management database. It applies to all locations and to Borealis' affiliates, such as joint ventures where Borealis has the majority ownership, as well as customers or suppliers, unless the Executive Board has approved an exception. The policies and governance documents in the Group BMS are revised at least every three years.

Local BMS documents apply to a particular location and can be written in the local language, to ensure local employees fully understand them. Controlled documents in the local BMS are revised at least every five years. Any new Group regulation or change to an existing regulation requires Borealis' involvement and approval before it becomes obligatory. Approvals need to be given by the document issuer, document owner and document approver related to the specific subject covered by the document. This ensures Borealis maintains its independence as a company.

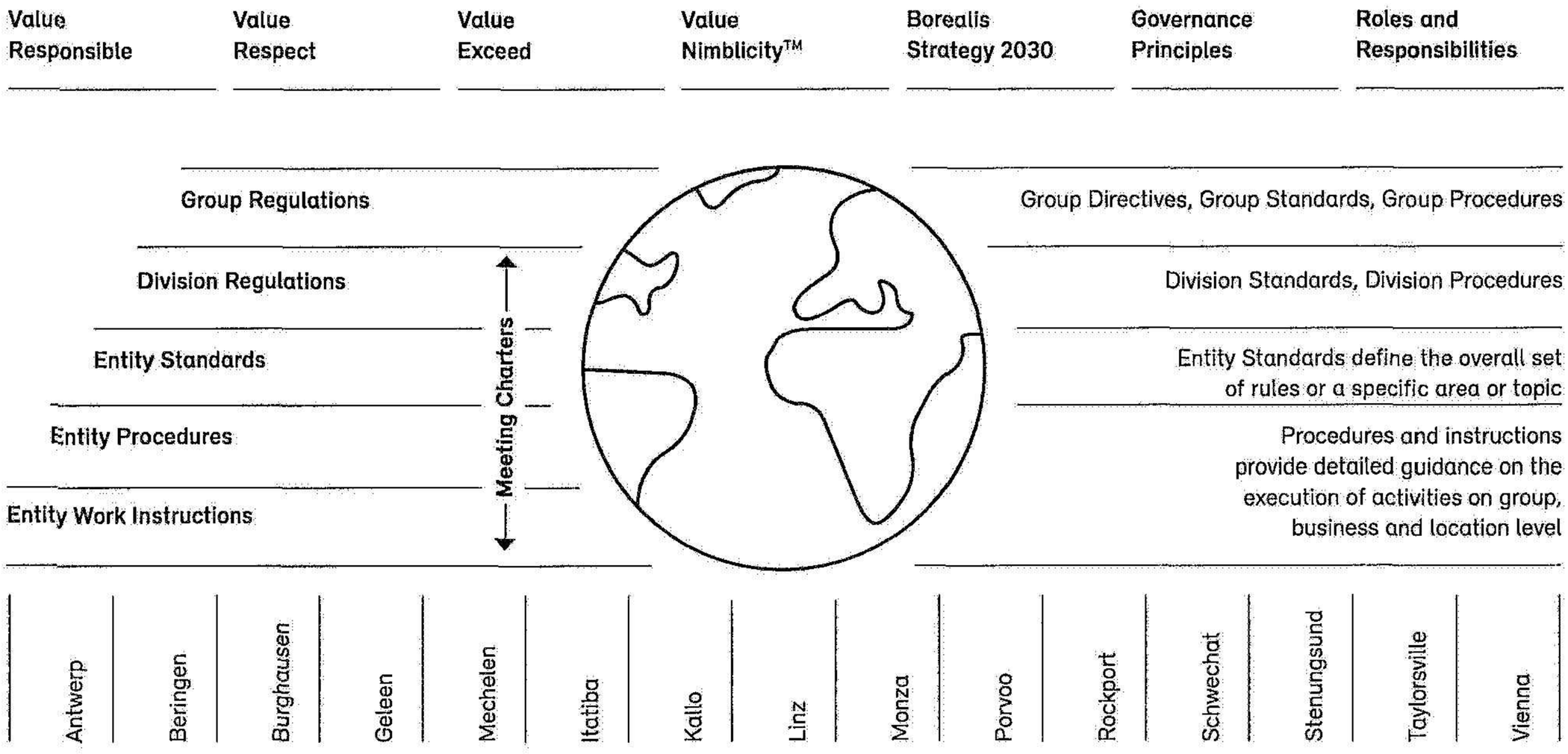
This independence is also ensured by the Company's Authority Schedule, which defines how authority is delegated in all business and functional areas and establishes the approval levels for senior management within key processes. The Authority Schedule is a controlled document in the BMS and any material change to it must be approved by the Chief Financial Officer (CFO) as the document owner, by the Executive Board and subsequently by the Borealis Supervisory Board (SVB).

Secondary BMS Documents and BMS Setup
In addition to the Group and Divisional Regulations, the BMS encompasses Entity Standards, Entity Procedures, Entity Work Instructions, and Committee and Meeting Charters.

The Entity Standards provide specific guidance, describe key processes and explain the purpose, scope and setup at departmental level. The subsequent Entity Procedures and Entity Work Instructions have a more operational focus and provide detailed guidance on the execution of activities at Group, business or location level.

20230711119837

Fig. 10: **The Borealis Management System**



Ensuring Compliance with the Borealis Management System
Compliance with the BMS is monitored at multiple levels and by various stakeholders:

- Process owners across the organisation use performance indicators to continuously monitor the effectiveness and efficiency of their respective processes. Processes are also reviewed regularly through internal system audits.
- The effectiveness and efficiency of the management system is reviewed annually at location level by the location leadership teams and at Group level by the Executive Board.
- In addition to audits by external certification bodies and governmental institutions, a number of Borealis' customers select different locations for an audit as part of their supplier qualification and review process. Borealis uses these audits as a key source of continuous improvement initiatives. In 2022, Borealis successfully passed all mandatory third-party audits. Voluntary second-party audits, such as customer audits, were pursued as requested.

Internal Controls and Audit

Borealis has established a system of internal controls in line with EU regulations. These controls assess the robustness of the Group's systems and processes, and support the monitoring, management and reporting of related risks.

The system of internal control is owned by the CEO and senior management. Internal controls are defined for core processes and require control owners to complete self-assessments.

Borealis follows the guidelines set by the Institute of Internal Auditors. In 2022, Internal Audit performed more than 20 audits, special investigations and internal control reviews for key processes. The 2022 audits encompassed: compliance; operations; strategic and financial topics including risk management, ethics and management control; sustainability; circularity; inventory management; information technology and security management; procurement; strategy execution; project management and audits of joint ventures; and innovation. Internal Audit also conducted prevention, risk management and process-safety-related audits at Borealis' locations.

Management of Risk

Borealis' approach to risk management is based on the *core objectives of identifying, assessing and managing risks* that could impact its economic performance, the environment or society, as well as understanding how the explicit consideration of risk may affect the Group's strategy and performance. Risk management is therefore designed to

enrich dialogue with internal and external stakeholders and contributes to achieving Borealis' long-term strategy and short-term goals, as well as its sustainability journey.

Enterprise Risk Management (ERM) also enhances Borealis' enterprise resilience, which is the ability to anticipate and respond to change. This process is driven by the Internal Audit and Risk Management department. Both financial and non-financial risks are identified, assessed and reported through the Group-wide ERM process. Borealis continuously updates the process, to ensure compliance with developing regulatory reporting standards. In addition to identifying risks to be managed and mitigated, assessing financial, market, operational, tactical, strategic and reputational risks helps the Group to assess business opportunities systematically.

Risk Management Governance
Borealis' objective is to deliver value through risk-based management and decision-making, by establishing sound risk management practices in all business areas and in all locations where the Group operates. The Group's approach is based on a "three lines model", where the first line is business management, the second line is risk management and the third line is Internal Audit. The Group's risk management process ensures that all parts of Borealis routinely identify and assess their risks, and develop and implement appropriate mitigating actions.

The CFO owns the Risk Management Policy, ensures compliance with it and is responsible for the Group-wide implementation and execution of sound risk assessment practices. Borealis has created a Risk Coach Network, chaired by the CFO, with senior representatives from across the Group.

Business units and functions are provided with risk assessment guidelines, procedures and tools, which cover all key risk elements within their business areas. The guidelines allow Borealis to map the risks in its risk landscape, based on their potential business impact and the probability of the risk occurring. The common risk categories are defined in the Risk Management Policy.

Key risks across the Group are periodically discussed at a Group-wide level and consolidated to produce the Group's overall risk landscape. At least twice a year, the Executive Board reviews these key risks, validates the Group's risk tolerance levels and risk appetite, monitors the implementation of mitigating actions and ensures that they are integrated into strategic planning. The process consists of individual steps, starting with risk identification, analysis, evaluation, treatment, reporting and review, through to continuous monitoring of changes to the risk profile.

While each Borealis employee is responsible for managing risk within their own areas of activity, the Executive Board owns the Group-wide risk landscape. The consolidated Group Risk Landscape, including the status of mitigation actions, is owned by the CFO, agreed with and approved by the Executive Board and reported by the Executive Board twice a year to the SVB. The SVB reviews the effectiveness of Borealis' risk management practices and processes, the Group's risk exposure and the effectiveness of its mitigating actions.

The key risks of each business unit and function are owned by their respective Executive Vice Presidents (EVPs) and/or Directors. They are responsible for continually identifying potential risks and opportunities within their area.
The Director Internal Audit supports the Group-wide adoption of comprehensive and effective risk management processes and practices, providing training or risk management briefings for senior management, facilitating the risk management process and supporting the Audit Committee in reviewing Borealis' risk landscape and risk mitigation activities.

Immediate risk escalation is a key element of Borealis' continuous risk management process, to ensure the Group reacts promptly to any sudden increase in risk exposure. Risk owners are required to report to the relevant EVP when they identify major increases in the business impact or probability of a particular risk, whether caused by internal or external factors. The EVP then reviews the new risk and decides whether further escalation to the Executive Board is necessary, to facilitate immediate reprioritisation of the mitigation actions The Executive Board regularly discusses and addresses high-risk issues.

The Group Risk Landscape is presented and discussed with the Executive Board and subsequently reported twice a year to the Supervisory Board.

Specific Sustainability Risks and Opportunities
In addition to the Group's regular ERM process, the Sustainability Department has developed a Group-wide

20230711119838

Fig. 11: **ESG risk and opportunity assessment categories**

Probability	Time horizon	Financial impact	NaDiVeG matters	Risk type	Climate risk/opportunity classification
– Likely (>50%, *more often* than once in 2 years) – Very Possible (20%–50%, once in 2 to 5 years) – Rare (10–20%, once in 5 to 10 years) – Very Rare (1–10%, once in 10 to 100 years) – Extremely Rare (<1%, less than once in 100 years)	– Short-term (<3 years) – Mid-term (3–5 years) – Long-term (>5 years)	– High Impact (>EUR 5,000 mn) – Severe (EUR 1,000–5,000 mn) – Major (EUR 500–1,000 mn) – Significant (EUR 100–500 mn) – Considerable (EUR 50–100 mn) – Moderate (EUR 10–50 mn) – Minor (EUR 1–10 mn) – Negligible (< EUR 1 mn)	– Environmental matters – Employee matters – Social matters – Anti-corruption and bribery – Human rights	– Outside-in risk (on Borealis) – Inside-out risk (on environment & society) – Both	– Physical – Transitional – policy & legal – Transitional – technology – Transitional – market – Transitional – reputation

assessment process for sustainability risks and opportunities. The process was updated during 2022. Due to ongoing organisational changes and other work packages that were prioritised during 2022, sustainability risks will now be fully integrated into the ERM process in 2023.

Sustainability risks and opportunities for the most relevant Borealis business areas have been identified and qualitatively and quantitatively assessed in terms of their probability, time horizon (short-term, mid-term, long-term), financial impact (high, severe, major, significant, considerable, moderate, minor, negligible) and classified according to the NaDiVeG and TCFD frameworks.

Risks and opportunities were also identified by Borealis' expert departments, by monitoring the external environment through continuous stakeholder dialogue, desktop research of industry reports, peer analysis and topic-related studies (→ ESG Risks and Opportunities, Annex, p. 280).

Activities 2022

Borealis' corporate governance focus in 2022 was to maintain the maturity of the management system, while preparing it for the required changes, namely:

– implementing all applicable OMV regulations and a new, harmonised management system nomenclature (→ Fig. 9, p. 64);
– preparing for the divestment of the Fertilizers, Melamine and TEN organisation, by dividing the joint ISO certificates between Borealis (Polyolefins and Hydrocarbons & Energy), and Fertilizers, Melamine and TEN;
– transferring to a new certification body for the Borealis plants certified to the International Automotive Task Force standard IATF 16949; and
– regularly cooperating and exchanging knowledge between Borealis and the OMV Group of companies, such as the successful joint training programme for new internal auditors.

Outlook

For 2023 and beyond, the Group's objectives in the corporate governance area are to:

– foster an even closer relationship with the business via Borealis Quality Management, through a reviewed Customer Support Team approach encompassing a greater focus on customer awareness and a closer co-operation with the sales managers;
– expand and strengthen network activities with Borouge, with the focus on healthcare products and joint markets, such as India; and
– continue to onboard new locations, including acquired companies such as DYM SOLUTION CO., LTD and new assets such as the dehydrogenation plant being constructed in Kallo, Belgium (Dehy 2), to ensure they adopt the Group's quality thinking and way of working, by close co-operation with the local stakeholders.

Responsible Care®

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

Borealis' determination to control sustainability risks is stipulated in its Responsible Care Policy Statement. The statement is the basis for all of Borealis' activities and for developing processes in areas such as occupational health and safety, energy and environmental management, process safety and product stewardship, with the aim of achieving world-class performance and being a recognised leader.

The Group meets or exceeds the legal and other requirements to which it subscribes. The Group has a Responsible Care management system, based on continuous improvement and verification of its performance, and openly discusses Responsible Care issues with its stakeholders to further promote health, safety and the environment and to save energy along the value chain.

Borealis is committed to implementing the guidelines of the Responsible Care Global Charter, which is the chemical industry's voluntary initiative aimed at continuous improvement in HSE performance. The charter's guidelines, such as efficient use of natural resources and avoiding waste production, are also among the principles guiding Borealis.

Through Responsible Care, Borealis commits to:

- ensuring it has a corporate leadership culture which proactively supports safe chemical management, through the global Responsible Care initiative.
- safeguarding people and the environment by continuously improving the HSE performance and security of Borealis' facilities, processes and technologies, and by driving continuous improvement in chemical product safety and stewardship throughout the supply chain.
- strengthening chemicals management systems by participating in the development and implementation of life cycle-oriented, science- and risk-based chemical safety legislation and best practices.
- influencing business partners to promote the safe management of chemicals within their own operations.
- engaging stakeholders, understanding and responding to their concerns and expectations for safer operations and products, and communicating openly on Borealis' performance.
- contributing to sustainability through improved performance, expanded economic opportunities and the development of innovative technologies and other solutions to societal challenges.

20230711119839

Ethics & Compliance

Goals for 2022	Key Achievements of 2022
Achieve ISO certification for Compliance Management and Anti-Bribery	Achieved certification for Compliance and Anti-Bribery & Corruption Management Systems according to ISO 37001 and ISO 37301
Update the Borealis Ethics Policy	Launched updated Borealis Ethics Policy in March 2022, ensuring compliance with the EU Whistleblower Directive, upcoming legal supply chain requirements and other compliance-relevant legislation
Conduct country human rights assessments, according to OMV Group requirements	Borealis conducted and completed a thorough human rights assessment in the US, which has been externally verified by Dentons UK, as part of its annual human rights assessment plan. In addition, in response to alleged human trafficking practices by contractor IREM at the Borealis PDH construction site in Kallo, Belgium, Borealis conducted a human rights audit at that site.
Conduct anti-bribery and corruption and anti-trust maturity assessment	In co-operation with Dentons, Borealis completed a thorough anti-bribery and anti-trust maturity assessment within the Group, to identify gaps and improve its compliance standards

Maintaining the highest standards of integrity is essential for securing and maintaining the trust of Borealis' customers, suppliers, employees, shareholders and society at large. Failure to meet its ethical and compliance obligations could expose Borealis to the loss of stakeholder trust and reputational damage, as well as to fines, legal claims, loss of business, contracts or licences, or even the imprisonment of management and employees involved. An unethical or non-compliant environment can also affect employees' engagement and job satisfaction.

Borealis' commitment to ethical business conduct is clearly reflected in its core values of Responsibility, Respect, Exceed and Nimblicity™. The Ethics Policy provides guidance to Borealis' employees and sets out the Group's ethical principles, most importantly including human rights, ethical business conduct, and the requirement for ethical and respectful co-operation. The Policy also includes rules to ensure compliance with laws on anti-corruption, competition, trade restriction and data protection, as well as issuer compliance requirements.

Governance

The Group's Compliance & Ethics function has both preventative and controlling roles. It looks to prevent infringements of laws, ethical principles and compliance matters, and to mitigate risk, react to issues and implement lessons learned. The function is headed by the Group Compliance & Ethics Officer, who reports to the VP Legal & Compliance and also has a reporting line to the Audit Committee, which receives an annual report on compliance and ethics issues. The Group Compliance & Ethics Officer is supported by a team of compliance managers and a network of more than 90 Ethics Ambassadors. The Ethics Ambassador network is a key tool for promoting and strengthening Borealis' ethics culture. The network has global coverage, with one ambassador at almost every location and across all hierarchy levels.

Borealis' Group Compliance & Ethics function has regular exchanges of information with its counterparts at the Group's owners, OMV and ADNOC. In addition, Group Compliance & Ethics regularly provides ethics-related information and updates to the CEO and the Audit Committee. In particular, this information includes major new projects, a report on substantiated unethical conduct, updates on training conducted and any other major developments. The function also consistently seeks guidance and advice from the Executive Board and the Audit Committee, to further enhance the effectiveness of the Compliance Management System.

The Ethics Council is sponsored by the CEO and General Counsel, and chaired by the Group Compliance & Ethics Officer. It consists of senior leaders or senior representatives from Legal, Internal Audit, HSE, People & Culture and the different businesses. The Council aligns the Group's approach to ethics and provides updates on compliance and ethics matters to ensure consistent Group-wide ethics

standards. It also has the exclusive right to decide on important and strategic ethics-related matters, such as disciplinary actions, high-value sponsorships and conflicts of interest, which are binding for the Borealis Group.

Borealis Ethics Policy (Code of Business Conduct)
The Borealis Ethics Policy is accessible to the public on Borealis' website (Ethics and Compliance – Commitments – About Borealis – Borealis (borealisgroup.com). The Policy is available in ten languages and applies to the entire Borealis workforce.

Borealis' contractors, suppliers and other business partners are required to adhere to the Ethics Policy or to have their own policies which are of a similar standard. Borealis has also created a Supplier Ethics Policy to reflect the specific ethics aspects needing to be managed in its supply chain. All major and strategic Borealis suppliers must adhere to the Responsible Sourcing Policy. It defines the Group's approach to key aspects of business ethics when sourcing, such as anti-corruption, anti-slavery and child labour, as well as health, safety and the environment (HSE). The Policy is available from the Borealis website and is also being actively communicated to Borealis' suppliers via a special letter and/or in the course of the onboarding process during the contracting phase.

In March 2022, Borealis' Executive Board, in its capacity as Borealis' most senior approving body, unanimously approved the following updates to the Ethics Policy:
- New foreword from the CEO: In this foreword, the CEO expresses his compliance and ethics-related expectations towards Borealis' workforce and external partners and makes a clear request to everyone to not look away in cases of witnessed or suspected misconduct.
- Business Partners: The Policy includes a new chapter which expresses even more explicitly Borealis' expectations towards its business partners. The due diligence requirements for business partners have also been updated with Procurement, reflecting the potential introduction of new legal due diligence requirements for business partners and the entire supply chain.
- Human Rights: The Policy contains a new section related to human rights. This expresses even more clearly the importance of human rights to Borealis and the Group's expectations of its employees and business partners. The Ethics Policy now also reaffirms Borealis' commitment to the Ten Principles of the UN Global Compact, the International Labor Standards of the International Labour Organisation and the UN Guiding Principles on Human Rights.
- Issuer Compliance: The Policy includes an update on issuer compliance requirements, reflecting the fact that Borealis is fully consolidated in the listed OMV Group.
- Ethics Hotline: The Policy includes updated reporting options, using Borealis' upgraded Ethics Hotline.
- The updated Ethics Policy was communicated to all employees via the ethics policy newsletter.

Key Areas of the Ethics Policy

Corruption and Bribery

Before entering into a relationship with business partners from countries which are rated as high risk in Transparency International's Corruption Perceptions Index, Borealis conducts a compliance clearance review. This is supported by an IT application provided by Thomson Reuters, which verifies legal entities and associated individuals. Borealis will only proceed with the business relationship if the review shows no negative results. In all other cases, Borealis will not enter into any business relationship or will conduct further thorough due diligence to clarify any concerns.

Borealis' anti-corruption and anti-bribery rules include not accepting or tolerating any kind of facilitation payments. The Group also strictly prohibits offering, giving or accepting gifts or anything of value in order to obtain or grant an improper business advantage. Any gift or hospitality in connection with Borealis' business activities must be reasonable and appropriate, and must have a legal and reasonable business purpose. In accordance with Borealis' Ethics Policy, gifts and hospitality offered or received by Borealis colleagues must be registered in an internal gift registry, which is maintained and monitored by Group Compliance & Ethics.

In 2021 and 2022, all of Borealis' Polyolefins (PO) and Hydrocarbons & Energy (HC&E) operations were fully assessed by the law firm Dentons UK. Melamine, Fertilizers and Technical Nitrogen Products (TEN) operations were partially assessed. No significant risks were identified.

Competition

Borealis is committed to healthy, lawful, equitable and ethical competition between companies. The Group applies policies to ensure full compliance with applicable competition laws in all of the jurisdictions where it carries out business.

20230711198440

Borealis also puts special focus on anti-trust and competition requirements in its compliance training and workshops.

Data Privacy

Borealis must treat all personal information relating to its employees and business partners confidentially and in line with legal requirements. The Group takes its obligations under the General Data Protection Regulation (GDPR) and any other applicable data protection laws seriously and makes sure to prevent unauthorised disclosure. Certain employees may, as part of their role, deal with personal information about other employees or third parties. Those employees receive specific training on what is required from them in relation to such data. Borealis expects all employees dealing with personal data to always treat it confidentially and in accordance with the applicable law (→ chapter People & Culture, p. 76). In addition, Borealis implements IT security measures to help ensure data is adequately protected.

Issuer Compliance

Since Borealis became fully consolidated into the listed OMV Group, issuer compliance and the application of the Market Abuse Regulation (MAR) has become significantly more important at Borealis. The Group is now an important contributor to OMV Group's financial performance and Borealis' business performance might therefore impact OMV's share price and other financial instruments. The Group therefore needs to consider an increased compliance risk related to insider dealing and other misuse of inside information. Before the consolidation with OMV, Borealis was not a consolidated part of a listed group and the MAR was mainly relevant to Borealis as an issuer of fixed rate bonds, which involve minimal risk for insider trading and other market abuse practices. Group Compliance & Ethics has implemented and updated several procedures to create awareness and mitigate risks. Among others, there is a process in place to identify colleagues who are more exposed to MAR-related risks and who are annually trained and requested to sign an adherence declaration.

Managing Conflicts of Interest

The Group's process for preventing and mitigating conflicts of interest is outlined in its Code of Conduct, which applies to all Borealis employees including the Executive Board.

A conflict of interest may occur when an employee's personal interest could interfere with their duties to act in Borealis' best interests. Conflicts of interest can occur in many different ways and typically arise in the following situations:

- having outside jobs and affiliation with competitors, customers or suppliers;
- working with close relatives or having an intimate relationship with a colleague who can influence decisions such as salary, performance rating or promotion;
- membership of the board, advisory committee or other governing body of another organisation; and
- investments, including sponsorships, which might influence or appear to influence the employee's judgement

Borealis expects its employees to avoid any activity that creates even the remote appearance of a conflict between their personal interests and the interests of Borealis. Employees must disclose to their line managers and to the Group Compliance & Ethics Officer any actual, perceived or potential conflicts that they might have, in order to protect the employee and the Group. Group Compliance & Ethics has the authority to clear, reject or initiate further investigation of the conflict. Employees must follow any restrictions imposed on them as a result of a conflict of interest disclosure.

All reported conflicts are documented in the Group's Integrity Tool and regularly reported to the Ethics Council. Where actions are taken, the stakeholders affected and the Executive Board are informed. In 2022, neither the Supervisory Board, the Executive Board nor the Audit Committee members held shares in Borealis or the majority of the shares in a holding company, thereby preventing any related conflicts of interest.

Cross-shareholdings and cross-board memberships of members of the Executive Board and the Supervisory Board have been assessed for any potential conflicts of interest. No such conflicts have been identified.

Human Rights

Human rights are universal values which guide Borealis' conduct in every aspect of its activities.

Borealis does not tolerate any form of harassment, bullying, discrimination, disrespect, exploitation of a person's vulnerability or dependency, or any other violation of human rights and therefore expects all its suppliers, customers and other business partners to strictly comply with the universal

human rights and respective national laws. Borealis has an Operative Instruction in place to ensure compliance with the requirements of the UK Modern Slavery Act. The Group is also strongly committed to the Ten Principles of the United Nations' Global Compact and the International Labour Standards of the International Labour Organization. Borealis is committed to address adverse human rights impacts we are involved in and to take adequate measures for their prevention, mitigation and, where appropriate, remediation.

In meeting its human rights responsibilities, Borealis acts in strict compliance with applicable national law. Where national law falls short of Borealis' standards, based on international human rights law, Borealis is guided by its higher standards while complying with applicable laws.

Before doing business with an external partner, Borealis conducts a compliance check by applying an automated IT screening system called Third-Party Manager. The checks involve human rights aspects and highlight any convictions, ongoing proceedings, suspicions or other red flags with regard to human rights violations. The checks continue to be carried out for as long as Borealis does business with the partner. An Operative Instruction determines the due diligence requirements and escalation procedure in the event of a higher risk rating or red flags being detected, with the Group Compliance & Ethics Officer having the ultimate responsibility for approving or rejecting a business partner. In addition, Borealis conducts an annual human rights assessment in different regions to determine local human rights risks and recommend appropriate actions to mitigate those risks.

Despite the stringent processes in place, in July 2022 Borealis became aware of possible large scale social fraud and alleged human trafficking practices by its contractor IREM, at the construction site for the propane dehydrogenation plant in Kallo, Belgium. Borealis immediately supported the Belgian authorities in their investigation. Full report on the incident and Borealis response → About the Kallo Case, p. 35.

Ethics Hotline: Whistleblowing and Speaking Up

Borealis complies with the EU Whistleblower Directive (Directive (EU) 2019/1937), which became applicable in all EU jurisdictions on 17 December 2021. Borealis' stance is that "looking away is not an option" and the Ethics Policy therefore obliges employees to speak up about any actual or suspected ethical or compliance breaches.

Borealis continuously promotes speaking up and creates awareness about the Ethics Hotline and how to use it, in particular through the Ethics Policy, Ethics Newsletters to all Borealis employees, articles on the intranet and in each Ethics Training. Borealis' CEO also continuously promotes speaking up in internal update meetings and site visits. Furthermore, each white collar employee has to confirm, in the course of their Annual Certification, that they have reported all witnessed and suspected violations of the Ethics Policy.

The Ethics Hotline is based on an automated cloud-based case management tool, "Integrity", provided by the German service provider EQS. The tool is user-friendly, self-explanatory and practical for both the reporter and the managers of the reported cases, and has been well accepted by all relevant stakeholders.

Reports to the Ethics Hotline can be made 24/7 in 21 languages, by following the link: borealis.integrityline.com. The link is published on the intranet and on Borealis' external website, which enables individuals inside and outside Borealis to file reports. These can be fully anonymous, in which case the identity of the reporter is not tracked.

All reports to the Ethics Hotline are directly tracked and recorded in the management tool. Each reporter is notified that the report has been received and is being handled. Group Compliance & Ethics is immediately notified of each new report and can then administer the report in the management tool. Reports received through other reporting channels are manually set up in the tool by the Group Compliance & Ethics team. Access to the IT tool is strictly limited to the Group Compliance & Ethics team, the General Counsel and the Director Internal Audit and Risk Management.

Every report is assessed and handled with the utmost priority, in accordance with Borealis' Investigation and Ethics Case Handling Procedure. While Group Compliance & Ethics is responsible for the intake, categorisation, documentation and initial handling of each case, Internal Audit, People & Culture and subject matter experts are involved in the investigation, depending on the compliance areas and risks involved.

20230711119841

Each investigation which substantiates unethical conduct is carefully reviewed by Borealis' cross-functional Ethics Council, which has the authority to decide on disciplinary measures and other remediation measures. The Group Compliance & Ethics Officer provides quarterly updates to the Executive Board on all conducted and substantiated investigations. Furthermore, Borealis' Audit Committee receives an annual report of all conducted investigations and remediation actions.

The decision about whether a report is investigated follows the process laid down in Borealis' Investigation and Ethics Case Handling Procedure. Only reports which suggest or include allegations of a possible violation of the Ethics Policy are investigated. Reports which do not suggest any such violation are either forwarded to the department which is best placed to deal with it or, if the report is unreasonable or without serious intent, it is dropped and closed.

In compliance with the EU Whistleblower Directive, the Ethics Hotline allows Borealis' workforce and external stakeholders to make reports related to the following categories:
- *Anti-bribery and corruption*
- *Human rights violations*
- *Breach of confidentiality*
- *Competition law*
- *Financial crime*
- *Conflict of interest*
- *Data privacy*
- *Fraud and theft*
- *Trade compliance*
- *Labour issues*
- *Violation of policies*
- *HSE*
- *Environmental damage*

Activities 2022

ISO Certification Compliance Management and Anti-Corruption Management

On 9 November 2022, Austrian Standards granted Borealis certification to the ISO 37001 (Compliance Management) and ISO 37301 (Anti-Bribery & Corruption) standards, following a thorough on-site two-tier audit conducted by Taylor Wessing. The audit involved more than 20 interviews and a review of hundreds of policies and other documents and confirmed that Borealis operates a professional compliance management system.

Data Protection

In 2022, Borealis implemented the OMV Group Data Protection Directive and furthered its alignment with the OMV Group Data Protection Team. As part of closer co-operation, Borealis and OMV have conducted data protection maturity level assessments at several Borealis locations, to identify and remediate any gaps in relation to data protection requirements. Additional steps have been taken by hiring external consultants for gap analyses in several locations, in accordance with GDPR requirements.

Human Rights Assessments

In alignment with OMV Group requirements, Borealis defines annual Human Rights Assessment plans and conducts dedicated country risk assessments regarding labour and human rights, to determine and monitor compliance risks. In addition to monitoring relevant labour rights risks, the risk assessment is verified by the law firm Dentons UK and shared with local management, the Borealis Executive Board, the Ethics Council and the OMV Human Rights Team.

For 2022, one assessment was scheduled and conducted in the US operations of Borealis Compound Inc., which has been externally verified by Dentons UK. A 2021 risk assessment in Brazil was also completed in early 2022. In addition, in response to alleged human trafficking practices by contractor IREM at the Borealis PDH construction site in Kallo, Belgium, Borealis conducted a human rights audit at that site.

Ethics Hotline "Speaking Up"

In 2022, Borealis further stepped up its efforts to encourage external stakeholders to speak up and to increase the effectiveness of this grievance tool. The Group launched a campaign to re-emphasise and promote the availability of the Ethics Hotline to employees as well as external partners and, in particular, to workers of contractors and subcontractors at Borealis' locations.

In 2022, Group Compliance & Ethics received more than 180 reports, of which 88 cases were investigated. Twenty of these investigations substantiated or partially substantiated misconduct by Borealis colleagues, 56 did not substantiate misconduct and 12 are ongoing. Twenty nine of the reports

related to the alleged human rights incident at the Borealis PDH construction site in Kallo.

Performance 2022

Non-compliance and legal actions

With regard to the alleged human trafficking practices by contractor IREM at the Borealis PDH construction site in Kallo, Belgium, by the closing date of this report, no investigation had been initiated against Borealis.
See more information: → About the Kallo Case, p. 35.

Apart from the above, Borealis, to the best of its knowledge, was not involved in any material violations of anti-corruption, anti-trust or competition law, monopoly legislation, human rights or data privacy restrictions during 2022. No penalties, fines or other permanent sanctions were imposed on Borealis and no legal action was initiated against Borealis or any Borealis employee for non-compliance with these legal requirements by the end of 2022.

Ethics & Compliance Training

Borealis provides regular training to promote its Ethics Policy, which is based on the principles of honesty, integrity, working together, respect for each other, accountability and HSE. Borealis provides e-learning for employees through its service provider, Learn Research Network Limited (LRN). LRN is one of the global market leaders for e-learning solutions. The training plan is illustrated in Fig. 12, p. 75. It is reviewed annually and adapted as necessary.

Training on human rights issues, as well as anti-corruption and bribery, are part of every classroom training and Code of Conduct e-learning training. Topics covered include non-discrimination, respect, fair treatment and data protection.

In 2022, 15,558 e-learning courses were completed by Borealis employees (11,953 in HC&E and PO and 3,605 in Fertilizers, Melamine and TEN). Altogether, 86% (90% HC&E and PO and 74% Fertilizers, Melamine and TEN) of the entire Borealis workforce have completed an ethics-related e-learning course.

In 2023, Borealis will roll out e-learning courses which specifically address human rights topics and will be mandatory for all employees.

Outlook

In 2023, Borealis will further strengthen its ability to prevent any type of unethical social behaviour within Borealis and its suppliers. Amongst other initiatives, the Group will:

- implement a dedicated human rights e-learning course, which will be mandatory for all Borealis employees;
- implement additional resources with a new team, to ensure social compliance across the Group, including newly created roles such as a social compliance manager;
- deploy a new governance structure for Ethics & Compliance, to put Borealis in the best possible position to monitor and ensure ethical business conduct by the Group's business partners and contractors, with a focus on ethical and legal treatment of their workers; → About the Kallo Case, p. 35; and
- update and further strengthen Borealis' due diligence process and requirements of its business partners and contractors. In particular, the Group will introduce processes to identify critical business partners and intensify its monitoring of them.

20230713119842

Fig. 12: **Courses completed by employees in 2022** [1) 2)]

	PO/HC&E	Fertilizers, Melamine and TEN
Number of Ethics & Compliance e-learning courses completed [3)]	11,953	3,605
Percentage of total workforce that completed Ethics & Compliance e-learning courses	90%	74%
Number of tailored classroom/virtual training sessions on Ethics & Compliance held	636	11
Number of employees who received tailored classroom/virtual training sessions on Ethics & Compliance, which includes training on anti-corruption and bribery and human rights	5,337	1,705
Number of hours of training on human rights [4)]	600	300
Number of employees from Sales, Procurement, Legal and eligible project teams who completed specific e-learning courses on anti-corruption	63	29
Percentage of Executive Board Members who received training on anti-corruption policies and procedures, human rights and Market Abuse Regulation (MAR) requirements	100%	100%
Percentage of Supervisory Board Members who received training on anti-corruption policies and procedures, human rights and MAR requirements	100%	100%

1) Today, security personnel at Borealis sites are exclusively provided by external vendors. A review done in 2022 confirmed that approx. 60% of dedicated personnel were trained by the vendors on human rights. In 2023, Borealis will require and monitor that 100% of said personnel will receive human rights training. // 2) DYM SOLUTION CO., LTD, mtm and Rosier are excluded from e-learning courses. // 3) Ethics & Compliance e-learning courses subsume various types of courses. Some employees have completed several e-learning courses. // 4) Training on human rights is part of our general ethics training.

Fig. 13: **E-learning schedule**

Training title	Target group	Training description	Frequency
Annual Certification	All white-collar employees	Commitment by each white-collar employee that the Ethics Policy is understood and followed	Annually
Code of Conduct	All employees	Principal rules of the Ethics Policy	Annually
Human Rights	All employees	Human rights risks in business conduct	Every second year
Combating Bribery in Business	Managers, Sales & Procurement	Anti-corruption requirements	Annually
Trade Compliance	Managers, Sales, Procurement, Tax & Customs	Sanctions, embargoes and trade control requirements	Every second year
Issuer Compliance	All Borealis managers and employees who have access to Inside Information	Legal requirements related to the EU Market Abuse Regulation (MAR)	Annually
Ethical Leadership	All Borealis managers	Line managers are trained on how to create an ethical culture in their teams	Once for every manager

People & Culture

Goals for 2022	Key Achievements of 2022
Develop activities around the Group's Discover Resilience Together platform, with a yearly calendar of activities	Launched local wellbeing initiatives at all locations
Finalise Diversity, Equality & Inclusion (DE&I) strategy for the OMV Group and roll out across Borealis	Launched DE&I Volunteer Network in 2022 and held first DE&I month in October
Develop a capability roadmap, setting out the competences the Group requires, as an input for strategic workforce planning	Reviewed and updated existing competence profiles, to support strategic workforce planning
Update and align Borealis' employer value proposition (EVP) and brand, to fit the Group's new strategic direction	Based on Group strategy, defined building blocks of EVP, mapped career opportunities and defined target groups, with implementation in 2023
Start implementation of new People & Culture (P&C) strategy	Approved new P&C strategy, based on four pillars (Employee Experience, Growing Talent, New Ways of Working and Organisational Evolution) powered by transformational leadership and began implementation

Borealis puts people at the centre of all of its activities. This is made visible through the new strategy, which is titled "People make it happen", and through the renaming of the Human Resources department as People & Culture (→ Fig. 14, p. 77).

Governance

Borealis' P&C organisation provides people-related support and guidance to leaders and employees throughout their careers. The services provided by P&C include talent acquisition and onboarding, organisational and individual development, change management, and compensation and benefits.

The Vice President (VP) P&C reports to the CEO and, together with the Executive Board, identifies how P&C can best support the Group's strategy and initiatives. The VP P&C and the P&C leadership team ensure that the Group has the relevant competences by developing and offering specific internal or external training, for example on the circular economy, as well as the necessary people-management tools and resources.

The Borealis P&C Handbook sets out the Group's P&C governance, which is managed through the Borealis People Policy and a number of Group procedures and operative instructions. These cover areas such as performance management, including bonuses and development, the Borealis Incentive Plan, succession planning and talent management. The Borealis Management System (→ Corporate Governance, p. 56) collates all these documents in one system.

Borealis measures performance related to recruitment, performance management, mobility, people engagement and data quality via key performance indicators (KPIs) in the P&C Dashboard. KPIs have also been defined for each of the four pillars in the P&C strategy, which are a mix of leading and lagging indicators.

Improving the P&C Information System

Borealis' core people administration is centrally managed using SAP. The system includes payroll, employee data, organisational management, time management, competence management, merit and long-term incentive plans. All employees' data are also documented in SAP. Digital approval processes support a state-of-the-art employee experience.

Borealis uses SuccessFactors – a cloud solution interfaced with the SAP system – to help employees and leaders make better use of important P&C processes. SuccessFactors includes Employee Profile, Learning, Succession Planning and Talent Management, Performance and Recruitment modules.

Borealis Works Council and Collective Bargaining Agreements

During 2022, Borealis became part of the new European Works Council of OMV Group, in close co-operation with the relevant trade unions. From 1 January 2023, this will replace the Corporate Co-operation Council (CCC), which was Borealis' previous forum for exchanging information between the works councils at the various Borealis locations and top management. It was an important platform for dialogue between management and employee

20230711119843

representatives and held four meetings and one conference each year. In 2022, the CCC Conference was held in May in Belgium and focused on balancing work throughout life and how the Group can make this happen.

Borealis respects employees who wish to organise themselves and be represented by unions or works councils. In Borealis, 72% of all employees are covered by collective bargaining agreements. In some countries (especially in Eastern Europe, where these instruments do not exist), there are no comparable agreements. However, Borealis adheres to the applicable industry terms and conditions.

Employee Engagement and Information on Organisational Changes

Borealis runs open forums and townhalls, where all employees are invited to join members of the Executive Board and senior management to receive updates and ask questions. Common topics discussed at these events include the Group's financial performance, Group initiatives and other topics of interest. The Group also has several other information and engagement channels that it uses regularly, particularly during 2022 to keep employees informed about organisational changes as a result of the change in ownership structure. These include announcements via the intranet, leadership conferences followed by information cascades via the leaders to their teams, and webinars held by the CEO, another Executive Board Member or Vice Presidents.

Since 2020, Borealis has also offered employees the opportunity to raise their voice by responding to the Pulse Check, a short employee survey with specific questions rolled out once in a year. In 2022, a pulse check was again conducted, covering the whole OMV Group for the first time.

The Pulse Check enables the OMV Group to understand employee engagement and drive meaningful actions. The 2022 Pulse Check for Borealis achieved an increase of *6 percentage points in response rate from 71% to 77%* but showed a slight decrease in employees' engagement of 3 percentage points, with lower engagement seen in all business groups and business units and in most locations.

Ongoing organisational changes and strategic transformation always cause a certain level of uncertainty. Nevertheless, this result is not satisfactory and in-depth analysis and action plans were defined in collaboration with our people.

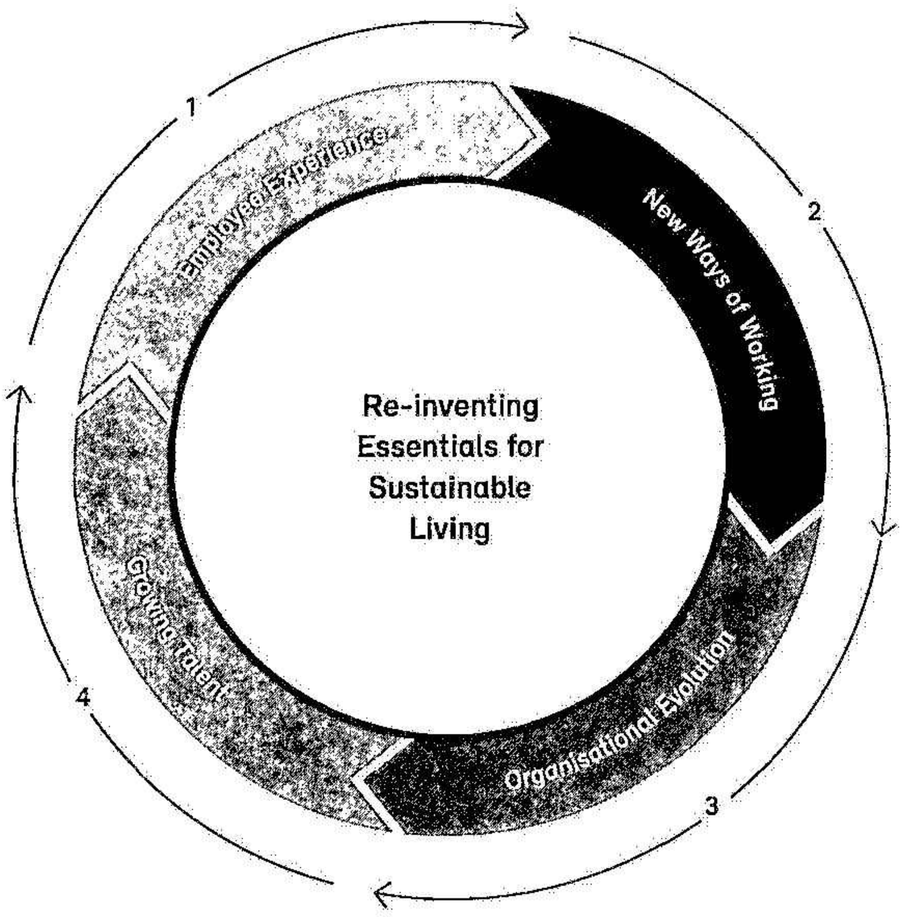
Fig. 14: **People and Culture Strategy**

1. Employee Experience

ensuring a positive experience and enhancing wellbeing and engagement.

2. New Ways of Working

embracing new forms of collaboration and working, taking ownership and fostering a "speak-up" culture.



4. Growing Talent

attracting and developing talent, promoting diversity and mobility, strengthening leadership capabilities and fostering self-driven learning.

3. Organisational Evolution

future-proofing Borealis' structure, capabilities and culture, and stimulating organisational effectiveness.

Consultation and negotiations (as part of collective bargaining) are embedded in European, national and/or sectoral collective agreements. Borealis respects and adheres to these provisions and the Group has a very strong track record of maintaining a healthy and constructive social dialogue at all the required levels.

Significant operational changes affecting employees and their representatives are discussed and aligned through the works councils before implementation. For example, in some locations this could entail the entitlement to form written advice following a consultation approach. In smaller locations, where there are no works councils or employee representatives, the alignment is done with the location leader or representative. There is no common minimum notice period regarding operational changes throughout the Group and the approach varies depending on the scale and impact of the change and in line with the respective national legal obligations.

Discover Resilience Together: Strengthening Employee Wellbeing

In 2022, Borealis built on the Group-wide initiative on wellbeing launched in 2021, called Discover Resilience Together, by increasing its efforts to ensure that the wellbeing initiative reached all employees. Several local wellbeing initiatives were launched in all locations, including massages, yoga and pilates sessions, initiatives to bring people back together again, such as a walk through the vineyards, psychological employee support via external professionals and special rates for gyms, to ensure that the topic is brought to the attention of all employees. In addition, the Borealis Executive Board provided a budget of EUR 2.5 million to fund activities at the locations that increase wellbeing and engagement.

Strengthening Company Culture

During Q1 2022, a Company Purpose Statement for the entire OMV Group was developed: "Re-inventing essentials for sustainable living". This new purpose statement was a natural evolution for Borealis and underlines the Group's commitment to the transition to a more circular future. This was followed by an extensive information campaign for all employees, with the aim of creating awareness and understanding of the new purpose and how employees can contribute to achieving it. The campaign, called "Stronger Together", conveys the objective to build on and combine the strong culture and values of all OMV Group companies and, by doing so, to leverage the full potential to jointly enable a transformation towards sustainable living.

Following the development of the new Group Strategy, OMV Group has begun a project to foster a Group-wide culture, which will start by developing new Group-wide values, supporting the transformation and achievement of the Group's purpose and strategy. The project is both bottom-up, with employees at all levels and from all three companies taking part, as well as top-down, involving senior management of all Group companies. The new Group-wide values will be communicated in early 2023.

Diversity, Equity & Inclusion (DE&I)

Diversity and equity of opportunity are integral elements of Borealis' open and inclusive culture and enrich the Group's working environment. Borealis strongly believes that diverse and inclusive teams are more creative, resourceful and knowledgeable, that they generate broader perspectives and ideas, and that they improve overall engagement. Ultimately, the Group's goal is to encourage and support all forms of diversity within the workforce and create an environment where all employees are valued and feel able to be their full selves in the workplace. This means maintaining the Group's inclusive culture, in which the same opportunities are in place for all people to feel supported and contribute to Borealis' success.

The Group's DE&I journey began in 2020 and has gained momentum as a result of increasingly close alignment with the OMV Group on this topic. This co-operation has resulted in the development of a common DE&I framework and delivery of a joint programme of activities and events, including the annual DE&I week. During this week, several initiatives, keynote speeches and activities are offered to the OMV and Borealis organisations, with the aim to inform, discuss, inspire, galvanise and guide all employees through the DE&I journey. Another joint initiative took place on International Women's Day 2022, with the special topic #BreakTheBias to create awareness of bias, stereotypes and discrimination.

20230711119844

Borealis is continuously working to encourage more women to join all levels of the organisation and to take on more responsibilities. For example, the Group's approach includes engagement with national institutions such as universities and chemical schools, a more conscious and inclusive talent acquisition process, which addresses unconscious bias, and actively encouraging line managers to nominate women to take part in Borealis' talent programmes. In addition, DE&I is becoming a more prominent discussion topic in the Group's forums, management meetings and works councils, which fosters insights and strengthens the journey.

Since 2021, Borealis has broadened its DE&I focus beyond gender to encompass diversity aspects including, but not limited to, age, nationality, employees with special needs or impairment, and diversity of thought. To support this broader scope, Borealis established a DE&I Volunteer Network to actively advocate for a DE&I mindset across the Group, with members from every part of the Group's operations and workforce.

Diversity and engagement goals are included in the Group Scorecard, which determines senior management bonuses, and as part of the ESG criteria determining rewards under the Long Term Incentive Plan (LTI), to promote the Group's long-term development.

Training and Development

Borealis looks to routinely train and develop employees, as well as external people who work with and for the Group.

The Group's ambitions require employees to understand how their work affects customer satisfaction and to have a zero-accidents mindset that puts safety first. Providing appropriate training for functional and workplace skills that are rooted in Borealis' values, safety and ethics ambitions helps the Group to protect the health and safety of all employees, conduct business ethically and ensure production processes and products are safe. It also helps to upgrade employee skills and advance their careers within Borealis.

The Group identifies each employee's training and development needs through its yearly performance management process. This results in line managers and employees agreeing on Individual Development Plans (IDPs). Employees with performance gaps have mandatory *Performance Improvements Plans* (PIPs).

Training needs are also identified using Borealis' Competence Profiles. These exist for most technical roles and enable the Group to assess employees' skill levels and gaps. To keep these Competence Profiles up to date, the Group reviewed them to ensure they fit the new Group strategy, for a future-proof capability roadmap. Competences are also a basis for the new process of Strategic Workforce Planning, which the Group designed in 2022 and will pilot in 2023.

Learning solutions are developed with internal customers and business owners, and reviewed and steered by the Executive Board. As a result of the close co-operation with OMV, the Group's training and development programme offer increased significantly in 2022, with further expansion of digital and blended learning opportunities (such as LinkedIn Learning platform) for leaders and employees, the introduction of a global coaching and language training platform, as well as gamified learning solutions to drive safety performance.

Borealis has also continued to broaden the range of sustainability training it offers. This includes the new Circular Academy, in co-operation with OMV and OMV Petrom, which provides a comprehensive set of different training courses that are appropriate to employees' specific job functions. The Group has also begun providing an employee guide to sustainability, as a selection of LinkedIn Learning courses, as well as a similar course aimed at the leadership level.

When an employee's job at Borealis ends, as a result of retirement or termination of employment, the Group offers transition assistance programmes to facilitate their continued employability and the management of career endings.

Fig. 15: **Average hours of training by gender & by employee category in 2022** [1)]

in hours	Female	Male
HC&E/PO		
Senior leaders	12.42	12.79
Managers	25.25	21.53
Team leaders	27.05	25.68
Experts	19.91	22.11
Administration	14.94	17.58
Blue-collar	19.61	15.71
Fertilizers, Melamine & TEN		
Senior leaders	0.00	8.91
Managers	20.03	19.79
Team leaders	27.12	33.21
Experts	12.40	19.32
Administration	15.74	21.48
Blue-collar	10.26	19.58

1) DYM SOLUTION CO., LTD, mtm and Rosier are excluded from e-learning courses.

Talent Management and Leadership Development

Offering meaningful careers and ways to unlock people's potential is essential for attracting and retaining a highly skilled, qualified and diverse workforce. The Borealis Talent Management Process focuses on attracting, identifying, promoting and developing people with the potential for leadership and expert positions, using Leadership Talent Management Programmes and Expert Talent Programmes.

Borealis provides a group of three modular leadership development programmes and one expert development programme that support the development of leadership or expert talents with the potential, performance and engagement to grow into a more complex role. The core focus is to develop the tools, skills and experiences for the future role, along the Borealis Leadership or Expert Profile.

The programmes usually start in Q3 of each year and consist of practical assignments (Leadership or Expert Challenges), which are the key drivers for learning and development. The participants also run through a series of classroom training sessions and are supported through peer groups, networking or coaching.

Talent Acquisition

Borealis looks to attract and recruit the talent of tomorrow, in order to achieve its purpose and strategy. To help with this aim, the Group promotes diversity and mobility, and focuses on providing a positive candidate experience in all their interactions with Borealis. This ranges from proactive talent sourcing and targeted partnerships with external organisations, schools and universities, to the use of innovative interviewing tools and personal interaction with all stakeholders involved in the process. This enables candidates to experience the Borealis employer brand, values

Fig. 16: **Percentage of total employees by gender and by employee category who received a regular performance and career development review** [1) 2) 3)]

in %	Female	Male
HC&E/PO		
Senior leaders	92.86	88.06
Managers	82.53	86.77
Team leaders	89.53	86.32
Experts	86.18	87.11
Administration	79.01	80.66
Blue-collar	69.85	70.67
Fertilizers, Melamine & TEN		
Senior leaders	–	100.00
Managers	100.00	98.21
Team leaders	81.48	86.55
Experts	88.46	94.01
Administration	82.33	85.47
Blue-collar	69.44	80.19

1) As the performance and career development cycle ends on 31 March, figures are only available from the previous cycle (2021). The rate is influenced by employees that are not eligible for a bonus (e.g. new hires in Q4) and therefore did not participate in performance management within the period. // 2) Numbers are correct to two decimal places in order to maintain granularity. // 3) Employee category grade refers to the internal role classification system (grade 1 to 21): Senior leaders: all line managers grade 16 and above. Managers: all line managers grade 12 to grade 15. Team leaders: all line managers grade 11 and below. Experts: all non-line managers grade 10 and above; Administration (white-collar employees): non-line managers grade 1 to grade 9. Blue-collar employees: non-line managers grade 1 to grade 9.

20230711198455

and culture throughout the course of the hiring process. As part of Borealis' approach to continuous improvement, the Group has reviewed and enhanced its graduate recruitment programme, in order to better fit the requirements of the business and to improve the candidate experience, in particular to meet the expectations of Generation Z. Implementation of the new programme is expected in 2023.

The Group is determined to deliver an inclusive, fair, transparent and compliant recruitment process. During 2022, the Borealis Recruitment & Selection process and internal guidelines were aligned with the OMV Group Standard, in order to have transparent and aligned processes in place.

During the year, the Group also piloted an employee referral programme, a structured programme that companies use to find talented people, by asking their employees to recommend candidates from their private and professional networks. Referrals typically produce the highest number of quality applicants, compared to other sources of applications. Borealis will conduct a formal review of the programme, to reinforce and optimise its success.

Fair Remuneration

Fair remuneration means ensuring pay for performance, based on transparent performance evaluation. It supports strong business results by incentivising high-performing individuals and teams, increasing employees' retention and enhancing Borealis' reputation in the labour market. Borealis is therefore committed to providing fair and transparent reward packages for all employees.

Every employee reward package at Borealis consists of a base salary and incentive compensation, with an annual bonus for all eligible employees and the LTI for Executive Board and senior management. Bonuses include a sustainability element and the LTI has ESG criteria, including DE&I and CO_2 emissions. The structure of bonuses

Fig. 17: **Ratios of standard entry level wage by gender compared to local minimum wage in 2022**

Grades [1) 2)]	Austria		Belgium		Finland		France		Sweden	
	F	M	F	M	F	M	F	M	F	M
18	–	317%	–	–	–	–	–	–	–	–
17	–	335%	–	–	–	–	–	–	–	–
16	357%	–	–	371%	–	–	–	–	–	–
15	–	261%	480%	–	–	–	–	–	–	–
14	222%	244%	–	367%	–	113%	–	–	157%	137%
13	277%	267%	315%	313%	–	133%	–	170%	–	128%
12	224%	262%	288%	260%	124%	113%	–	150%	137%	–
11	185%	186%	221%	263%	126%	118%	118%	–	142%	151%
10	157%	165%	224%	207%	126%	123%	108%	133%	169%	141%
9	180%	183%	–	202%	119%	112%	–	123%	140%	132%
8	161%	152%	154%	176%	120%	122%	–	123%	–	130%
7	154%	150%	166%	138%	–	–	103%	118%	134%	140%
6	133%	135%	179%	–	–	–	105%	–	122%	140%
5	144%	138%	–	149%	–	–	–	–	–	100%
4	121%	–	–	–	–	–	–	–	–	–
1	–	–	–	–	–	–	130%	104%	–	–

F ... female // M ... male // 1) Employee category grade refers to the internal role classification system (grade 1 to 21): Senior leaders: all line managers grade 16 and above. Managers: all line managers grade 12 to grade 15. Team leaders: all line managers grade 11 and below. Experts: all non-line managers grade 10 and above; Administration (white-collar employees): non-line managers grade 1 to grade 9. Blue-collar employees: non-line managers grade 1 to grade 9. // 2) Some grades may not be depicted or show no data in certain categories due to no new hires in the respective group during the reporting period.

Fig. 18: **Ratio of salary and remuneration of women to men in 2022** [1) 2)]

	Austria	Belgium	Finland	France	Sweden
Senior leaders	1.06	0.71	0.91	–	–
Managers	0.94	0.98	0.93	0.83	1.00
Team leaders	1.05	0.88	1.13	1.14	1.04
Experts	0.86	0.99	0.89	0.93	0.86
Administration	0.95	0.89	0.95	0.99	0.96
Blue-collar	0.79	1.07	0.97	0.99	0.95

1) Borealis' significant locations are Austria, Belgium, Sweden, Finland and France. Definition: Countries with more than 500 employees. // 2) Basic salary and remuneration is composed of the annual base salary plus the Borealis incentive plan.

and the LTI mean employees from the Executive Board down are incentivised to ensure Borealis is sustainable.

The total package is based on the systematic evaluation of roles, using an external evaluation methodology linked to Borealis' internal grading structure. This requires up-to-date role descriptions which define core activities and responsibilities. The reward package is evaluated regularly in the context of insights into national remuneration market data and developments. This approach ensures that the reward package is competitive both internally and externally.

Each grade in the Group's grading system has a country-specific pay range and the pay position of employees within this range is monitored at both country and Group levels, to control overall gender pay equality. The Group shares this aggregated gender pay analysis with its employees, as legally defined in the various countries. Employees are also entitled to information about how their salary compares to the respective market. Borealis performs a yearly equal pay analysis to identify focus areas for improvement.

For its own employees the Group always pays entry-level salaries that are above the minimum defined in the respective national laws, collective labour agreement or company agreement. Borealis also requires this for leasing employees and has respective agreements with its leasing agencies in place.

The Pension & Benefits Council, which is led by the CFO, sets the overall principles for employee benefit programmes, monitors their implementation across the Group and decides on significant changes to them. Based on the output from the Pension & Benefits Council and the Remuneration Committee, the Executive Board then gives P&C a mandate to design new concepts for remuneration and to propose changes when needed.

Fair remuneration requires an effective performance management process, supported by low-performer management. → chapter Corporate Governance, p. 56

Defined Benefit Plan Obligations and other Retirement Plans

The company has defined benefit pension plans, which are in general closed or grandfathered plans except in Belgium. Due to a legal obligation for a minimum interest guarantee in Belgium this includes also defined contribution plans.

We also sponsor other post-employment benefit plans that provide medical or severance benefits. In addition we provide other long-term employee benefits such as pre-pension and jubilee benefits in various countries.

Concerning the projected benefit obligation as well as the fair value of plan assets of these defined benefit obligations, please refer to chapter Notes to the Consolidated Financial Statements 15. Employee Benefits.

As the company aims for a competitive benefit package to attract and retain employees, we contribute also to defined contribution pension plans. The level of the voluntary employer

20230711119846

pension contribution depends on the local social security pension as well as market practice. The related costs are published in chapter Notes to the Consolidated Financial Statements 14. Personnel and Share Based Payments. A global framework is in place which impacts the design, financing, delivery and control of core global and local employee benefit programmes (pension or insurance programmes related to retirement, death, disability or medical benefits), to ensure compliance of employee benefits with the Borealis Employee Benefits Strategy and guiding principles. The Pension & Benefit Council as cross-functional committee (Finance & P&C) together with the Remuneration Committee play a key role in the steering and approval process of employee benefits.

Borealis' Workforce

In 2022, Borealis employed 7,916 people, with 5,914 in HC&E and PO and 2,002 in Fertilizers, Melamine and TEN. This compared to 7,606 in 2021. Of these, 97% (5,789 HC&E and PO and 1,927 Fertilizers, Melamine and TEN) worked for Borealis on a permanent basis (2021: 98%) and 3% (125 HC&E and PO and 75 Fertilizers, Melamine and TEN) were employed on a temporary basis (2021: 2%). This workforce was supported by 124 (72 HC&E and PO and 52 Fertilizers, Melamine and TEN) (132 in 2021) leasing employees who are not employed by the Group, primarily in Austria and France, and some 300 summer workers, job students, apprentices and interns.

Fig. 19: **Benefits provided to employees in 2022** [1) 2)]

	Austria			NITRO Austria			Belgium		
Benefits	**FT**	**PT**	**T**	**FT**	**PT**	**T**	**FT**	**PT**	**T**
Life insurance	●	●	●	●	●	●	●	●	●
Health care	●	●	●	●	●	●	●	●	●
Disability and invalidity coverage	●	●	●	●	●	●	●	●	●
Parental leave	●	●	●	●	●	●	●	●	●
Retirement provision	●	●	●	●	●	●	●	●	●
Stock ownership [3)]	–	–	–	–	–	–	–	–	–
Others: company car, mobile phones, etc.	●	●	●	●	●	●	●	●	●

	Finland			Sweden			France		
Benefits	**FT**	**PT**	**T**	**FT**	**PT**	**T**	**FT**	**PT**	**T**
Life insurance	●	●	●	●	●	●	●	●	●
Health care	●	●	●	●	●	●	●	●	●
Disability and invalidity coverage	●	●	●	●	●	●	●	●	●
Parental leave	●	●	●	●	●	●	●	●	○
Retirement provision	●	●	●	●	●	●	●	●	●
Stock ownership [3)]	–	–	–	–	–	–	–	–	–
Others: company car, mobile phones, etc.	●	●	●	●	●	●	●	●	●

1) The listed benefits are standard for full-time employees of the organisation but may not apply to temporary or part-time employees, by significant locations of operation. // 2) Definition for significant locations of operation: Austria, Belgium, Finland, France and Sweden are Borealis' significant locations of operation with more than 500 employees. // 3) Borealis does not have any stocks.

FT ... Full-time // PT ... Part-time // T ... temporary // ● ... YES // ○ ... NO

Fig. 20: **Parental leave in 2022** [1)]

	Austria		Belgium		Finland		France		Sweden		Other Europe		Non-Europe	
F ... female // M ... male	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Employees that were entitled to parental leave in %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Number of employees that took parental leave	55	28	14	52	16	53	3	0	48	93	7	11	2	5
Number of employees that returned to work after parental leave ended	26	28	11	45	9	49	2	0	39	93	3	4	1	5
Number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work	49	20	0	1	5	43	2	0	37	89	1	9	1	5

1) Countries sorted according to our definition of significant locations, Other Europe and Non-Europe to be consistent within the report. Employees per region can be found in tables 21 and 24.

Fig. 21: **Total number of employees by employment contract (permanent or temporary) by gender & by region/ and total number of employees by employment type (full-time or part-time) by gender & by region in 2022** [1) 2) 3) 4) 5)]

M ... male // F ... female	Gender	Permanent	Temporary	Total	Full-time	Part-time	Total
Total	M	6,081	123	6,204	5,825	379	6,204
	F	1,635	77	1,712	1,403	309	1,712
	Total	**7,716**	**200**	**7,916**	**7,228**	**688**	**7,916** [6)]
Borealis AG	M	153	1	154	153	1	154
	F	153	9	162	147	15	162
	Total	**306**	**10**	**316**	**300**	**16**	**316**
HC&E/PO							
Austria	M	974	22	996	977	19	996
	F	397	36	433	326	107	433
	Total	**1,371**	**58**	**1,429**	**1,303**	**126**	**1,429**
Belgium	M	1,086	7	1,093	934	159	1,093
	F	268	4	272	190	82	272
	Total	**1,354**	**11**	**1,365**	**1,124**	**241**	**1,365**
Finland	M	708	16	724	720	4	724
	F	208	6	214	202	12	214
	Total	**916**	**22**	**938**	**922**	**16**	**938**

20230711119847

M ... male // F ... female	Gender	Permanent	Temporary	Total	Full-time	Part-time	Total
France	M	15	–	15	15	–	15
	F	6	–	6	6	–	6
	Total	**21**	–	**21**	**21**	–	**21**
Sweden	M	727	15	742	712	30	742
	F	227	10	237	233	4	237
	Total	**954**	**25**	**979**	**945**	**34**	**979**
Other Europe	M	619	4	623	536	87	623
	F	101	1	102	73	29	102
	Total	**720**	**5**	**725**	**609**	**116**	**725**
Non-Europe	M	362	1	363	362	1	363
	F	91	3	94	92	2	94
	Total	**453**	**4**	**457**	**454**	**3**	**457**
Total	**Total**	**5,789**	**125**	**5,914**	**5,378**	**536**	**5,914**
Fertilizers, Melamine & TEN							
Austria	M	672	40	712	679	33	712
	F	118	12	130	76	54	130
	Total	**790**	**52**	**842**	**755**	**87**	**842**
Belgium	M	6	–	6	6	–	6
	F	2	–	2	2	–	2
	Total	**8**	–	**8**	**8**	–	**8**
France	M	717	17	734	731	3	734
	F	137	5	142	135	7	142
	Total	**854**	**22**	**876**	**866**	**10**	**876**
Other Europe	M	195	1	196	153	43	196
	F	80	–	80	68	12	80
	Total	**275**	**1**	**276**	**221**	**55**	**276**
Total	**Total**	**1,927**	**75**	**2,002**	**1,850**	**152**	**2,002**

1) Total number: headcount (employees hired for more than three months, excluded: externals, trainees, apprentices, summer workers, long-term absences, temporary employees hired for less than three months). Permanent: employee contract without end date. Temporary: employee contract with an end date. Full-time: working 100% or work in a shift model (even if that does not add up on average to the weekly working hours). Part-time: working only a certain percentage as agreed in an individual contract. // 2) Austria, Belgium, Finland, France and Sweden are Borealis' significant locations of operation with more than 500 employees. All other European production or sales locations are summarised under Other Europe. Non-Europe covers all production or sales locations outside Europe. // 3) All numbers as of 31 December 2022. // 4) Borealis AG is included in the Austrian figures and displayed separately. // 5) Figures also include the headcount of non-consolidated entities. // 6) 267 headcount in non-consolidated entities included in the above.

Fig. 22: **Percentage of employees by employee category & by gender & by age in 2022** [1) 2) 3)]

in % M ... male // F ... female	Gender	<30	30–50	>50	% per gender per employee category
HC&E/PO					
Senior leaders	M	0.00	0.37	0.76	1.13
	F	0.00	0.12	0.12	0.24
Managers	M	0.05	4.97	3.67	8.69
	F	0.08	2.05	0.68	2.81
Team leaders	M	0.19	4.85	2.99	8.03
	F	0.10	1.07	0.29	1.45
Experts	M	0.57	7.24	4.79	12.60
	F	0.44	4.19	1.61	6.24
Administration	M	1.44	5.63	3.77	10.84
	F	1.27	4.85	2.74	8.86
Blue-collar	M	5.99	16.79	12.97	35.75
	F	0.76	1.86	0.74	3.36
Fertilizers, Melamine & TEN					
Senior leaders	M	0.00	0.25	0.30	0.55
	F	0.00	0.00	0.00	0.00
Managers	M	0.00	3.15	2.45	5.59
	F	0.00	0.85	0.35	1.20
Team leaders	M	0.30	7.99	2.85	11.14
	F	0.00	1.10	0.25	1.35
Experts	M	0.45	4.95	2.95	8.34
	F	0.15	1.95	0.50	2.60
Administration	M	2.35	12.89	5.39	20.63
	F	1.55	6.89	2.30	10.74
Blue-collar	M	8.49	21.38	6.19	36.06
	F	1.00	0.50	0.30	1.80

1) Employee category grade refers to the internal role classification system (grade 1 to 21): Senior leaders: all line managers grade 16 and above. Managers: all line managers grade 12 to grade 15. Team leaders: all line managers grade 11 and below. Experts: all non-line managers grade 10 and above; Administration (white-collar employees): non-line managers grade 1 to grade 9. Blue-collar employees: non-line managers grade 1 to grade 9 // 2) All numbers as of 31 December 2022. // 3) Numbers are correct to two decimal places in order to maintain granularity.

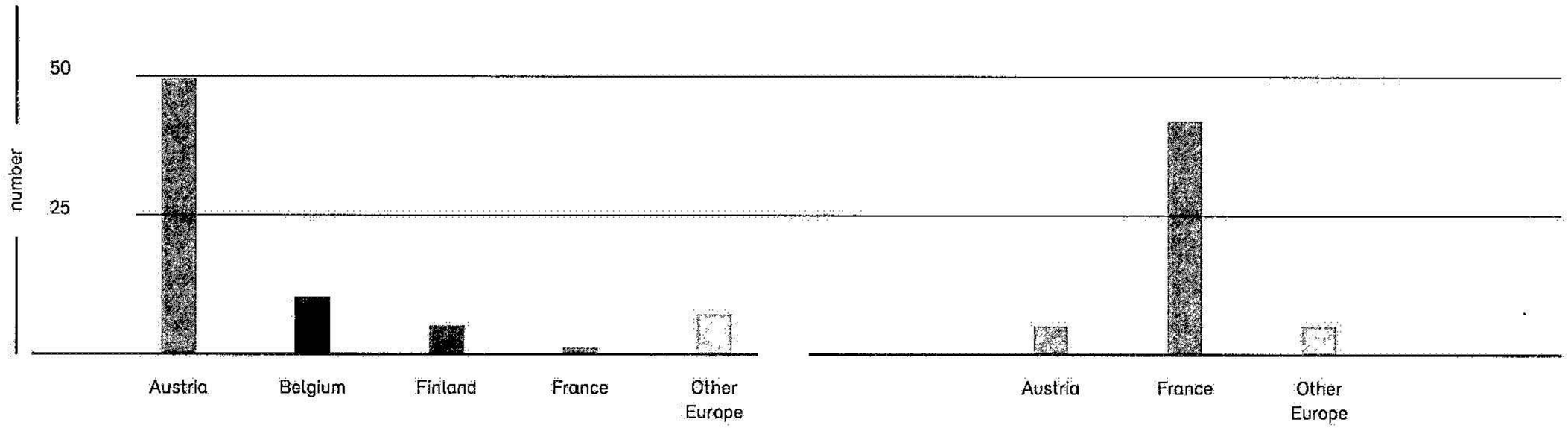
20230711198-43

Fig. 23: **Percentage of new hires/turnover by gender & by region & by age in 2022** [1) 2) 3) 4) 5)]

in %	% of new hires per total gender/per total region/per total age cluster	% of turnover per total gender/per total region/per total age cluster
HC&E/PO		
Gender		
Male	66.75	72.07
Female	33.25	27.93
Region		
Austria	39.75	22.18
Belgium	11.75	17.45
Finland	8.75	13.76
France	0.50	1.23
Sweden	10.50	17.25
Other Europe	7.75	8.62
Non-Europe	21.00	19.51
Age		
<30	22.00	19.51
30–50	68.75	44.15
>50	9.25	36.34
Fertilizers, Melamine & TEN		
Gender		
Male	66.67	75.15
Female	33.33	24.85
Region		
Austria	12.35	35.50
Belgium	0.00	0.59
France	38.27	38.46
Other Europe	49.38	25.44
Age		
<30	29.63	20.71
30–50	61.73	40.83
>50	8.64	38.46

1) The percentage of new hires is based on employee changes during the year in the respective category. The percentages refer to the split in employee changes with total new hires and turnover resulting in 100% in each respective category. // 2) Austria, Belgium, Finland, France and Sweden are Borealis' significant locations of operation with more than 500 employees. All other European production or sales locations are summarised under Other Europe. Non-Europe covers all production or sales locations outside Europe. // 3) Turnover refers to all employees who left Borealis // 4) Numbers are correct to two decimal places in order to maintain granularity // 5) Definition of new hires: employees hired for more than three months, excluding: externals, long-term absences, trainees, apprentices, summer workers, temporary employees (less than three months). Employee turnover: employees who left the company.

Fig. 24: **Total number of non-employees per region in 2022** [1) 2)]



HC&E/PO	
Austria	49
Belgium	10
Finland	5
France	1
Other Europe	7
Total	**72**

Fertilizers, Melamine & TEN	
Austria	5
France	42
Other Europe	5
Total	**52**

1) Non-employees: The most common type of worker and their contractual relationship with the organisation are leasing employees. The type of work they perform is blue collar work. // 2) Definition of significant fluctuations is a deviation in the number of employees during two consecutive reporting periods of more than 50 employees within a single organisational unit (equals 10% of Borealis' definition of significant location of operation)

Fig. 25: **Proportion of senior management hired from the local community in 2022** [1) 2) 3)]

in %	
Austria	42.11
Belgium	82.35
Finland	100.00
France	100.00
Sweden	66.67

1) Employee category grade refers to the internal role classification system (grade 1 to 21): Senior leaders: all line managers grade 16 and above. Managers: all line managers grade 12 to grade 15. Team leaders: all line managers grade 11 and below. Experts: all non-line managers grade 10 and above; Administration (white-collar employees): non-line managers grade 1 to grade 9. Blue-collar employees: non-line managers grade 1 to grade 9. // 2) Definition of local: Senior Manager has the nationality of that country. Data refers to all Borealis entities in one country. // 3) Definition for significant locations of operation: Austria, Belgium, Finland, France and Sweden are Borealis' significant locations of operation with more than 500 employees. All other European production or sales locations are summarised under Other Europe. Non-Europe covers all production or sales locations outside Europe.

Data Protection

Borealis ensures that it protects employee data by following a clearly defined data protection procedure, outlined in an Operative Instruction specifically for P&C.

The Operative Instruction covers P&C authorisation and defines, for example, who has access to which P&C data or how to request authorisation and approval workflows. Borealis also ensures that it complies with the 8th EU Directive, which requires the Group to monitor critical authorisations (such as salary data) and ensure segregation of duties.

P&C closely aligns with the Group Data Protection Expert in the Legal function to regularly follow up on data protection issues and ensure ongoing training for relevant stakeholders. Trust Arc is the Group's guiding tool for documenting General Data Protection Regulation (GDPR)-relevant processes. The Group also continuously aligns with OMV on data protection topics and, in particular, on intercompany data exchange matters. The Group rolled out GDPR e-learning modules during the year and defined a common process for new IT applications, to ensure GDPR conformity.

20230711119849

Hybrid Workplace
Borealis introduced a Hybrid Workplace Group guidance in 2021, to provide employees with greater flexibility to work between the office and their homes, when appropriate. Flexible homeworking benefits both Borealis and employees. It provides a choice of when and where employees may work for optimal results, with homeworking allowing for increased focus, productivity and execution of tasks, and office working focused on collaboration, interaction and meetings. Hybrid working also supports Borealis' wellbeing commitments to support employees' work-life balance.

External benchmarking shows that hybrid workplace solutions have a positive influence on work performance and productivity, increase employee engagement and loyalty, foster a more diverse workforce and improve overall attraction and retention.

Outlook
The Group's P&C goals for 2023 are to continue implementing the four defined pillars of the P&C strategy to 2030, with the following priorities:

Employee experience
- update and align Borealis' employer value proposition and employer brand, to fit the Group's new strategic direction, and increase employer brand awareness by expanding social media usage;
- continue to launch wellbeing initiatives Group-wide, as part of a common annual calendar; and
- finalise the DE&I strategy and roll it out across the organisation.

Growing Talent
- launch a cross-company leadership programme, to support transformational leadership and competences;
- enrich the Sustainability Academy programme; and
- create a modern and fit-for-purpose internal candidate testing toolbox, to expand the assessment possibilities and skills during the selection process.

New ways of working
- implement the newly developed purpose, values and behaviours throughout the organisation, as an important part of the Group's transformation; and
- focus on increased flexibility in relation to hybrid working and reward.

Organisational evolution
- introduce strategic workforce planning to translate the Borealis strategy into a strategic workforce plan;
- implement more elements of Borealis' Digitalisation Journey as self-service workflows; and
- support fair remuneration, by implementing OMV Group-wide job families and title structures (with a top-down implementation approach), and a harmonised OMV Group grading framework.

Innovation

Goals for 2022
Launch Borstar® Nextension Technology
Move Borealis along the road towards a circular economy
Continue to grow Borealis through its joint ventures

Key Achievements of 2022
Launched Borstar Nextension Technology and three products at the K-Fair 2022
Received commitment for funding from Swedish Government for the ongoing Front End Engineering Design (FEED) study for the Stenungsund chemical recycling project
Progressed Borcycle M technology-based asset to be built at Schwechat to the FEED phase
Launched seventeen (17) Bornewable™ products
Inaugurated the Baystar™ ethane cracker in Texas, US

Innovation is fundamental to Borealis' ability to achieve its purpose of Re-inventing Essentials for Sustainable Living. The Group is committed to developing technologies that will provide solutions to the most critical issues facing society, including climate change, pollution and increased energy costs. Together with OMV Group, Borealis leads the industry in the transformation toward the circular economy with zero CO_2 emissions. The strategies of both Groups confirm their determination to achieve this transformation, supported by the Borealis technology strategy. Specifically, Polyolefins looks to develop new high-performing materials, Hydrocarbons & Energy is identifying innovative approaches to using new renewable feedstock, and Circular Economy Solutions (CES) is developing technologies to use waste plastic as a crucial resource.

Governance

As the technology powerhouse for the Group, Borealis operates a global innovation community that employs more than 500 people in three Innovation Centres in Linz (Austria), Porvoo (Finland) and Stenungsund (Sweden). The Innovation and Technology department is led by the Vice President of Innovation and Technology, and is part of the Polyolefins organisation, under the leadership of the Executive Vice President Polyolefins, Innovation & Technology and Circular Economy Solutions, who is a member of the Executive Board.

Most innovation projects are proposed by the Marketing or Technology Transfer organisations. Following opportunity-driven innovation principles, topics supported by business cases are presented to a decision-making forum called the Innovation Portfolio Table, which consists of all relevant stakeholders, such as the Head of Polyolefins, Heads of Sales and Marketing, and the Head of Innovation. The Portfolio Table group decides whether to launch, stop or extend the innovation projects on the basis of their success, potential, relevance to the strategy and sustainability, and resource availability. Projects are managed by a group of professional project managers and the project teams consist of researchers, engineers and marketing specialists.

Borealis maintains competences that are needed to implement its innovation strategy in-house or gains access to them through the open innovation collaborations with other centres of competence. Among other facilities essential for successful innovation, the Borealis Innotech operates a Borstar polyethylene (PE) pilot plant in Porvoo, and two Borstar polypropylene (PP) pilot plants, one in Porvoo and one in Schwechat, as well as a catalyst pilot plant in Porvoo.

Innovation Strategy and Culture

The Group's technology strategy is aligned with the new Borealis and OMV Group Strategy launched in early 2022. In particular, it puts sustainability even more firmly at the centre of Borealis' approach to innovation, focusing on:

- co-developing technologies for recycling plastics;
- carbon neutrality and CO_2 capturing technologies that will enable the Group to reach its neutrality goals;

20230711198S0

- developing highly specialised materials via new proprietary catalyst technologies, and/or via compounding that enables design for recyclability; and
- enabling the Group's growth agenda, by preparing Borealis' proprietary technologies for venture-based licensing, making them attractive for various markets and geographical regions.

The aim of the strategy is to create value through innovation, by pushing the boundaries of science to develop customer solutions with exceptional performance. This means understanding what the customer wants and leveraging the right competencies, tools and expertise to develop the best solution with a tailored customer service level. Ultimately, Borealis Innovation aims to address the challenges of society with smarter, more sustainable solutions for the future.

Borealis' Hydrocarbons & Energy business is following Borealis' open innovation strategy in its partnership with OMV Group. Together, Borealis and OMV are looking to advance the monomer recycling of post-consumer plastics and the availability of renewable hydrocarbons as a more sustainable feedstock for manufacturing polyolefins. The evaluation of monomer recycling technologies is ongoing, in order to obtain virgin polymer products based on feedstock from recycled plastics. Borealis is also participating in the Cracker of the Future consortium, which is developing a new furnace concept that will use renewable and carbon-neutral energy sources rather than fossil fuels, to significantly reduce carbon emissions. Furthermore, the innovation project portfolio is addressing the dramatic increase in energy prices and the growing necessity for a significant reduction in greenhouse gas emissions.

The importance of Borealis' innovation strategy was confirmed by market developments and product launches in 2022.

Partnerships to Advance Innovation

In addition to its internal collaborations, Borealis undertakes a wide range of engagement with relevant stakeholders. It is a member of the Dutch Polymer Institute, attends polyolefins industry conferences and publishes papers. Borealis' Innovation and Technology management team and some of the lead scientists are invited to present at numerous leading conferences around the globe each year, such as the Society of Plastics Engineers International Polyolefins Conference and the Polyethylene-Polypropylene Chain Global Technology & Business Forum. Borealis is also a member of the European Ethylene Producers Conference and participates in a number of its issue groups.

Borealis' Innovation experts use every opportunity to actively participate in these gatherings, contributing with the highest level of research results and describing the Group's successes in developing diverse technologies.

Borealis' Innovation Process

The Borealis innovation process comprises three main phases: idea creation, innovation project implementation and portfolio management.

Idea management is the front-end phase of the innovation pipeline. It involves scouting and generating ideas and selecting the right ones, either as an innovation project or as a pre-study, in the case of an investment project. In 2022, Borealis continued its Idea Campaigns, which invite all employees to contribute creative ideas to solve particular problems. The response to these calls is typically very strong and the selected ideas now being implemented are expected to deliver important progress.

Innovation projects serve to develop new product platforms, new or improved process or application technologies, or new catalysts. Borealis is a market-driven organisation and the main driver for establishing an innovation project is an unsatisfied market need that requires new products and/or technologies to deliver the products.

Innovation project portfolio management provides structure and decision-making, to ensure the right innovation programmes are executed to achieve specific objectives and support venture-based licensing. The portfolio of innovation projects and activities is managed by a separate professional group, which is instrumental in facilitating project approval, execution and finalisation, and ensuring that the allocation of resources is consistent with Borealis' strategy. Once a project has achieved certain predefined goals, it is

transitioned to the business within Advanced Products, where development and growth of this emerging business continues.

Intellectual Property
An important requirement when pushing the boundaries of technology is to ensure a strong intellectual property right position and strengthen Borealis' position as a licensor. Many patents also protect products and applications.

Borealis has an extensive patent portfolio, comprising around 8,500 granted patents and around 3,000 pending patent applications. In 2022, Borealis filed 128 new priority patent applications.

Attracting the Next Generation of Innovation Talent
The Group must ensure that it can attract and develop the talent it needs. There is a diminishing talent pool available, which Borealis looks to address by attracting young people into the industry. Borealis raises its profile with talented individuals through the Borealis Student Award, which goes to the students with the best Diploma, Masters and PhD thesis. The Group also develops its own R&D talent, for example, through its Talent Expert Pool.
→ chapter People & Culture, p. 76

Activities 2022
To accelerate progress towards circularity in manufacturing and using polyolefins, while reducing its CO_2 footprint, Borealis entered into collaborations with various organisations with complementary competencies in 2022. In particular:
- Borealis has moved to the FEED phase (Front End Engineering Design) in its investment project for a new Borcycle M technology asset at its location in Schwechat, Austria
- In February 2022, Borealis received a commitment for EUR 20 million funding from Business Finland, to launch the innovative "Sustainable Plastics Industry Transformation" or SPIRIT programme. SPIRIT aims to drive the transformation through innovation of the plastics industry in Finland by replacing conventional fossil fuel-based feedstocks with renewably sourced ones; developing technologies and processes for mechanical and chemical recycling of plastics; and decarbonising production operations through electrification, as well as the use of hydrogen and renewable energy sources (→ chapter Circular Economy, p. 119).
- In early 2022, Borealis began the production of its proprietary Borstar Nextension catalysts in a brand new catalyst plant, CP2, in Porvoo, Finland. The plant specialises in producing single-site catalysts for Borstar Nextension technology.

Borealis commercially launched 10 new PO product innovations in 2022 (excluding modifications on grades only), demonstrating its innovation market leadership and delivering on its Company purpose of re-inventing essentials for sustainable living.

Innovation Highlights 2022
Polyolefins

Launch of Borstar Nextension PP Products
Borealis announced the launch of the first breakthrough polypropylene (PP) grades based on the ground-breaking Borstar Nextension Technology, which offers a step change in performance for tailor-made PP that delivers superior properties for cast and blown film. Two BorPure™ film grades that set new standards for PP food packaging are designed for eco-efficiency and recyclability. The nonwoven grade Borealis HG485FB also offers superior performance characteristics. All Borstar Nextension grades can be made using feedstock from the Bornewables and Borcycle™ C portfolios of circular polyolefins. By leveraging its polymers technology expertise, Borealis is offering its partners and customers an ever-larger number of solutions providing superior performance, paired with enhanced circularity and material efficiency.

Launch of Borcycle™ M products
Borealis launched three products based on its Borcycle M technology. The Group has successfully increased the recyclate content while maintaining or improving the product properties, particularly for five Borcycle M automotive product launches at K-Fair, where PCR content as high as 68% has been reached.

20230731:1983

Launch of new Bornewables Grades

During 2022, Borealis launched seventeen Bornewable products produced with renewable feedstock, as part of the Bornewables portfolio. Bornewables offers product properties equal to fossil-based product, allowing Borealis' partners to quickly and easily transition from fossil-based polypropylene to a renewable feedstock-based polypropylene (→ chapter Circular Economy, p. 119).

Introducing the New Borvida™ Portfolio of Circular Base Chemicals

Borealis has strengthened its EverMinds™ circular product offering with Borvida, a range of sustainable base chemicals. The Borvida portfolio will offer base chemicals or cracker products (such as ethylene, propylene, butene and phenol) with ISCC Plus-certified sustainable content from Borealis' sites in Finland, Sweden and Belgium. The portfolio will initially comprise Borvida B, from non-food waste biomass, and Borvida C, from chemically-recycled waste. In the future, the range will evolve to include Borvida A, sourced from atmospheric carbon capture. Borvida is complementary to, and is the building block of, Bornewables, Borealis' portfolio of polyolefins based on renewably-sourced second generation feedstocks, and Borcycle, which offers circular polyolefins produced from mechanically- and chemically-recycled plastic waste.

The basis of the Borvida portfolio is Mass Balance, the Chain of Custody model that enables sustainable content to be tracked, traced, and verified through the entire value chain, offering sustainability-assured products from feedstock to end product. Using this model, circular alternatives can be offered in a cost-effective and environmentally-conscious way, which can be scaled up quickly without compromising on quality or efficiency.

Hydrocarbons & Energy

In Hydrocarbons & Energy, feedstock prices are volatile and innovative new sources of feedstock are required. In 2022, Innovation and R&D focused, among other things, on the use of pyrolysis oil made from plastic waste as a feedstock for the Group's crackers. During the year, Borealis selected the chemical recycling process technologies for producing and upgrading pyrolysis oil, to feed the steam cracker furnaces at its Stenungsund (Sweden) location.

The Group has also begun utilising pyrolysis oil from its co-operation with Renasci as direct cracker feed in the Porvoo operations. Borealis received the first delivery of this chemically recycled feedstock in June 2022. The pyrolysis oil is blended with naphtha before use and Borealis demonstrated its commitment to innovation by being one of the first organisations to crack pyrolysis oil directly with naphtha in a steam cracker. Borealis has constructed an ISO container unloading station at Porvoo, to improve the logistics for delivering pyrolysis oil. In addition, the Group has continued to establish the analytical setup and criteria for qualifying pyrolysis oil made from plastic waste.

Hydrocarbon & Energy's other innovation projects include qualifying a new dehydrogenation catalyst, which will be loaded during the plant turnaround in 2023. The aim is to increase production, with a better performing and more robust catalyst. Borealis has also further improved the hydrogenation operation in the cracker downstream area, by benchmarking C3 hydrogenation catalysts.

Microplastic Research

Microplastics are plastic particles of less than 5 millimetres in diameter. They can be found in the environment, in the food and water we consume, and even in the human body. Borealis takes part in research programmes that study the sources of microplastics and their potential impact. See → chapter Product Safety, p. 114 for more information on microplastics.

CORNET Project "microplastics@food"

Borealis' is supporting the EU-funded CORNET (Collective Research Network) project "microplastics@food", run by a consortium led by the Food Cluster of Lower Austria and involving several high-level academic partners. The Group will also join the follow-up "microplastic@complexFOOD" project, starting in 2023.

Borealis provided the microplastics@food project with PE- and PP-based soft drink closures and corresponding pellet samples, for testing and research. So far, the findings have shown only a very limited amount of multi-polymer microparticles on freshly produced PE screw caps, which most likely resulted from aerial deposition in the production process. The project has also developed harmonised and reliable detection methods for microplastics, which work well in clear liquids and solutions and will be extended to more complex foodstuffs.

Research on Polymer Degradation and Stability
Borealis collaborated with TU Vienna to research secondary microplastics formation from polypropylene film, with the results published in the prestigious journal "Polymer Degradation and Stability". The work showed that the breakup of larger particles into microplastics is clearly related to chemical degradation, resulting from UV irradiation, and this may be the first stage of a purely abiotic degradation pathway. The Group also supported another project studying environmental exposure and degradation of "artificial litter", by providing well-characterised samples.

Plastics Europe Brigid Project
The "Brigid" project financed by Plastics Europe is studying the biological effects of microplastics on animals and humans, and is being conducted by a consortium of independent scientific partners coordinated by TNO, a Dutch research institute. This multi-million euro project will run until 2026 and cover different levels of biological interaction, from the cell level to the full organism. In line with other polymer producers, Borealis is supplying polymer samples and expertise to the project, the results of which are intended for public sharing.

Outlook
The war in Ukraine dramatically increased energy prices in 2022. Together with the ever-more urgent need to tackle climate change, this calls for the rapid development of technologies that enable increased use of renewable and available energy, renewable and available feedstock for polyolefin manufacturing and a rapid reduction in CO_2 emissions. Borealis will continue to intensify its efforts to contribute to this development.

In addition, in 2023 Borealis will work on:
- further developing recycling technologies, with the emphasis on mechanical recycling; and
- continued development of products with advanced performance, enabling their use in applications that are designed for recycling.

20230711119852

Digital Transformation

Goals for 2022	Key Achievements of 2022
Grow customer order volume via MyBorealis online platform	20% of order volume received via the platform
Increase number of safety training sessions completed via novel digital learning tools	18,000 training sessions were completed
Launch digital tools and start more tool development for Borealis' sustainability journey	Launched Neoni carbon dioxide calculator tool and CO_2 planner tool Started two further reporting and planner tool development projects, and set up two data projects to support these tool journeys

Increasing digitalisation will be an enabler for the transformation of Borealis to deliver its strategy to 2030. Digital solutions will increase productivity, improve the customer experience and, in particular, accelerate the transformation towards a circular economy and CO_2 neutrality for the Group.

For that reason, Borealis decided in 2017 to implement a Digital Programme and to create a state-of the art IT and digital organisation, which led in 2018 to the creation of the Borealis Digital Studio in Brussels, Belgium. The Digital Studio is Borealis' creative and agile enabler for developing smart solutions for customers and employees. It consists of a diverse, cross-functional team of digital professionals, including designers, usability experts, business analysts, software developers and engineers. Its mission is to support the Group's businesses as they adapt to a rapidly changing environment and to keep Borealis sustainably profitable, by creating innovative digital solutions that have a positive impact on the Group, its people and the environment. Adding value is key when creating digital solutions and end-users are always at the heart of the process, as the solutions are built both with and for them, following the agile methodology. Together with the Borealis IT organisation, the Digital Studio explores innovation options with the business functions.

Digital Strategy

The digital teams help the business to collaborate with digital professionals and users, whether they are consumers, Borealis' employees, suppliers or others. When reviewing ideas, the aim is to score each one consistently, objectively and transparently on four key factors:

- business viability: what value does it bring to Borealis and at what cost?
- technological feasibility: can Borealis do it?
- user desirability: do users want it? and
- strategic fit: does this fit into the Group's strategy?

To support innovation, Borealis has a central budget to fund exploration and create proof of concepts. Commitment and involvement from a Borealis business is required at this stage, to find the right innovation routes.

To go beyond this stage, Borealis believes that the businesses themselves need to fund projects, since this ensures that the right selection filters are applied before starting an initiative, and reflects the scarcity of money and time. Borealis has therefore created a business endorsement procedure for both proof of concepting and starting projects, including developing a supportive business case that considers funding, return on investment, the people commitment and other relevant parameters.

Activities 2022

Digital Solutions to Increase Personal and Process Safety

An innovative game-based interactive learning solution helps employees and contractors to learn the Group's Life Saving Rules and Process Safety Rules in a very immersive way, allowing them to apply theory to practice without stopping production or risking injury. The training combines a 3D-modelled plant environment, an engaging story and motivating gamification elements to simulate safety scenarios, enabling people to learn faster and retain knowledge better than traditional methods. In addition, Borealis has explored virtual reality technology to complement existing training methods and support the Group's journey to reach Goal Zero.

Digital Solutions to Increase Quality
Borealis is employing artificial intelligence (AI) models to improve quality. A solution that uses image recognition to trace contamination has been rolled out to multiple locations across the Group. It gives customers peace of mind by ensuring they receive very clean polymer material, which is especially relevant for high-voltage insulation applications in the Energy business. In addition, Borealis' plastic recycling businesses are using AI to improve their intake quality and waste sorting, which in turn supports the Group with advancing the circular economy.

Digital Solutions to Advance the Circular Economy
At K-Fair 2022, Borealis presented Neoni, a new carbon dioxide equivalent (CO_2e) emissions calculator which is currently under development. This digital tool is the first in the industry to offer CO_2e emissions data down to the grade level for polyolefins, providing more transparency to Borealis' customers so they can make informed decisions on which materials best meet their circularity goals. This is in line with Borealis' EverMinds™ approach to accelerating circularity through value chain collaboration.

Neoni offers a partial carbon footprint of products from Life Cycle Assessments (LCA), in the form of cradle-to-gate CO_2e emissions. This means the calculation includes all CO_2e emissions incurred up to the moment the grade leaves Borealis' facilities. The tool will soon offer customers the option to calculate additional CO_2e emissions incurred from Borealis to their own operations, further enhancing its usefulness.

Neoni presents CO_2e emissions for a wide range of materials, from virgin, fossil feedstock-based solutions, to renewable feedstock-based grades in the Bornewables™ portfolio of circular polyolefins, as well as those in the Borcycle™ portfolio of mechanically recycled polyolefins. Neoni is being rolled out towards the end of 2022, at which time the tool will contain more than 500 Borealis grades. In addition to polyolefins grades, data on hydrocarbons will also be added. The results from the tool will be accessible to customers on MyBorealis, the online platform for Borealis customers.

Digital Customer-Centred Solutions to Add Value
Polyolefins' online portal supports customer service representatives and sales managers in their daily interactions with customers. It puts easy order management at the customer's fingertips, as well as a complete library of order, product or complaint documentation. The application works round-the-clock, providing instant access to up-to-date information, with ordering fully integrated with supply chain and IT processes. A single global portal supports eight languages, allowing organisations in Europe, North America and South America to use it. By the end of 2022, 20% of the business's order volume was via the portal, up from 18% at the start of the year.

Digital People and Plant Solutions for a Strong Foundation
In addition to Borealis' strong focus on safety and its Goal Zero objective, the Group wants to increase efficiency in its operations, implement more automated processes, drive robotisation and evolve towards being a smart plant, decision and work organisation. Various initiatives contribute to this.

20230711119853

Borealis has developed a solution for recording and following-up on the condition of equipment at its plants. The integrated digital tool allows the operator to access and enter real-time data in the field, using tablets compliant with ATEX, the two European Directives for controlling explosive atmospheres. Additionally, a failure prediction model using Borealis' cloud-based data and analytics platform has been rolled out on rotating equipment. The model allows live anomaly detection and will be scaled to other equipment types, contributing to higher reliability for the Group's production assets.

Other initiatives to increase reliability include introducing autonomous robots with sensors for monitoring data points from equipment, using smart glasses to enable skilled experts to provide remote assistance in the field and creating a Group-wide data platform containing 3D scans of critical spare parts. To better support Borealis' complex activities in plant turnarounds, a Management Tool for Turnaround and Projects has been rolled out, which fully integrates planning and progress reporting on work orders, as well as the Go4Zero tool, which supports safety follow-up for employees and contractors.

Borealis began its Borstar® Digital Twin programme in 2021 and will run it until at least 2025. The Digital Twin is a suite of digital solutions for Borstar plants, which are rooted in Borealis' Borstar process expertise and built on successful applications such as the Group's Proprietary Advanced Process Control and Operator Training Simulators. The Borstar Digital Twin is part of Borealis' digitalisation goal to strive towards fully autonomous production plants, as well as a way to preserve the Group's knowledge in a system, to address an ageing and changing workforce and to attract talent with modern technology. Last but not least, it complements Borealis' Borstar process license offerings, to capture the digital market and secure the Group's intellectual property.

Outlook

In 2023, the digital teams aim to support Borealis' business strategy and transformation by continuing to develop digital solutions and services that transform the way Borealis works. The teams will continue to emphasise safety, efficiency, the circular economy, sustainability and value-add customer solutions. The medium-term strategy foresees the teams further embracing agile methodology and working with the business with even greater emphasis on user centricity, innovation and data science.

EU Taxonomy

Goals for 2022
Perform EU Taxonomy eligibility assessment 2022 (same as 2021)
Perform EU Taxonomy alignment assessment 2022
Continue organisational roll-out

Key Achievements of 2022
Eligibility assessment updated and completed for 2022
Evaluation of technical screening criteria for Borealis' activities (alignment assessment) completed
Climate and vulnerability assessment completed for all Borealis locations
Detailed information sessions held with local and central Health, Safety and Environment, Finance and Sustainability departments
Executive Board workshop conducted to discuss key levers of Borealis' taxonomy alignment and understand impact of execution of the Strategy 2030

As part of the European Commission's Sustainable Growth Financing Action Plan, Regulation (EU) 2020/852 establishing an EU classification system for ecologically sustainable economic activities (EU Taxonomy) came into force on 12 July 2020. The EU Taxonomy is a key instrument for the European Union to redirect capital flows towards sustainable investments and to create transparency. It encourages increased channelling of investments by companies, investors and policymakers to where they are most needed for sustainable development. Therefore, the EU Taxonomy Regulation will play an important role in scaling up sustainable investments and implementing the European Green Deal. [1)]

Within Article 3, the EU Taxonomy Regulation 2020/852 sets out four conditions that an economic activity has to meet in order to qualify as environmentally sustainable. These require that the activity: [2)]

a) contributes substantially to one or more of the environmental objectives set out in Article 9 in accordance with Articles 10 to 16;
b) does not significantly harm (DNSH) any of the environmental objectives set out in Article 9 in accordance with Article 17;
c) is carried out in compliance with the minimum safeguards laid down in Article 18; and
d) complies with technical screening criteria that have been established by the Commission in accordance with Article 10 (3), 11(3), 12(2), 13(2), 14(2) or 15(2).

The six environmental objectives specified within Article 9 of the regulation are: [3)]

a) climate change mitigation;
b) climate change adaptation;
c) the sustainable use and protection of water and marine resources;
d) the transition to a circular economy;
e) pollution prevention and control; and
f) the protection and restoration of biodiversity and ecosystems.

The Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 supplements regulation (EU) 2020/852 by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation. Furthermore, it determines whether that economic activity causes no significant harm to any of the other environmental objectives. [4)] At the time of writing this chapter, the EU Commission has not yet defined the four environmental objectives c) to f) listed above (see: Article 9 of the EU Taxonomy Regulation).

The minimum safeguards stated in point c) of Article 3 of the EU Taxonomy Regulation have been implemented following a request from the European Parliament. These safeguards shall ensure that entities which are carrying out environmentally sustainable activities, which are labelled as "taxonomy-aligned", meet certain minimum governance standards and do not violate social norms, including human rights and labour rights, as laid out in Article 18. [5)]

1) See: EU Taxonomy for sustainable activities | European Commission (europa.eu) // 2) See: Regulation (EU) 2020/852 // 3) See: Regulation (EU) 2020/852 // 4) See: Regulation (EU) 2021/2139

20230711119854

Reporting Requirements According to Regulation (EU) 2020/852

Applying the EU Taxonomy enables Borealis to be transparent about its sustainable economic activities and to demonstrate the sustainability performance of all business areas within the Group (except assets classified in Borealis' balance sheet as "held for sale").

According to the EU Taxonomy, Borealis is obliged to disclose how, and to what extent, its activities are classified as sustainable, as defined by the EU Taxonomy Regulation. In 2021, the EU Taxonomy reporting requirement was reduced and only the share of taxonomy-eligible and taxonomy-non-eligible activities had to be reported. Therefore, Borealis distinguished in 2021 only between taxonomy-eligible and taxonomy-non-eligible activities. For the Annual Report 2022, Borealis needs to distinguish between three types of economic activities: [6]

- **Taxonomy-aligned economic activity,** which means an economic activity that complies with the requirements laid down in Article 3 of Regulation (EU) 2020/852;
- **Taxonomy-eligible economic activity,** which means an economic activity that is described in the delegated acts adopted pursuant to Article 10(3), Article 11(3), Article 12(2),Article 13(2), Article 14(2) and Article 15(2) of Regulation (EU) 2020/852, irrespective of whether that economic activity meets any or all of the technical screening criteria laid down in those delegated acts; and
- **Taxonomy-non-eligible economic activity,** which means any economic activity that is not described in the delegated acts adopted pursuant to Article 10(3), Article 11(3), Article 12(2), Article 13(2), Article 14(2) and Article 15(2) of Regulation (EU) 2020/852.

Approach

Borealis' figures for the taxonomy-related activities to be reported are derived from the figures reported in the Group's consolidated IFRS financial statements. The Fertilizers, Melamine and Technical Nitrogen Products (TEN) business and Rosier S.A. were not considered in the EU Taxonomy assessment, in accordance with the recommendation of the European Securities and Markets Authority (ESMA), as these disposal groups are non-current assets held for sale under IFRS 5. [7] The exclusion of the disposal groups from the EU Taxonomy assessment leads to differences from the financial report of Borealis Group, as the classification of Rosier S.A. as an asset held for sale was completed at the end of Q3 2022 (→ Financial report, p. 163). Subsidiaries that are not fully consolidated and joint ventures were excluded from the assessment as per the reporting requirements of the EU Taxonomy Regulation. Turnover, CAPEX and OPEX were defined to avoid double counting (making sure each posting that was in the scope of the EU Taxonomy was assigned only once), such as the exclusion of maintenance cost centres that are allocated to production cost centres.

Turnover

The turnover KPI is based on Borealis' consolidated net sales (→ Financial report, p. 163). Government grants have been excluded according to ESMA's Advice on Article 8 of the EU Taxonomy Regulation. [8] In general, turnover was linked to the revenue streams of the products or services and assigned to the respective economic activity in the EU Taxonomy Regulation.

CAPEX

CAPEX was derived according to the definition in the → Financial report, p. 163. CAPEX was assigned to economic activities at project level, based on the Borealis CAPEX plan. Projects with CAPEX below EUR 0.5 million in 2022 were automatically allocated to the economic activity of the associated location.

Any intangible asset additions of allowances for CO_2 emissions related to the disposal groups have been excluded from the CAPEX reported under the EU Taxonomy.

OPEX

The OPEX KPI consists of R&D expense, building renovation measures, maintenance and repair costs, other direct expenditure related to day-to-day servicing of assets and short-term leases. Every OPEX category was evaluated individually in the EU Taxonomy assessment.

Taxonomy-Alignment Assessment

During Q1 2022, Borealis screened the alignment criteria for its business activities and together with the respective subject matter experts, made a high-level assessment. Throughout the year, the team built on this first assessment in several iterations. The taxonomy-alignment for Borealis'

5) See: Final Report on Minimum Safeguards (europa.eu) // 6) See: Regulation (EU) 2021/2178 // 7) See: ESMA Final Report, 2021 – note 58 // 8) See: ESMA Final Report, 2021 – note 58

activities was assessed as much as possible using available data. If the necessary documentation was not available, it was obtained via expert interviews within Borealis. Borealis' economic activities included in the EU Taxonomy assessment are all related to the environmental objective of climate change mitigation.

Climate Risk and Vulnerability Assessment
As part of the DNSH examination process, a robust climate risk and vulnerability assessment is required, which identifies physical climate risks that are material to the respective business activities in the future. In 2022, this scope was contracted to an external consulting company specialising in such climate risk and vulnerability assessments. Based on this analysis, Borealis performed internal working sessions to link external physical climate risks to Borealis' economic activities and assessed the materiality of these risks. No current material risks have been identified regarding the taxonomy-aligned activities in Kallo and Schwechat. Long-term adaptation measures are currently being assessed by Borealis' experts and will be addressed in the following years.

Eligible Activities for Borealis & Performance 2022
Borealis' core business consists primarily of the economic activities: 3.17 "Manufacture of plastics in primary form" (in the Polyolefin (PO) segment) and 3.14 "Manufacture of organic base chemicals" (in the Hydrocarbons & Energy (HC&E) segment).

For Borealis, activity 3.17 represents the manufacturing of resins, plastics materials and non-vulcanisable thermoplastic elastomers, as well as the mixing and blending of resins on a custom basis. Activity 3.14 in Borealis mainly relates to the production of high-value chemicals (ethylene and propylene). Activity 5.9 "Material recovery from non-hazardous waste" refers to the turnover for accepting plastic waste as input material for the mechanical recycling of plastics at mtm plastics GmbH and Ecoplast Kunststoffrecycling GmbH. The installation of a photovoltaic plant in Schwechat is shown under economic activity 4.1 "Electricity generation using solar photovoltaic technology" and the leasing of company cars under economic activity 6.5 "Transport by motorbikes, passenger cars and light commercial vehicles".

Part of the HC&E production, namely the phenol and acetone business, as well as turnover from the catalyst business and technology transfer are non-eligible economic activities.

Turnover
For Borealis' turnover KPI, 85% can be classified as taxonomy-eligible. The largest share of turnover relates to economic activity 3.17 "Manufacture of plastics in primary form" and reflects the activities of the Polyolefins segment. The second largest turnover share stems from economic activity 3.14 "Manufacture of organic base chemicals", which reflects part of the external revenue of the HC&E business. Activity 5.9 "Material recovery from non-hazardous waste" is listed under other eligible activities.

Non-eligible activities include the trading of Borouge products or feedstock trading and the manufacture of individual products that are non-eligible, such as phenol and acetone, catalysts or turnover from technology transfer.

For 2022, Borealis has not claimed any taxonomy-aligned turnover. In principle, the mechanically recycled volumes Borealis sells to customers have the potential to be aligned under activity 3.17, but the studies to provide the required evidence for DNSH are not all available yet. The fossil-based revenue reported under activity 3.17 cannot be claimed as taxonomy-aligned. The eligible turnover reported under activity 3.14 is not taxonomy-aligned, as either the substantial contribution criterion is not fulfilled or the necessary evidence for the DNSH criterion is not available. Borealis will continue to work on obtaining the required information in 2023.

CAPEX
For the CAPEX KPI, 90% of Borealis' total CAPEX can be classified as taxonomy-eligible. A major part of CAPEX can be allocated to economic activities 3.14 "Manufacture of organic base chemicals" and 3.17 "Manufacture of plastics in primary form". Furthermore, there are other investments in taxonomy-eligible economic activities, such as the installation of a photovoltaic power plant in Schwechat or the leasing of company cars.

18% of the eligible investments (16% of total CAPEX) are taxonomy-aligned. The taxonomy-aligned investments are the investments for the Kallo Propane Dehydrogenation Unit 2 (PDH2) and the photovoltaic power plant in Schwechat. Despite ongoing investigations into alleged human trafficking by Borealis' former contractor IREM at the propane dehydrogenation plant construction site in Kallo, Belgium, Borealis is of the opinion that this project fulfils all four of the criteria described above (→ About the Kallo Case, p. 35).

20230711119855

Fig. 26: **Share of taxonomy-aligned investments**

Location	CAPEX	KPI share OPEX	TO	Substantial contribution	DNSH	Minimum social safeguards
Kallo PDH2	17.4%	–	–	✓	✓	✓
Photovoltaic plant Schwechat	0.4%	–	–	✓	✓	✓

Fig. 27: **CAPEX plan**

Environmental objective	Economic activity	CAPEX 2022 in EUR mn.	CAPEX 2023–2026 in EUR mn.
Climate change mitigation	3.14 Manufacturing of organic base chemicals	201	380

1) CAPEX plan numbers are based on the latest approved business plan whereas time horizon reflects the maximum five-year period for a CAPEX plan mentioned in Annexes 1–5 to the commission delegated regulation (EU) 2020/852.

All of the taxonomy-aligned CAPEX is registered as an addition to property, plant and equipment. According to the definition in point 1.1.2.2. of Annexes 1–5 to the commission delegated regulation (EU) 2020/852, the photovoltaic power plant in Schwechat belongs to "(a) related to assets or processes that are associated with Taxonomy-aligned economic activities" whereas the Kallo PDH2 belongs to "(b) part of a plan to expand Taxonomy-aligned economic activities or to allow Taxonomy-eligible economic activities to become Taxonomy-aligned". The remaining 82% of taxonomy-eligible investments (84% of total CAPEX) cannot be claimed as aligned, as the majority of investments do not fulfil the substantial contribution criterion.

As the Kallo PDH2 project is still in the construction phase, there is no turnover or OPEX linked to this business undertaking.

OPEX

For operational expenditures, 89% within the scope of the EU Taxonomy Regulation are related to taxonomy-eligible activities. For the OPEX KPI, the different cost types were assessed separately, so the shares of OPEX attributable to eligible activities vary between the different cost types.

The maintenance and repair costs of the existing plants account for the largest share of the taxonomy-eligible OPEX (EUR 197 million). Short-term leases amount to EUR 2.1 million and are fully assigned to eligible activities (the difference from the reported figure in → Financial report, p. 163 stems from eliminations of short-term leases for Group functions). R&D costs total EUR 6.6 million (matching the non-capitalised R&D cost as part of the R&D cost reported in → Financial report, p. 163), and 69% are assigned to eligible activities.

In line with the turnover KPI, to claim taxonomy-alignment for OPEX requires further steps from Borealis, such as investing into taxonomy–eligible activities to become taxonomy–aligned.

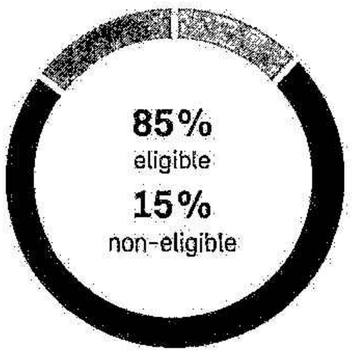
Outlook

Borealis' Executive Board has a clear commitment to sustainability, as embedded in the Strategy 2030, forming the core of all Borealis' current and future operations. This commitment will be reflected in the "taxonomy-aligned" numbers throughout the coming years, as these numbers are projected to increase steadily, especially for turnover and OPEX. One of Borealis' key goals for 2023 is to further raise the understanding of the EU Taxonomy Regulation and its importance to Borealis. The Group also intends to train key supporters in the relevant business and production functions. Most importantly, the Group will conduct the studies needed to provide the required evidence for DNSH criteria, as a basis for being able to report that all qualified

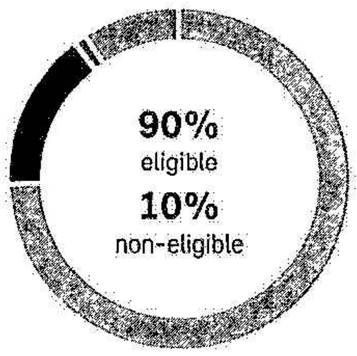
activities are aligned. Furthermore, in 2023 Borealis will evaluate opportunities to include the EU Taxonomy in the relevant decision-making processes, such as for large CAPEX projects and acquisition projects.

The publication of the EU Taxonomy KPIs according to the reporting forms as specified in Annex 1 Appendix II Delegated Regulation 2021/2178 can be found in → Annex p. 293.

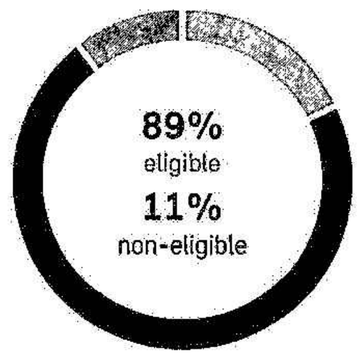
Fig. 28: **Share of eligible and non-eligible economic activities of the Borealis Group 2022**



Turnover	in EUR mn.
Manufacture of organic base chemicals	1,172
Manufacture of plastics in primary form	6,585
Other eligible activities	4
Non-eligible [1]	1,324
Total	**9,085**



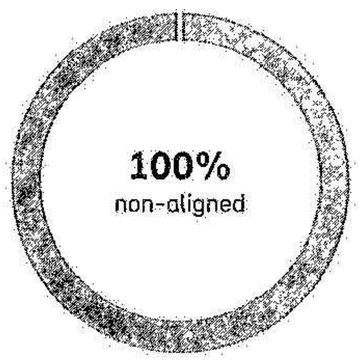
CAPEX	in EUR mn.
Manufacture of organic base chemicals	951
Manufacture of plastics in primary form	195
Other eligible activities [1]	9
Non-eligible [1]	121
Total	**1,276**



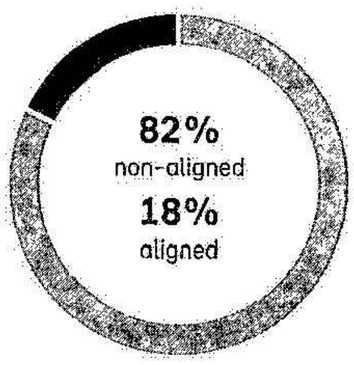
OPEX	in EUR mn.
Manufacture of organic base chemicals	41
Manufacture of plastics in primary form	163
Non-eligible [1]	24
Total	**228**

1) Phenol & acetone, Borouge products trading, feedstock trading, Innotech catalyst business & technology transfer

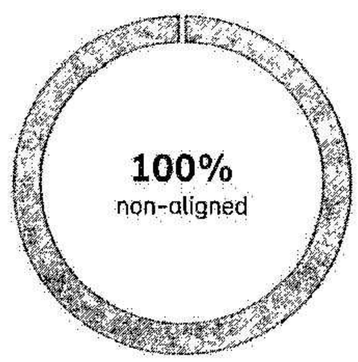
Fig. 29: **Share of aligned and non-aligned economic activities of the Borealis Group 2022**



Turnover	%
non-aligned	100



CAPEX	%
non-aligned	82
aligned	18



OPEX	%
non-aligned	100

20230711119856

Sustainability Focus Areas

Health & Safety

Occupational Health & Safety

Goals for 2022	Key Achievements of 2022
Polyolefins (PO) and Hydrocarbons & Energy (HC&E)	**Polyolefins (PO) and Hydrocarbons & Energy (HC&E)**
Roll out ONE Synergi, the OMV Group's incident management software	Upgraded Synergi tool, to create a joint system across the entire OMV Group
Harmonise contractor health, safety, security and environment (HSSE) management, incident management and the Life Saving Rules from Borealis and OMV Group into a common set of Life Saving Rules	Aligned the contractor HSSE management process with OMV Group and trained all relevant stakeholders Aligned the process to manage incidents with OMV Group and trained all relevant stakeholders Aligned the Life Saving Rules in Borealis and OMV Group
Fertilizers, Melamine and Technical Nitrogen Products (TEN)	**Fertilizers, Melamine and Technical Nitrogen Products (TEN)**
Update incident management instruction and conduct an exercise involving the emergency management team	Aligned the process to manage incidents in Fertilizers, Melamine and TEN with OMV and Borealis Group Organised an exercise at the Grand Quevilly (France) location, to simulate a major incident and involve the emergency management team
Revise health and safety training for front line leaders and roll it out in the locations	Rolled out safety training for front line leaders

Chemical operations involve highly flammable, toxic and hazardous substances that could pose a significant risk to Borealis' employees and neighbours, if not handled correctly. Health and safety is therefore one of the key focus areas in the Borealis Sustainability Strategy and the number one priority for the Group. In addition, process and occupational health and safety incidents have a direct link to lost working time and damage to valuable assets, both of which could affect the Group's ability to supply its customers, and its profitability and performance. Borealis therefore lives by the slogan "If we can't do it safely, we don't do it at all!" Everyone at Borealis is expected to stop working, or not to start working in the first place, if the situation is unsafe.

Governance

Borealis follows the slogan "If we can't do it safely, we don't do it at all." This rule is embedded in Borealis' Group HSE management system and infringement by line management leads to consequences for them. Every Borealis employee can report work-related hazards and has access to the Group's incident reporting tool, Synergi, where they can report near misses. These are reviewed and the number of near misses followed up is a performance indicator.

At a Group level, the HSE managers' network defines the HSE strategy, establishes improvement actions and shares lessons learned. The network includes local HSE managers and Group HSE.

HSE is part of the Responsible Care Committee at Executive Board level, with regular status updates and reviews of performance, and twice-yearly deep dives into HSE trend focus areas and definitions of additional actions.

The Corporate Co-operation Council (CCC) is a forum for exchanging information between the works councils at the various Borealis locations and top management and an important platform for dialogue between management and employee and workers representatives. The CCC holds four meetings and one conference each year. Health & Safety aspects are a key topic on the agenda in every meeting.

At location level, the local leadership and Health & Safety team meet each month to discuss health and safety performance. Every location also has an HSE Forum, where employee representatives are consulted and informed about the HSE management system. The HSE Forum also

promotes worker participation in occupational health and safety. A number of informal platforms and meetings ensure that all employees of operational sites are represented. These forums are organised at a location level and their frequency is the choice of each location. The Group assesses the implementation of these forums during the Group HSSE Blue Audit. These are performed every five years and include an assessment on how HSE information is cascaded in the organisation. In the last ten years, no nonconformities have been identified.

Health & Safety meetings are scheduled regularly to share lessons learned, report potential hazards and hazardous situations, and discuss improvement areas and best practices, with attendees including all health and safety specialists at the locations and Group health and safety experts.

Preventing Occupational Health & Safety Incidents
Borealis is committed to eliminating hazards and reducing occupational health and safety risks, and continuously improves through systematic learning. The most significant health and safety impacts on employees are caused when working at heights and/or with energised equipment. The Group proactively prevents accidents by developing risk management tools, implementing controls, undertaking awareness campaigns and health and safety training, and conducting regular audits for both employees and contractors. Group HSE defines the key intervention areas and developments over the next five years, related to occupational health and safety, process safety, environment and energy. These focus areas are in line with top management objectives and are consolidated into the Group's goal zero journeys, resulting in concrete actions for the year to come. Subject matter experts in the Group HSE team develop standards and the required processes to ensure they are consistently applied. HSE conducts regular deep dives on performance and shares these with the Executive Board and other top management teams, to define corrective actions and prioritisation.

The Group has an HSE management system, which is designed to reduce the possibility of incidents in the workplace by ensuring that hazards are systematically eliminated or controlled. It is developed on a voluntary basis at Group level and legal compliance is assured by the locations. The system covers occupational health and safety, process safety, environment and energy, as well as some aspects of security to fulfil legal requirements. It applies to all businesses where Borealis owns more than 50% or where the Group has operating responsibility. For Polyolefins (PO) and Hydrocarbons & Energy (HC&E), the Group has an ISO 45001 matrix certification, with the Antwerp (Belgium) location achieving ISO 45001 certification during 2022.

Fig. 30: **Workers covered by an occupational health and safety management system**

HC&E/PO [1]	Fertilizers, Melamine and TEN [2]
All listed sites below are ISO 45001 certified	All listed sites below are covered by the integrated management system, which includes health and safety aspects
Vienna (Borealis Group and Vienna Location)	Vienna (office location)
Mechelen	Grandpuits
Linz PO	Grand Quevilly
Schwechat	Linz NITRO
Porvoo	Ottmarsheim
Beringen	Piesteritz
Kallo	Paris
Antwerp	Lummen
Monza	Budapest
DYM Korea	all warehouse locations

1) All non-employees at these locations whose work and/or workplace is controlled by the organisation are covered by this ISO 45001 certification. This represents 1,177 FTEs, with no exclusions. A further 1,723 FTEs are non-employees whose work and/or workplace is controlled by the organisation, and who work at a location which is not yet ISO 45001 certified but which is audited via the Group's HSSE Blue audit on the Borealis HSE management system. There are no exclusions. // 2) All employees and workers who are not employees but whose work and/or workplace is controlled by the organisation are covered by the internal integrated management system. This represents 934 FTEs.

Borealis uses risk assessments to identify hazards, assess the risk and take necessary measures to reduce it. These risk assessments are done before any work is carried out on a project or changes are made to an installation. Everyone must report hazards and hazardous situations and can do this via the Group's incident management software, Synergi.

Major meetings and conferences in Borealis commonly start with awareness raising and sharing lessons learnt on health and safety, which is a mandatory topic for discussion at many meetings. All levels of management at Borealis, from

20230711119857

front-line leaders to Executive Board members, carry out regular engagement walks. These ensure dialogue occurs between management, employees and contractors. The walks are designed to spot safety risks and encourage positive changes in daily work routines.

In addition to safety training for all employees and contractors, all visitors to Borealis' locations must pass safety training before they gain access to the site. Some Borealis sites also organise an annual meeting with their neighbours, where safety performance and initiatives are discussed. Borealis also coordinates emergency planning with the emergency services.

Borealis aims to develop its health and safety culture from a calculative level (where safety is based on having systems in place to manage hazards) via a more proactive level (where safety leadership and values drive continuous improvement), towards a generative level, where health and safety becomes "how we do business". The Group has set itself a "Goal Zero" ambition that nobody should get hurt when working at Borealis and the aim is to have zero process safety incidents. Effective field leadership is a key enabler of this. In addition, each Borealis employee has a shared responsibility for others. "Care for my colleague" means encouraging employees to report incidents, actively participate in investigations and contribute to making Borealis safer for all.

Promoting Employees' Health and Wellbeing

Borealis promotes and protects its employees' health and wellbeing in several ways. In addition to detailed chemical exposure monitoring, which is carried out in accordance with national laws, the Group offers physical examinations and subsequent check-ups, periodic screenings and evaluations. Employee health initiatives vary depending on local needs, but they typically include addressing issues such as back pain, blood pressure and weight management, as well as providing on-site flu vaccinations. Employees learn about stress prevention, find help to quit smoking and can consult a psychologist. Employees may also take part in voluntary health counselling programmes to identify and monitor health problems.

Basic medical services are provided to all employees, contractors and visitors. Advanced wellbeing services are offered to all employees through the local medical service centres but not to contractors or visitors. All information shared between patient and doctor is kept confidential, in compliance with existing national legal requirements. In addition, Borealis has developed a wellbeing concept that sets common standards across all locations, enables sharing of best practices and builds on existing activities. It takes a holistic view of wellbeing and identifies four key areas for ensuring motivated and healthy employees. These are health, job engagement, competence and work-life balance. → chapter People & Culture, p. 76

Borealis conducts regular workplace health surveys, which cover every location in the Group every five years. These surveys identify, evaluate and document the current standard of the working environment in both operations and offices to establish a base for further improvement and to prioritise an action plan. Their primary focus is to prevent occupational health risks, occupational illnesses and accidents. The health surveys also put a considerable focus on the psychosocial aspects of work and work-life balance.

Activities 2022

Protecting Employees from COVID-19

In 2022, preventing employees from becoming infected with COVID-19 remained a top priority. National regulations were always strictly followed and measures to protect against COVID-19, such as social distancing, use of face masks, hand hygiene and working from home for those who can, remained in place. Some of the Group's locations also provided COVID-19 vaccinations to employees and COVID-19 antigenic testing where this was feasible. Borealis succeeded in keeping its operations running while protecting the health and safety of its employees and subcontractors.

ONE Synergi

As part of the overall ambition to leverage synergies across the OMV Group, Borealis upgraded the Synergi incident management system used in PO and HC&E, in order to have one common system with the OMV Group. Fertilizers, Melamine and TEN separated its Synergi incident management system from PO/HC&E, to prepare for the divestment.

Contractor HSSE Management

Borealis aligned its process for managing HSSE for contractors with the OMV Group. For example, the same criteria are now used to qualify contractors and they will be audited jointly, using the same tools. Fertilizers, Melamine and TEN also reviewed its contractor management arrangements, to ensure they were suitable for its organisation.

Harmonisation of Incident Management
As part of leveraging synergies across the OMV Group, Borealis has aligned its process for managing incidents with OMV Group's requirements. This ensures a common way of sharing lessons learned across the OMV Group. Fertilizers, Melamine and TEN also updated its major incident management, to fit its organisation and prepare for the split with Borealis, and trained and tested the preparedness of its Emergency Management Team.

Harmonisation of Life Saving Rules
The five Borealis Life Saving Rules and five Process Safety Rules have been harmonised into a common set of nine Life Saving Rules. This means that all Borealis employees as well as contractors have the same rules to follow in OMV, Petrom and Borealis and enables the sharing of campaign and training material across the entire OMV Group. These rules will be rolled out in 2023 via a campaign and all training material will be updated accordingly. Fertilizers, Melamine and TEN will keep the current Life Saving Rules and Process Safety Rules.

Group-wide Safety Days
In 2022, the fifth Group-wide Safety Day was held in all locations, with the theme of "Safety Culture". For the first time, this Safety Day was held together with OMV. In addition to a webinar, the Group held safety workshops in some locations. Fertilizers, Melamine and TEN organised its own Safety & Environment day in June 2022, with a common presentation for all locations, as well as local initiatives.

In response to the fatality that occurred in May 2022 in France and increasing total recorded injuries (TRI) rates at Group level, the Executive Board held a B-Safety Day with all location leaders and local HSE managers. The Executive Board set out their expectations for safety performance and this was followed by workshops identifying the areas of concern, such as safety leadership, contractor management and competence development, resulting in clear actions for each location to implement. These actions were established by sharing best practices between the locations and were followed up on a quarterly basis with all HSE managers.

Safety Culture Actions
In 2021, Fertilizers, Melamine and TEN conducted a Safety Culture Survey in conjunction with Dupont Company. In 2022, the business ran a workshop to define the areas requiring action. The locations were asked to cascade the results of the Safety Culture survey and define, for all departments, one action in the areas identified by the Group.

Performance 2022
TRI per million working hours has been a Borealis Group Scorecard KPI for many years. TRI are those that require medical treatment, restrict the work an employee can do or result in lost working days. Both Borealis' employees and contractors are tracked. All Borealis workers, contractors and subcontractors are covered by the indicators. Suppliers of raw materials, chemicals, additives and other commodities and hauliers are excluded from the TRI statistics, unless Borealis has caused the accident. The TRI criteria were changed in 2021 to bring them into line with OMV's HSSE incident classification and reporting, based on the standards of the International Organisation of Oil and Gas Producers.

Despite the Group's strong focus and continuous engagement to prevent accidents, unfortunately in May 2022, a fatality occurred in the Borealis location at Grandpuits, France. A contractor fell through a roof 8 metres high and did not survive the accident. The investigations indicated significant flaws in different barriers in preparing and executing the works, leading to this dreadful accident. Several lessons were shared with all locations, resulting in concrete actions to prevent reoccurrence of a similar accident. These included the importance of risk assessment of high-risk activities and detailed proactive analysis of the work method statements, as well as clarification of accountabilities related to the work permit system.

- *Borealis has an ambitious rate of a TRI of 1.17 or less and continuously works towards zero TRI.*
- *The overall TRI rate was 2.9 [1] in 2022 compared with 2.3 in 2021, with 2.6 in HC&E and PO and 3.6 in Fertilizers, Melamine and TEN.*
- *The TRI rate for Borealis' employees was 2.7 (HC&E and PO) and 3.5 (Fertilizers, Melamine and TEN) against 2.2 (HC&E and PO) and 2.6 (Fertilizers, Melamine and TEN) in 2021.*
- *The TRI rate for contractors was 2.4 (HC&E and PO) and 3.7 (Fertilizers, Melamine and TEN) compared to 2.2 (HC&E and PO) and 1.9 (Fertilizers, Melamine and TEN) in 2021.*

---

1) Rosier is included in overall TRI rate. The TRI rate of Rosier was 3.2.

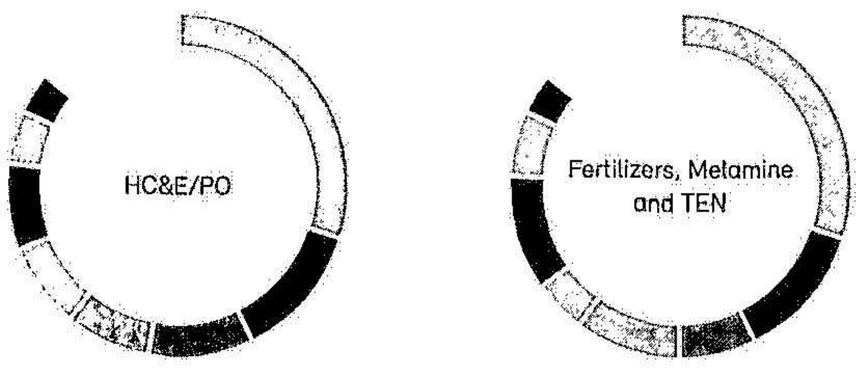
20230711119858

Data analysis showed that hands and fingers remain the main body parts harmed in accidents and that the most frequent incidents (HC&E and PO: 12 out of 60; Fertilizers, Melamine and TEN: 4 out of 18) are slips, trips and falls. The sick leave rate is another important occupational health indicator. In 2022, the sick leave rate was 4.1% for HC&E and PO and 5.5% for Fertilizers, Melamine and TEN, compared to 3.7% in 2021.

Analysing the incidents based on severity and reoccurrence led to the following actions in 2022:

- to respond to 25 TRI relating to finger and wrist injuries, the Group launched a special awareness campaign on prevention of such injuries;
- to respond to the nine TRI when using knives, the Group published clear instructions to ban unsafe knifes and only use safe knifes that drastically reduce the probability of an injury;
- to respond to the six TRI caused by bumping into obstacles, Borealis assessed the pathways in all locations and ran an awareness campaign to secure safe scaffolds; and
- several high-potential incidents, such as dropped objects or loose gratings resulted in clear Group instructions, to prevent these events ending in an injury.

Fig. 31: **Part of the body harmed between 2020 and 2022** [1]



	HC&E/PO	Fertilizers, Melamine and TEN
Hand, finger, wrist	30%	30%
Leg, knee	13%	13%
Arm, elbow	10%	7%
Foot, ankle, toe	8%	10%
Neck, shoulder	8%	5%
Eye	8%	11%
Face, mouth	5%	6%
Back	4%	4%
Others	14%	14%

1) Analysis of 1,260 (492 for NITRO) injuries between 2020 and 2022

Outlook

Occupational health and safety remains the number one priority for Borealis and for 2023 the Group has identified the following primary focus areas. These are to:

- roll out a Safety Focus Programme, to further respond to unfavourable results in 2022, with the programme focusing on the following topics;
  - reinforcing leaders' ability to influence their teams' safe behaviours;
  - increasing the effectiveness of existing safety systems, processes and routines;
  - enhancing risk recognition and decision-making at all levels;
  - cross-learning from incidents to reduce repeat incidents; and
  - enabling the Borealis organisation to develop and retain a generative safety culture.
- train leaders during a three-day session and all other Borealis employees through a one-day session, with the goal of refreshing the Group's basic health and safety focus areas and enhancing their effectiveness in the field;
- roll out the updated Life Saving Rules, harmonised with the OMV Group and in line with the OIGP standard, resulting in two new rules on hot work (already covered by a detailed procedure) and line of fire (part of existing training material) for Borealis;
- improve contractor HSE performance by auditing contractors and focus on sub-contracting and on smaller high-risk contractors, such as roof repair;
- educate a critical mass of incident investigators through a one-day training, and follow-up incident investigations in the Group network with a review by top management (including the responsible Executive Board member) of the results and actions of each TRI investigation; and
- continue the programme to certify the locations which are not part of the matrix certification to ISO 45001.

Fig. 32: **Health & Safety performance indicators 2018–2022** [1) 2) 3)]
See detailed background explanation of the performance in the respective section of this chapter

Issue	Definition	2022 HC&E/PO	2022 Fertilizers, Melamine and TEN	2021	2020	2019	2018
TRI Rate Total (Borealis and contractors)	Per 1 mn hours worked						
a. Old definition		–	–	–	1.7	1.6	1.3
b. New definition [1)]		2.6	3.6	2.3	3.9	3.4	–
TRI Total	Number						
a. Old definition		–	–	–	–	–	–
b. New definition [1)]		41	18	–	–	–	–
TRI Rate Borealis	Per 1 mn hours worked						
a. Old definition		–	–	–	1.8	1.3	1.1
b. New definition [1)]		2.7	3.5	2.3	3.8	3.3	–
TRI Borealis	Number						
a. Old definition		–	–	–	–	–	–
b. New definition		26	11	–	–	–	–
TRI Rate contractors	Per 1 mn hours worked						
a. Old definition		–	–	–	1.3	2.6	1.8
b. New definition [1)]		2.4	3.7	2.2	4.2	3.6	–
TRI contractors	Number						
a. Old definition		–	–	–	–	–	–
b. New definition		15	7	–	–	–	–
Fatalities	Number	0	1	0	0	1	0
Fatalities Borealis	Number	0	0	0	0	0	0
Fatalities Contractors	Number	0	1	0	0	1	0
Fatality rate Total (Borealis and contractors)	Per 100 mn hours worked	0	20.0	0	0	5.6	0
Fatality rate Borealis	Per 100 mn hours worked	0	0	0	0	0	0
Fatality rate contractors	Per 100 mn hours worked	0	53.5	0	0	19.7	0

1) Suppliers of raw materials, chemicals, additives and other commodities and hauliers are excluded from the TRI statistics; Ecoplast Kunststoffrecycling GmbH, mtm plastics GmbH and mtm compact GmbH are excluded from incident action completion rate. // 2) 2022 shows HC&E/PO and Fertilizers Melamine and TEN separately, whereas the years before data has been reported consolidated. // 3) Definitions were adjusted in 2021 to be aligned with OMV definitions. A comparison to previous years is therefore not possible (see Performance 2022, p. 106).

20230711119859

Issue	Definition	2022 HC&E/PO	2022 Fertilizers, Melamine and TEN	2021	2020	2019	2018
High-consequence work-related injuries Total (Borealis and contractors)	Number	2	1	3	6	0	2
High-consequence work-related injuries Borealis	Number	1	1	2	5	0	0
High-consequence work-related injuries Contractors	Number	1	0	1	1	0	2
High-consequence work-related injury rate Total (Borealis and contractors)	Per 1 mn hours worked	0.13	0.20	0.15	0.31	0	0.11
High-consequence work-related injury rate Borealis	Per 1 mn hours worked	0.11	0.32	0.16	0.40	0	0
High-consequence work-related injury rate Contractors	Per 1 mn hours worked	0.16	0	0.13	0.15	0	0.37
Hours worked Total (Borealis and contractors)	Hours (thousand)	15,647	4,997	20,466	19,260	17,823	17,903
Hours worked Borealis	Hours (thousand)	9,484	3,129	12,548	12,532	12,748	12,484
Hours worked Contractors	Hours (thousand)	6,162	1,868	7,918	6,728	5,075	5,419
Sick leave rate	% of total hours worked	4.1	5.5	3.7	3.6	3.4	3.6

1) Suppliers of raw materials, chemicals, additives and other commodities and hauliers are excluded from the TRI statistics; Ecoplast Kunststoffrecycling GmbH, mtm plastics GmbH and mtm compact GmbH are excluded from incident action completion rate. // 2) 2022 shows HC&E/PO and Fertilizers, Melamine and TEN separately, whereas the years before data has been reported consolidated. // 3) Definitions were adjusted in 2021 to be aligned with OMV definitions. A comparison to previous years is therefore not possible (see Performance 2022, p. 106).

Definitions

Total Recordable Injuries (TRI): Accidents resulting in absence from work, the need to do a different type of work or any other case in which medical treatment is required. The TRI criteria have been aligned with OMV Group and have therefore become stricter from this year: this now also includes, for example, an accident which resulted in a single lost day of work without any medical treatment, or an incident which resulted in an employee requiring a single stitch. The rate is calculated as the number of accidents per million working hours. Borealis' employees and contractors working on the Group's premises are included in this calculation.

High-consequence work-related injuries: High-consequence work-related injuries are split between:
- Fatalities
- Other injuries from which the worker cannot recover (e.g. amputation of a limb), or does not or is not expected to recover fully to pre-injury health status within six months (e.g. fracture with complications).

The definition of high-consequence work-related injury uses recovery time instead of lost time as the criterion for determining the severity of an injury. Lost time is an indicator of the loss of productivity for an organisation as a result of a work-related injury; it does not necessarily indicate the extent of harm suffered by a worker. Recovery time, in contrast, refers to the time needed for a worker to recover fully to pre-injury health status.

Sick leave rate: The sick leave rate indicates the amount of time employees were absent from work due to sickness or injury. The overall sick leave rate is calculated as a percentage of the total number of planned working days in the current year.

Process Safety

Goals for 2022	Key Achievements of 2022
Develop Group Process Safety Roadmap to improve Process Safety management system in 12 different areas and start roll-out	Developed a Group-level Process Safety Roadmap to 2025 for Polyolefins (PO) and Hydrocarbons & Energy (HC&E) and started roll-out to the locations
Conduct a Quantitative Risk Assessment (QRA) for the cracker and aromatics plants in Porvoo, Finland	Finalised the Porvoo cracker and aromatics QRA and completed a study for the QRA for Stenungsund, Sweden
Undertake cross-learning on liquefied gas loading incidents in the industry in Fertilizers, Melamine and TEN	Cross-learning done for each plant in PO, HC&E and Fertilizers, Melamine and Technical Nitrogen Products (TEN)
Deep dive on one of the Process Safety rules in Fertilizers, Melamine and TEN	Conducted internal health checks on "Bypassing of Interlocks" at several locations
Prepare locations in Fertilizers, Melamine and TEN for handling the hazards of natural gas powered trucks	Prepared locations to receive natural gas powered trucks

Borealis processes large quantities of flammable and/or toxic materials under high pressure and temperatures, which, if not handled properly, could lead to process safety incidents. In a worst-case scenario, leaks, fires or explosions could severely harm people's health or cause fatalities, both inside and outside Borealis, as well as causing environmental pollution. This could also disrupt supply to customers, with a consequent financial impact on Borealis. It is therefore of the utmost importance for Borealis to invest in process safety and to properly design, maintain and operate its plants.

The Seveso Directive is the main EU regulation dealing with the control of onshore major accident hazards involving dangerous substances. In line with this directive, Borealis works closely with national authorities and emergency organisations to ensure the safe operation of its plants and maintain a high level of preparedness in case of incidents. The Group also actively supports industry-wide efforts to enhance process safety, as a member of the European Process Safety Centre.

To reach Borealis' objective of achieving zero accidents, the Group has put in place its Goal Zero programme. This covers both occupational health and safety and process safety, and is a key deliverable of the Group's Sustainability Strategy. As Borealis employees are encouraged to see Goal Zero as a journey to be taken together, the programme helps establish a collective health and safety mindset.

Governance

The Group Process Safety department has developed a process safety management system that enhances risk identification and mitigation. The Group policies that are relevant to process safety are the Risk Management Policy and the Responsible Care® Policy. The Risk Management Policy defines Borealis' risk management framework by providing principles, roles and responsibilities, and guidelines for risk assessment, mitigation and reporting. The policy aims to ensure the implementation of sound risk management practices at all levels across the Group. The Responsible Care Policy statement sets out the guiding principles for the Group-wide implementation of Responsible Care at Borealis (→ chapter Corporate Governance, p. 56).

The Executive Vice President Base Chemicals and Operations chairs the Group-level Process Safety Committee. The Committee's members are directors and departmental leaders from all of the relevant operational streams: Group Health, Safety, Environment & Quality, Manufacturing Excellence, Operations Polyolefins and Operations Hydrocarbons and Project & Expert Support. Each production location also has its own health, safety and environment (HSE) Assurance Team, chaired by a nominee appointed by local management. Its members come from different areas within the location, to ensure cross-learning and a link to Group developments.

20230711119860

Assurance Teams meet regularly to oversee Borealis' process safety performance and programme, steer the Group's process safety Goal Zero roadmap, review progress and provide guidance on priorities, key activities and performance measures. Priorities are identified based on reoccurring or severe incidents, leading to a programme being launched by multi-functional teams to improve performance. These teams determine best practice and roll it out in the locations, with support and supervision from Group Process Safety. Group Process Safety also takes an active role in resolving challenges for Borealis' growth projects, by providing its expertise in an early-stage study.

In addition to being an active member of the European Process Safety Centre, sharing lessons from incidents and supporting process safety developments, Borealis also takes part in a number of forums related to process safety. These include the High Pressure Safety Conference, Fertilizers Europe, the European Ethylene Producers Conference and the European Chemical Industry Council (Cefic) Plant & Process Safety Network. Borealis also exchanges information with other companies to assess the best technical solutions for preventing and mitigating the escalation of major process safety incidents and scenarios.

Activities 2022

In 2022, Borealis undertook a wide range of activities, which were designed to further improve its process safety performance. In particular, PO and HC&E:

- started to roll out a Process Safety Roadmap, which is a five-year plan of critical Process Safety activities needed to close identified gaps in technical and process safety management, in a structured way across all locations, followed by training;
- continued to develop the Group's process safety competency by conducting Process Safety in Design and Hazard Study Leader training, and following up Process Safety Basics e-learning, which OMV Group shared with Borealis;
- finalised a quantitative risk analysis (QRA) in Porvoo, Finland, which is a methodology for assessing the probability and potential consequences of all possible chemical release scenarios. This makes it possible to identify risk profiles in different areas inside and outside the location, with the goal of reducing the overall exposure risk of Borealis' employees and contractors.
- developed and issued an internal ATEX guideline on minimum requirements for improving the protection of workers potentially at risk from explosive atmospheres (ATEX stands for Appareils destinés à être utilisés en ATmosphères EXplosibles or "equipment intended for use in explosive atmospheres"); and
- developed virtual training based on a new concept (Play it Safe) for the Group's Process Safety Rules and coordinated cross-learning sessions on liquid ammonia and hydrocarbon loading incidents in the industry.

The Fertilizers, Melamine and TEN business:

- conducted a deep dive on one of the Process Safety Rules ("Bypassing of Interlocks") by performing internal health checks at several locations; and
- developed and implemented a guideline for handling the hazards of natural gas powered trucks at fertilizer locations.

Process Safety Audits

- *Borealis Blue Audits are an internal audit of a location's HSE systems and requirements.*
- *In 2022, these were conducted in Monza (Italy), Porvoo (Finland) and Geleen (The Netherlands), as well as the Fertilizers, Melamine and TEN location in Linz (Austria).*
- *In preparation for its divestment from Borealis, Fertilizers, Melamine and TEN also developed its own safety audit concept, with a strong focus on process safety.*

In addition, four internal health checks were completed on Layer of Protection Analysis in Antwerp (Belgium), Kallo (Belgium), Linz (Austria) and Porvoo (Finland), and DNV, the world's largest classification body for vessels and mobile offshore units, carried out an external process safety management audit in Stenungsund.

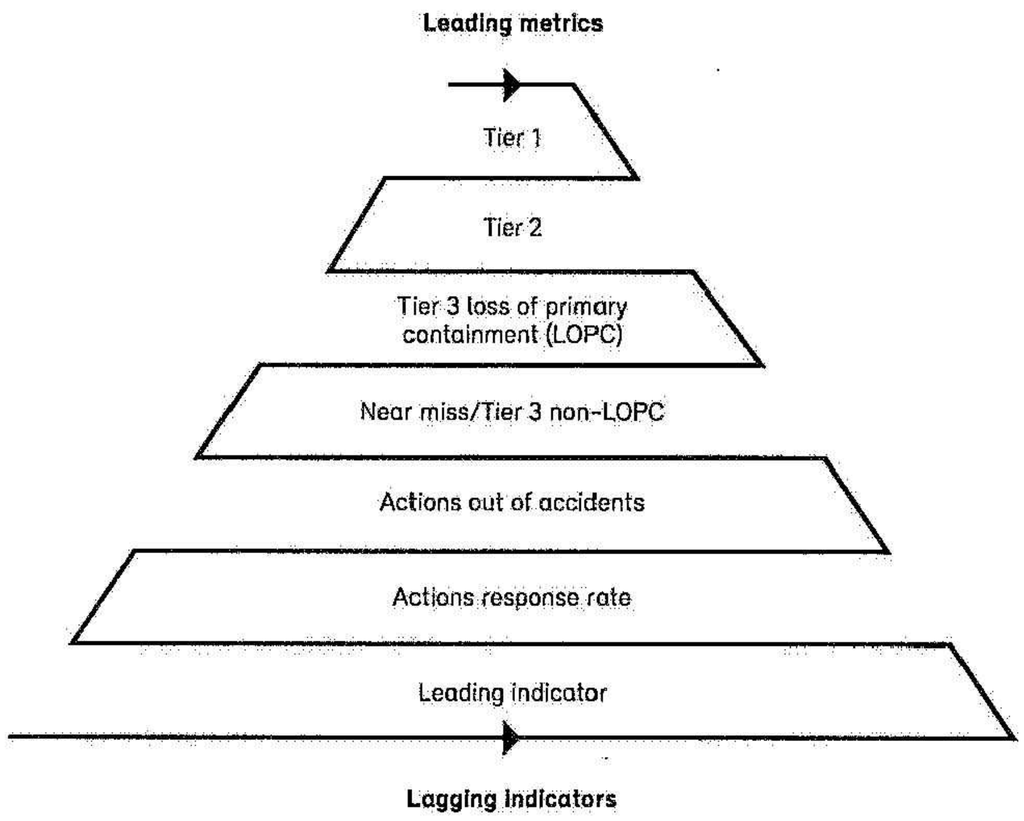
Furthermore, Borealis' insurance brokers conducted six major surveys and one follow-up survey. All of these audits reassured the Group's insurance brokers that the Group has a well-managed process to prevent and limit the impact of incidents.

Based on lessons from the fire in 2020 at the Stenungsund cracker, Borealis is closely following-up und implementing actions defined in the risk reduction programme, including elements such as process safety competence, enhancing the project hazard review process and initiating actions to reduce the risk landscape of the location, as well as rolling out a Group-wide assessment of the protection layers for large machines.

Performance 2022

Borealis uses a Loss of Primary Containment Pyramid tool to support the monitoring of incidents, ensure they are investigated and that actions are completed in time to prevent reoccurrence.

Fig. 33: **Borealis' Loss of Primary Containment Pyramid**



The pyramid includes the performance of the safety-critical processes designed to prevent accidents. This performance is measured using indicators such as the status of safety-critical inspections, the testing of critical interlocks and the closure of actions. The leading indicators are followed up annually through a "deep dive" into overall performance and review by the Process Safety Committee. As well as using its own process safety incident rating tool, Borealis tracks process safety incidents according to Cefic (the European Chemicals Industry Council) standards.

High-severity (Tier 1) accidents would include, for example, a large fire or explosion resulting in injuries or fatalities, and significant business loss and impact on the environment.

Medium-severity (Tier 2) accidents are those resulting in a loss of containment, with medium consequences for people, planet and profit. A medium-severity accident would normally result in limited injuries, easy-to-repair damage and a controllable environmental impact.

Low-severity (Tier 3) accidents are those where substances are released but which result in a very low to zero impact.

In 2022, the Group's target was to have a maximum of 21 Tier 1 and Tier 2 accidents.

In 2022, 3 (HC&E/PO) and 1 (Fertilizers, Melamine and TEN) Tier 1 accidents were reported. 8 (HC&E/PO) and 4 (Fertilizers, Melamine and TEN) Tier 2 accidents and 473 (HC&E/PO) and 209 (Fertilizers, Melamine and TEN) Tier 3 low-severity process safety accidents were reported, along with 517 (HC&E/PO) and 118 (Fertilizers, Melamine and TEN) process safety near misses, of which 2 (HC&E/PO) and 1 (Fertilizers, Melamine and TEN) were process safety-related with high potential.

As general process safety awareness increases due to Borealis' educational initiatives and campaigns, more low-severity accidents are being reported (→ chapter Occupational Health & Safety, p. 103).

The process safety response rate measures the number of actions closed against the number due to be closed on a 12-month rolling basis. Including all actions for 2022, the response rate for December was 91% (HC&E/PO) and 92% (Fertilizers, Melamine and TEN) (2021: 91.7%; 2020: 92.7%). A total of 1,012 (HC&E/PO) and 533 (Fertilizers, Melamine and TEN) actions were implemented in response to high-, medium- and low-severity accidents.

20230711119863

Fig. 34: **Process Safety performance indicators 2018–2022** [1) 2)]

Issue	Definition	2022 HC&E/PO	2022 Fertilizers, Melamine and TEN	2021	2020	2019	2018
Response rate on process safety incidents	% actions completed on time	91	92	91.7	92.7	92.9	97.1
High-severity accidents (Tier 1)	Number	3	1	9	1	0	0
Medium-severity accidents (Tier 2)	Number	8	4	7	11	11	16

1) Definitions were adjusted in 2021 to be aligned with OMV definitions. A comparison to previous years is therefore not possible. // 2) Rosier data is tracked in Synergi and recorded *monthly in the LOPC Pyramid. For Rosler no Tier 1 & 2 accidents were reported in 2022.*

Definitions

Response rate of process safety incidents: *Process safety incidents of a certain severity or risk potential are recorded and investigated through root cause analysis. Corrective actions are defined to prevent re-occurrence. The response rate of process safety incidents is measured as the ratio (%) of corrective actions completed within a defined time period.*

High-severity accidents: *are Tier 1 accidents according to API RP754;* **Medium-severity accidents:** are Tier 2 accidents according to API RP754.

Outlook

During 2023, Group Process Safety will focus on the following areas:

- undertaking a Process Safety Event (PSE) Tier 1 and Tier 2 analysis, including an impact assessment, to assess the greatest opportunities for risk reduction and work out an action plan;
- revision of risk register based on aligned Borealis OMV risk matrix for HSSE
- conducting a quantitative risk analysis (QRA) in Beringen, Belgium to assess all possible release scenarios from a probability and consequence perspective and identify risk profiles at different locations inside and outside the site, with the goal of reducing the overall exposure of employees and contractors; and
- continuing the process safety management audits by DNV in 2023 at a Group level and in one location. The HSSE group will also conduct internal health checks on process safety-related elements and a process safety review in the Borealis Blue Audits.

Product Safety

Goals for 2022	Key Achievements of 2022
Keep Borealis' registrations under the European Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) up to date	Submitted and followed a plan to update all active REACH dossiers by 2026: updated 17 dossiers for Polyolefins (PO) and Hydrocarbons & Energy (HC&E), one for Rosier and four for Fertilizers, Melamine and Technical Nitrogen Products (TEN). One PO/HC&E dossier and two Fertilizers, Melamine and TEN dossiers were lead registrant dossiers.
Contribute expert know-how on the ongoing regulatory changes related to implementing the EU's Chemical Strategy for Sustainability (CSS)	Contributed to the European Chemical Industry Council (Cefic) economic impact assessment of the CSS and participated at the public consultation of the REACH review
Provide regulatory support for the implementation of the circular economy in the field of mechanical recycling	Provided guidance on product safety testing regime for mechanically recycled products, and all Borealis recyclates were tested according to testing scheme
Support Borealis' growth projects in US and South Korea by providing safety data sheets (SDS) and marketability of products in the EU and Turkey markets	Submitted additional 3 EU REACH registrations and published 30 SDSs

Borealis' Product Stewardship department is responsible for ensuring product safety throughout a product's entire life cycle. The Product Stewardship team gives clear instructions to the organisation, to ensure that all products comply with chemical- and application-related laws in all the countries in which the Group operates and sells. The Group also publishes Safety Data Sheets (SDSs) and product safety information sheets, to provide guidance on the safe use and disposal of Borealis' products, with regards to human health and the environment.

The Group ensures that it understands and anticipates consumer and market needs and concerns about chemical safety, as well as the development of legislation concerning chemicals, their applications and the environment, so it can take necessary measures and ensure continued compliance.

In addition to ensuring legal compliance and the health and safety aspects of its products along the entire value chain, Borealis sees the proactive substitution of chemicals of concern as an opportunity to gain market share. This will bring value to the Group's customers and ensure their products' continued compliance and sustainability.

Governance

Group Product Stewardship reports to the Director Health, Safety, Environment and Quality (HSEQ). The team assesses and approves incoming chemicals at Group level and ensures that products comply with general chemical legislation, such as REACH and Classification, Labelling and Packaging (CLP), as well as application-related legislation, such as food contact or healthcare applications. Product Stewardship activities at national or location level, such as plant-level approvals of raw materials and managing compliance with national chemical laws, are handled by experts who are part of the locations' HSEQ organisations.

The Product Stewardship Council addresses chemicals of concern in a proactive way. It is chaired by the Director HSEQ and brings together experts from across the Group, including areas such as Product Stewardship, Sustainability, Ethics and Innovation & Technology, as well as all of Borealis' business sectors and operations. This range of competencies ensures holistic risk assessments that consider market needs, legal and technological requirements and stakeholder views.

Chemicals Strategy for Sustainability

In October 2020, the European Commission published its Chemicals Strategy for Sustainability (CSS) towards a toxic-free environment. This is part of the EU's zero pollution ambition, which is a key commitment of the European Green Deal. Together with the EU Circular Economy Action Plan and the linked EU Sustainable Products Initiative, this aims to bring about a step change in product safety and sustainability in the EU. Preparations for turning the strategy's ideas into proportionate and enforceable legislation were ongoing throughout 2021 and 2022 and will continue for several years.

Borealis has continued to participate in the Cefic-organised economic analysis of the impacts of the CSS on the European chemical industry. In addition, the Group is represented in

20230711119862

many Cefic and Plastics Europe working groups dealing with different aspects of these initiatives, including the ongoing revisions of REACH and the Classification, Labelling and Packaging (CLP) regulation.

Numerous aspects of the CSS have been embedded in Borealis' ways of working for many years. Borealis is committed to the principles of Responsible Care® and enforces high product stewardship standards, to ensure that its products are used safely at every stage along the value chain (→ Responsible Care p. 68).

Assessing Chemical Risks

The Group's hazardous chemicals strategy follows the precautionary principle of continuously assessing the risk potential of all substances used in Borealis' products, to identify critical chemicals that need to be replaced by safer alternatives. The Group establishes a list of Substances of Concern (SoC) that is influenced by regulations such as REACH and customer and public perception.

The Product Stewardship Council assesses substances with the highest identified risk, selecting the substances to be evaluated using a proprietary ranking tool. These assessments enable Borealis to identify, mitigate and manage the risks posed by hazardous chemicals. The Product Stewardship Council also updates the Borealis Banned Substances List of more than 250 substances and substance groups that the Group will not use. In 2022, 14 substances were added to the list, which is published on the Borealis website.

Borealis uses its Portfolio Sustainability Compass to assess the sustainability of its Polyolefin product portfolio. Product Stewardship assesses the Group's polyolefin products and innovation projects in two categories of the Compass: "Chemical hazard and exposure across the life cycle" and "Global regulatory trends", and follows up any finding, opportunity or threat. (→ chapter Sustainability Management, p. 40).

In Fertilizers, Melamine and TEN, continuous regulatory monitoring of the business's substances enables it to assess the potential risk of additional legal action. Melamine has been identified as a Substance of Very High Concern (SVHC) and will be added to the candidate list of SVHC for Authorisation and possibly to Annex XIV of REACH, which means an authorisation would be needed for further usage.

Product Compliance

Borealis' product safety procedures cover the health, safety and environmental (HSE) aspects of a product throughout its life cycle, from raw material sourcing to its eventual recycling, recovery or disposal. All of the Group's products are assessed for their health and safety impacts, as well as compliance with chemical and product compliance regulations, including hazard communication via SDSs and hazard labels. All products undergo mandatory compliance assessments that are reviewed whenever there is a change in the product or the applicable legislation, to ensure they are suitable for use in the countries where they are sold, and that they comply with all applicable legislation. Guidance for correct disposal is given on the SDSs or Product Safety Information Sheets of Borealis products. For Polyolefin products, those documents also include instructions on how to avoid accidental release of plastic pellets to the environment.

Borealis' products are in full compliance with REACH. This regulation requires participants in the chemicals value chain to prove the safe use of chemicals. In recent years, the quality of REACH registration dossiers has been challenged by non-governmental organisations and some EU Member States. Cefic has therefore established a REACH dossier improvement programme, which Borealis has signed up to and fully supports. The aim of the programme is to update all existing dossiers by 2026. In addition to improving the Group's existing registrations, in 2022 Borealis filed four additional registrations to allow the import of new raw materials to its EU production plants.

Other relevant legislation and regulations include the Toxic Substances Control Act in the United States, the Globally Harmonised System (GHS) for the classification and labelling of hazardous chemicals, CLP, and, depending on use, any application-related legislation, such as the EU framework regulation on food contact materials.

One of the main goals of REACH was to generate more data to better understand the potential hazards and control the risks of the chemicals that are used. Borealis is actively following its suppliers' SDSs and the harmonised classification process, to ensure it always has accurate and up-to-date SDS and label information for its products.

- *In 2022, Borealis updated SDSs and label information for 111 Polyolefin products, due to reclassifications by REACH.*
- *Implementation of the new REACH Annex II requirements also triggered 23 SDS updates for HC&E, 13 for catalysts, and about 700 SDS updates for PO.*
- *Fertilizers, Melamine and TEN updated SDSs for 26 products to implement the changes related to REACH Annex II and the new Fertilising Products Regulation, and sent the updated documents to more than 1,500 customers.*

The PO product portfolio that Borealis sells to Turkish customers contains about 70 substances that require a Turkey REACH registration. In 2022, Borealis put considerable effort into preparing for the 2023 registration deadline in Turkey.

In Fertilizers, Melamine and TEN, the main focus was to prepare the inquiries under UK REACH for the substances for which the business wants to be lead registrant. Creating a Substance Information Exchange Forum is more difficult, as the UK Government may delay the registration deadline by three years.

Fertilizers, Melamine and TEN has also worked hard to ensure it complied on time with Regulation (EU) 2019/1009, which lays down rules on making fertilizing products available on the EU market. While the regulation came into force on 16 July 2022, amendments are still ongoing and it will take time to create notified bodies, which are mandatory to sell solid fertilizers based on ammonium nitrate with high nitrogen content. The business has launched implementation projects and followed up to ensure product compliance and explore potential opportunities.

No incidents of non-compliance with regulation and/or voluntary codes concerning the health and safety impacts of products and services were identified. There were also no incidents identified of non-compliance with regulations and/or voluntary codes concerning product and service information and labelling.

- *Throughout 2022, Group Product Stewardship intensified its support for the new DYM site in South Korea.*
- *To support the new business, 30 SDSs were created for DYM products going to the EU and Turkey, three EU REACH registrations were submitted and coverage of DYM volumes by Borealis pre-registrations for Turkey REACH was confirmed.*
- *Support for DYM and other growth projects will increase and continue throughout 2023 and beyond.*

Controlling and Approving Raw Materials

Before they are approved for use, all incoming chemicals used in Borealis' products are assessed using a thorough incoming material process. Group Product Stewardship performs an initial assessment to ensure legal compliance. Product Safety teams in the countries where Borealis operates then perform additional assessments at each plant, to ensure the chemical meets plant-specific requirements and complies with national or community-related legislation. The raw material approval package must contain a signed specification, up-to-date SDSs and all relevant information as laid down in the Borealis Raw Material Questionnaire. The approval package is reviewed every three years.

Once materials are approved for purchase, they are subject to Borealis' quality control to ensure they continue to comply with the agreed material properties.

All materials are documented based on Borealis' knowledge of the exact composition of the raw material and on detailed information about the material's hazardous constituents. Proper documentation of the raw materials used is a key element of high-quality Borealis product compliance statements, such as SDSs, application-related statements (such as medical use, food contact and drinking water) and other statements, such as on raw materials' origin.

20230711119863

Borealis also regularly audits its raw material suppliers for compliance with, for example, their legal and hygiene requirements. The Group requires its suppliers to provide documentation for each raw material and to keep it up to date, including the information required by national chemical inventory control laws, the CLP and REACH. This enables Borealis to issue the respective SDSs for its customers. In addition, Borealis' production sites are subject to frequent external audits.

Supporting the Group's Polyolefin Sustainability Journey
Making plastics circular is one of Borealis' main goals. The Product Stewardship department plays a key role by supporting the Group's work to maintain product safety while using mechanically recycled post-consumer waste, which by its nature does not have a defined and homogenous chemical composition. Both existing and planned legal frameworks, for example, following the EU Commission's Green Deal, ask industry and brand owners to use post-consumer recycled (PCR) materials for their products. The Product Stewardship team is providing support by generating an overview of applicable legislation and available industry standards, to produce a risk assessment and analytical testing strategy that can confirm compliance and the suitability of Borealis' Circular Economy Solutions portfolio. In 2022, all Borealis, mtm and Ecoplast mechanically recycled products underwent analytical testing to support the confirmations in Borealis' compliance statements. These documents were harmonised and published during 2022 and proved highly valuable to the Group's customers.

Microplastics
Microplastics are found in the environment, our nutrition and the human body. Once in the environment, microplastics do not biodegrade and tend to accumulate, unless they are specifically designed to biodegrade in the open environment or salt water. They are often mistaken for food by birds and turtles, and swallowed particles can lead to injuries or starvation.

In its 2019 report on microplastics in drinking water, the WHO concluded that "no reliable scientific information available today suggests a potential human health risk associated with exposure to microplastics".

However, research on microplastics is complex and in its infancy and much remains uncertain. Scientists agree that today's evidence provides sufficient grounds for genuine concern. Science Advice for European Policy (SAPEA) concludes that, if microplastic pollution is left unchecked, business-as-usual would lead to concentration thresholds being exceeded in the near future and the occurrence of widespread risk within a century.

As it is not possible to completely remove microplastics once they are in the environment, the priority is to prevent plastics leaking into the environment in the first place. To develop effective and efficient solutions, more sound scientific knowledge is needed about the source, fate, persistence and effect of microplastics.

Borealis therefore has installed a cross-functional Microplastics Issue Team, which closely follows scientific knowledge generation, evaluates emerging studies and collaborates with value chain partners and industry associations in the development of new studies.
→ chapter Innovation, p. 90

Borealis proactively engages in working groups, along with Plastics Europe and Cefic. The Group's experts contribute to Cefic's Microplastics Issue Team, as well as to Plastics Europe's Microplastics Strategic Group, Operation Clean Sweep Taskforce and Microplastics Science Group.
→ chapter Public Affairs, p. 48

Furthermore, Product Stewardship has added instructions on how to avoid accidental release to the environment to all product safety documentation, such as SDSs and Product Safety Information Sheets (PSISs) issued from October 2020 onwards.

Sharing Product Safety Knowledge across the Value Chain
Borealis communicates with its stakeholders on product safety through a wide range of channels. The Borealis website allows anyone to find information about the Borealis Banned Substances List. The website also includes examples of successful substitutions of hazardous chemicals and some position statements regarding "hot topics". Borealis' Polyolefin customers can download SDSs, PSISs and other general or application-related compliance statements from the Borealis website or the MyBorealis customer portal.

When product modifications may influence customers' safety or require additional testing of finished articles, Borealis informs customers or authorities in due time before it makes the modifications. Borealis also informs customers in advance when legislative changes have consequences for them. For example, customer letters were sent out in October 2021 to inform them about classification and labelling changes effective from March 2022.

In addition, Borealis offers training and education to customers. Sharing Borealis' expert product safety knowledge with value chain partners makes an important contribution to helping customers continuously meet the highest product safety and quality standards.

Collaboration with the value chain is also instrumental to mechanical recycling. Together with customers, Borealis is defining the boundaries to guarantee the safety of PCR plastics in different applications, as no established standards are available yet. Borealis is, for example, an active member of the CosPaTox consortium and project, looking into the development of safety guidelines for the safe use of post-consumer plastic recyclates in cosmetic packaging.

In Fertilizers, Melamine and TEN, Borealis offers education and awareness activities for farmers. This informs them about proper use of mineral fertilizers and how to avoid pollution of groundwater or soil, using tools such as NutriGuide™, NutriZones™ and N-Pilot™.

Borealis actively participates in industry associations and standardisation groups to stay at the forefront of regulatory and public requirements (→ chapter Public Affairs, p. 48). The Group is an active member of the Product Stewardship teams at Cefic, Plastics Europe and related national organisations. The Group works closely with its own experts, customers and suppliers, and engages in experience exchange at REACH conferences and other activities.

As a member of Fertilizers Europe and related national associations, Borealis takes part in discussions on draft regulations and their applications. In 2022, the relevant topics included details of the new fertilizer regulation. During 2022, the Group took part in advocacy activities for melamine. The EU melamine producers together with the Downstream User Sector organisations (EPF and Formacare) coordinated their response to the upcoming public consultation on the identification of melamine as a substance of very high concern.

Outlook

The Group's product stewardship objectives are to:

- support Borealis in maintaining its position as a leader in regulatory compliance, with a special focus in 2023 on implementing the long-awaited amendments to the food contact regulation for plastics;
- be an active stakeholder in the shaping of regulatory changes implementing the EU's Chemical Strategy for Sustainability;
- continue to execute the agreed EU REACH dossier improvement plan by 2026;
- drive sustainability, by minimising potential hazards and risks associated with Borealis' portfolio;
- continue to implement emerging legislation globally, such as chemical inventories and registration, and application-related legislation, with a special focus in 2023 on submitting about 70 registrations in Turkey;
- provide regulatory support for the implementation of the circular economy in the fields of mechanical and chemical recycling, and for the use of renewable feedstock; and
- extend regulatory service to Borealis' growth projects.

20230711119864

Circular Economy

Goals for 2022
Establish strategic co-operation with waste management and extended value chain players
Launch portfolio of hydrocarbon/olefin circular base chemicals
Progress towards commercialisation of proprietary recycling technologies
Undertake initiatives and long-term collaborations to further enhance the circular economy for plastics and chemicals

Key Achievements of 2022
Borealis and the Reclay Group established a new joint entity: Recelerate
Launched Borvida™, a portfolio of circular base chemicals
Awarded engineering design contract for establishment of 60 kilotonnes per year advanced mechanical (Borcycle™ M) recycling facility
Awarded EUR 20 million funding from Business Finland for the SPIRIT programme
Joined the Renewable Carbon Initiative

The incredible versatility of plastics has been a key ingredient in improving life and increasing living standards in today's world. Plastics make our life more efficient, convenient and safe. However, with a linear economic model, plastic products are made, used and eventually disposed of. Continuing with this model will lead to more plastic waste and environmental pollution, while putting pressure on the planet's limited resources.

The solution is to transition to a circular economy, where dependence on fossil feedstock is reduced and plastics are reused, recycled and made from renewable feedstock. A circular economy decouples economic growth from resource constraints, while reducing the leakage of waste into the environment. The circular economy will also reduce climate change, since the greenhouse gas emissions of products will be lowered compared to incineration by using mechanical and chemically recycled material, instead of virgin feedstock. The creation of a truly circular economy also has wider implications. It provides economic benefits to society by reducing the significant financial burden of ineffective waste management systems and pollution management, and it creates new business opportunities for Borealis, as well as employment at various stages of the value chain.

Borealis therefore has set itself the ambition to lead in this transformation and is intensively working towards offering an alternative to the linear make-use-dispose economy, across all its applications. To accelerate this journey, Borealis created Everminds™, a platform to accelerate action on circularity for plastic, to help inspire and create more impact for circular solutions.

Governance

To accelerate its transformation to a circular model, Borealis has created a dedicated department called Circular Economy Solutions and New Business Development. This group leads the execution of Borealis' circular economy strategy across defined focus areas, such as chemical recycling or design for recyclability, as well as supporting all other Borealis business areas in their industry-specific transformation.

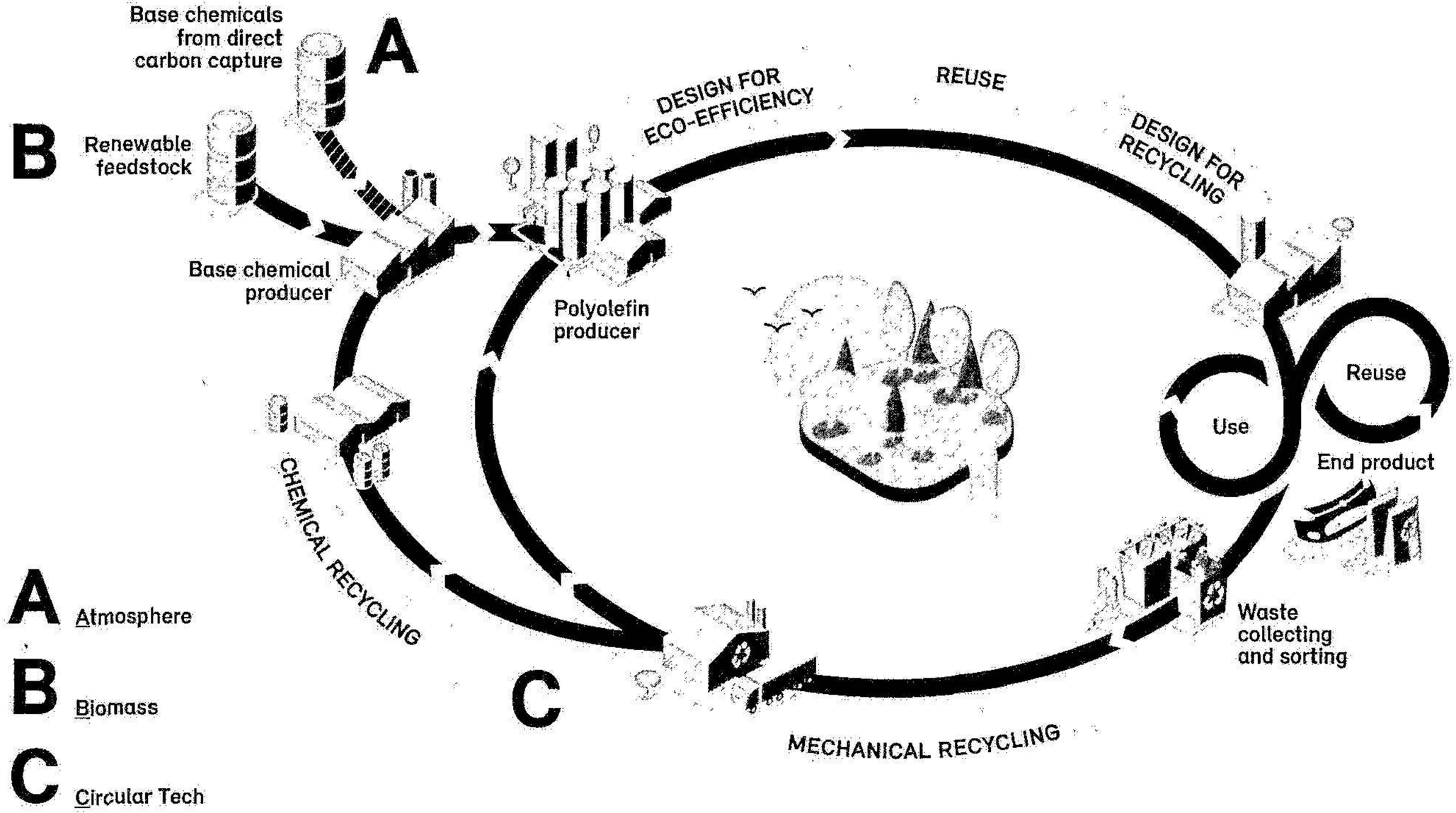
The Circular Economy Innovation Studio in Borealis' Innovation Headquarters in Linz, Austria, remains the Group's spearhead for technology and innovation, while the Digital Studio in Brussels, Belgium, is creating digital solutions for circularity. This setup enables Borealis to constantly learn and push innovation boundaries, while the business grows by offering customer-centric circular solutions, satisfying today's needs.

As a consequence of the OMV Group acquiring a majority stake in Borealis, the companies have joined forces to expedite the transition from a linear to a circular economy. Several circular economy areas, such as chemical recycling, are now being jointly developed.

Borealis' Integrated Approach to the Circular Economy

To transition to a truly circular and carbon-neutral economy, a variety of solutions are required to keep products circulating at their highest value, quality and utility over many lifetimes. Borealis therefore believes in using a full suite of carefully chosen technologies, in a complementary and cascading way, through the following hierarchy:

Fig. 35: **Borealis' integrated approach is embodied in the Circular Cascade Model**



- **Design for eco-efficiency:** adopting a design mindset from the start that sets the agenda for minimising the use of resources and maximising their lifetime value.
- **Reuse:** maximising the lifetime of products by establishing systems and business models for reuse.
- **Design for recyclability:** designing products that can be reused as well as collected, sorted and recycled, by making appropriate material and design choices.
- **Closing the loop:** using mechanical recycling first, to make products with the highest possible value and quality, and then with chemical recycling to valorise residual waste streams from mechanical recycling and mixed plastic waste streams which today cannot be mechanically recycled, or cannot be mechanically recycled efficiently, and would otherwise go to incineration or landfill.
- **Non-fossil feedstock:** moving towards carbon neutrality, the use of non-fossil feedstock such as renewables, and the development of carbon capture technologies for base chemicals production.

Targets and Performance

Borealis has defined a target for total production capacity for circular solutions of 0.6 million tonnes by 2025 and 1.8 million tonnes by 2030. In 2022, Borealis processed 117 kilotonnes of circular feedstock, up 21% compared to last year.

in kilotonnes	2022	2021
Total capacity for circular solutions established [1]	148	102
Processed circular feedstock [2]	117	98

1) Total capacity for circular solutions established means circular supply capability of polymers (e.g., polyolefins) and chemicals (e.g., olefins) based on recycled content and/or biobased/renewable feedstock. // 2) Total circular feedstock processed covers the actual input of feedstock for mechanical and chemical recycling, as well as renewable feedstock.

20230711119865

Activities 2022

Design for Eco-Efficiency

Borealis' foam business is a prime example of eco-efficient polyolefin solutions. This business line is used in industries such as packaging, sports, transport and construction, and helps facilitate the transition to a circular economy as it is especially suited to ultra-lightweight foam applications while being fully recyclable, thus enhancing resource saving.

Together with Bockatech EcoCore, which is a patented manufacturing technology, Borealis has developed a new lightweight cup to help the market switch from a single-use to multi-use packaging solution, thereby reducing packaging waste and carbon emissions. The development was showcased at three important value chain events in Europe and the Group signed its first contracts for three new applications with customers PACCOR and Jokey.

Reuse

Reuse is a core part of Borealis' integrated approach. Partnerships are vital for scaling up reuse activities and ensuring sustainable growth, and the Group strengthened its reuse commitment in 2022 by engaging in several collaborative projects with value chain partners.

After a successful pilot project in Borealis' sites in Belgium, in which 1,300,000 disposable cups were replaced by 40,000 reusable cups, the reusable cup system has been commercially rolled out in all Belgian Borealis sites since April 2022. By focusing on the optimal design of the reusable cups and minimising the environmental impact, an annual raw material reduction of 70% can be realised. The pilot project involved close co-operation with all partners of the reuse system.

Borealis and Red-Use On-the-Go have agreed a three-year collaboration to develop and implement a circular business model in a reuse environment, supported by digital solutions and mechanical recycling. The focus is on reuse models in the events, B2B services and take-away markets. The partners will gain insights into optimal reuse design and circular material flows. Moreover, by making the packaging smart with Radio Frequency Identification (RfiD) tags or QR codes, the partners can retrieve and analyse data, which is crucial for measuring the performance of a reuse system.

In addition, Borealis has joined the 4everPack consortium, a two-year research programme run by the Finnish institute VTT and funded by Business Finland. The project aims to replace the linear economy with a fully circular model, focusing on the reusable packaging value chain. Borealis will provide its know-how and expertise in innovative material and packaging design for the selected reuse systems.

Design for Recyclability

To promote Design for Recyclability, Borealis is actively promoting ten Codes of Conduct for polyolefin packaging designers. These are being incorporated into assessment methodologies for recyclability, for example, in future modulated Extended Producer Responsibility (EPR) guidelines for packaging. Borealis also applies its innovation activities to offer alternatives to materials and material combinations that are not recyclable today. In addition, the Group collaborates with strategic value chain partners to expand its range of monomaterial solutions.

In October 2022, Borealis announced the launch of the first polypropylene (PP) grades based on the Borstar® Nextension Technology, a step change in performance for tailor-made PP that delivers superior properties for cast and blown film. The Borstar Nextension Technology is a breakthrough innovation that will enable the development of novel and more circular solutions for a wide range of applications, especially in the packaging industry,

Borealis is a member of the Holy Grail 2.0 digital watermarking project, which has now grown to more than 170 members, including more than 40 brand owners and retailers. In 2022, the project completed successful tests for phase 2, in which the HG 2.0 prototype digital watermark was tested for speed, accuracy and detection efficiency, in combination with near infrared and visual spectrum detection. Following the successful trials at two locations, brand owners started to bring products to market with digital watermarks in Germany, France and Denmark.

Closing the Loop with Recycled Materials

To support the transition to a circular economy, Borealis is building up its Borcycle™ portfolio to meet growing demand for high-quality recyclate that helps producers and brand owners to meet environmental and regulatory challenges.

Borcycle transforms plastic-waste streams into value-adding, high-performance and versatile solutions for demanding applications, with the portfolio including Borcycle M, based on mechanical recycling processes, and Borcycle C, which uses chemical recycling technology. In 2022, Borealis announced an important step towards expanding its advanced mechanical recycling capabilities, with the award of a design contract to establish a commercial-scale plant in Schwechat, Austria. The design of the plant will be based on Borcycle M, Borealis' advanced mechanical technology and will be operational in 2025, with the capacity to produce over 60 kilotonnes of circular solutions and compounds per year.

Borcycle C provides an important alternative to energy recovery and is suitable for very demanding applications such as food contact materials. During the year, Borealis and ITC Packaging jointly developed a series of more-sustainable rigid packaging formats that are suitable for food contact. The products use resins from both the Borcycle C and the Bornewables™ portfolios.

Borealis' co-operation with OMV and its proprietary chemical recycling technology, ReOil®, is key to the Group's circular economy strategy. After two years of continuous production in its ReOil100 pilot plant, OMV started construction of the ReOil2000 demonstration plant in 2022, with a target to start production in the second half of 2023.

In April 2021, Borealis began a feasibility study for establishing a chemical recycling unit at its location in Stenungsund, Sweden. In 2022, Borealis selected the engineering company and technology providers. In addition, the Swedish Energy Agency granted new funding of EUR 5.1 million to support the final study.

Borealis began a partnership with Renasci in 2021, to work on the innovative Smart Chain Processing concept, including a plastic to pyrolysis oils process. The project successfully continued in 2022, with Borealis taking a minority share.

Non-fossil Feedstock

Bornewables Portfolio

The Bornewables portfolio of polyolefins made with renewable feedstock is the Group's key solution for lowering the carbon footprint of plastic and its customers' plastics applications. The life-cycle assessment published in 2021 showed that cradle-to-gate (meaning all the steps from sourcing raw materials to products leaving Borealis' production site), Bornewables can go beyond carbon neutrality and reduce greenhouse gas emissions by at least 120% compared to polyolefins produced with fossil-based feedstocks. This is possible while offering the same high-performance levels as virgin polyolefins and the ability to be recycled in the same way.

The Bornewables portfolio uses the International Sustainability & Carbon Certification (ISCC) PLUS mass balance certification. In 2022, the production location in Antwerp, Belgium, received ISCC PLUS certification, giving Borealis seven accredited European production locations. The Group therefore has an even broader production base for mass balanced products, such as the Bornewables and Borcycle C product ranges.

During 2022, Borealis continued to commercialise the Bornewables portfolio, including a range of significant developments launched at the K-Fair 2022 in Düsseldorf, Germany:

- MAM, a producer of baby products, used Bornewables to create a new soother and the packaging for it, which doubles as a steriliser box. This development demonstrates how eco-efficient design and circular polyolefins can substantially reduce the carbon footprint of a product, while guaranteeing its safety and superior quality.
- Borealis and Trexel, a leading expert in foaming injection and blow moulded parts, co-developed a new plastic bottle based on a grade from the Bornewables portfolio. The bottle is reusable and designed to be fully recyclable. The combination of Bornewables with Trexel's proprietary foaming process minimises the use of valuable raw materials and reduces energy consumed in production, so the bottle has a significantly lower CO_2 footprint.
- Borealis has worked with Finnish ice cream company Froneri and German packaging specialist PACCOR to produce packaging moulded from Bornewables for the Aino brand of ice cream. The innovative monomaterial packaging is 100% recyclable, requires no modifications to the partners' manufacturing and packaging lines and reduces their carbon footprints.
- The Group collaborated with pipe manufacturer Uponor, enabling it to use Bornewables to create the world's first cross-linked polyethylene (PE-X) pipes based on renewable feedstock. The pipes have an unprecedented carbon footprint reduction of up to 90% when compared to

20230711193866

conventional fossil-based PE-X pipes and mark a major step forward, to help companies in the building and construction industry achieve their sustainability targets. Nupi Industrie Italiane (NUPI) selected Bornewables for the next generation of its piping solutions for domestic plumbing and heating, as well as heating, ventilation and air conditioning (HVAC) systems designed to perform under higher stress conditions and temperatures. Using Bornewables enables NUPI to reduce the carbon footprint of its products and stay ahead of more stringent regulations in Italy, which may soon make renewable feedstock mandatory for plastic pipes.

Borvida Portfolio

In addition, in June 2022 Borealis introduced the Borvida portfolio of circular base chemicals such as ethylene, propylene, butene and phenol. The portfolio is both complementary to and the building block for Bornewables. It will initially comprise Borvida B, from non-food waste biomass, and Borvida C, from chemically recycled waste. In the future, the range will evolve to include Borvida A, sourced from atmospheric carbon capture.

Carbon as an Alternative Feedstock

Borealis is also exploring the development of carbon capture technologies and the use of carbon emissions as a primary raw material, to accelerate the move away from fossil-based resources. In this regard, Borealis' collaboration with Lanzatech, Technip Energies and On shoes has taken its first steps to capture and use atmospheric carbon monoxide as a feedstock.

In September 2022, the companies presented the world's first ever shoe bottom unit made from carbon emissions. CleanCloud™ is the result of five years of dedicated work, which began with finding the best possible partners. This collaborative approach is key to overcoming the challenges of developing this complex technology at a commercial scale.

Technology from LanzaTech captures carbon emitted from industrial sources such as steel mills and ferments it to liquid ethanol. The ethanol is then dehydrated to create ethylene, which Borealis polymerises to become EV (a copolymer of ethylene vinyl acetate), the versatile and lightweight material that On starts working with to create a performance foam for shoes.

Collaboration with the Value Chain: EverMinds™

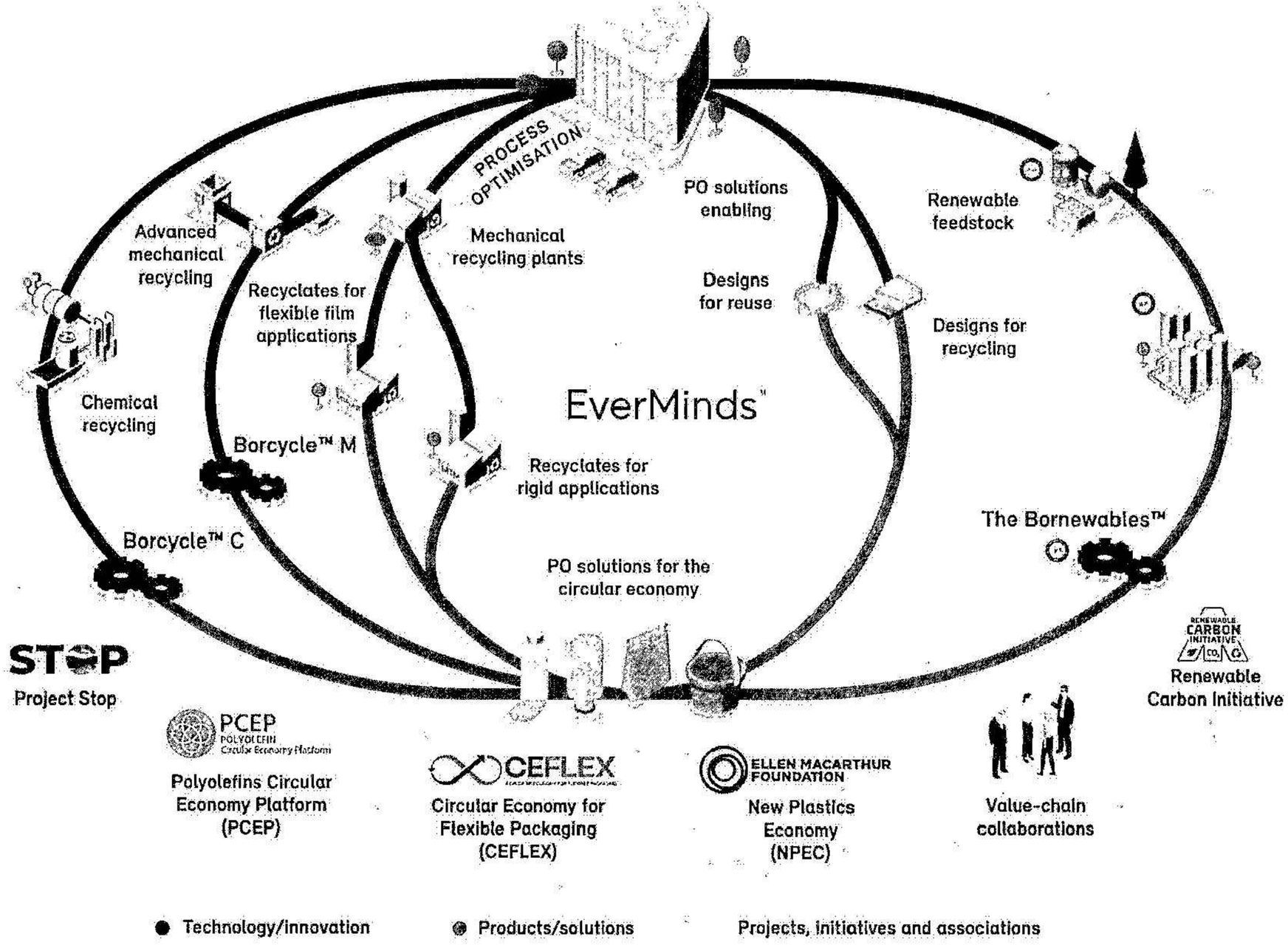
To expedite the circular transition of the polyolefins industry, it is imperative that the entire value chain collaborates. A circular polyolefins industry implies that all products are designed for recyclability, while quality waste streams become increasingly available for recycling operations. Higher waste collection rates and further improvements to the efficiency of waste sorting are prerequisites to advancing the Group's recycling agenda. The willingness of converters and brand owners to value high percentages of recycled content in their products is equally important. All Borealis initiatives which demonstrate the Group's progress in the circular economy are positioned under the EverMinds platform. The platform stands for accelerating and celebrating action in the circular economy based on partnerships and value chain co-operation.

During 2022, Borealis hosted 17 live webinars around sustainability and circular economy topics. The webinars were tailormade for all industry clusters and targeted customers and value chain partners. Examples of the topics covered included Bornewables for use in appliances, healthcare, foam, automotive, energy, infrastructure and food packaging applications. Most sessions were either hosted jointly with Borouge or with guest speakers from different companies and organisations, including ISCC, Beta-Gamma-Service GmbH, MARS, ENGEL, Oerlikon HRSflow and Reicofil. A cross-industry session about how to accelerate the transition towards a circular net zero business was hosted for more than 1,000 attendees. On average, each webinar had more than 500 registrations and an attendance rate of 50%. Recordings of the live sessions are offered to the target groups on-demand.

In February 2022, Borealis received a positive opinion on the commitment of EUR 20 million of funding from Business Finland, to launch the innovative "Sustainable Plastics Industry Transformation" or SPIRIT programme. SPIRIT aims to drive the transformation of the plastics industry in Finland by replacing conventional fossil fuel-based feedstocks with renewably sourced ones, developing technologies and processes for mechanical and chemical recycling of plastics, and decarbonising production operations through electrification, as well as the use of hydrogen and renewable energy sources.

Borealis has joined the Renewable Carbon Initiative, which aims to support and accelerate the transition from fossil

Fig. 36: **Overview of Borealis' Circular Economy landscape**



carbon to renewable carbon for all organic chemicals and materials. The initiative looks to bring stakeholders together, provide information and shape policy, to strive for a climate-neutral circular economy.

Grabher Group, a leading manufacturer of high-tech textiles, manufactures FFP2 face masks containing fully recyclable meltblown polypropylene supplied by Borealis. As face masks are quickly disposed of, many end up in landfill or as litter in the environment. To drive circularity, Grabher has started a novel collect-and-recycle scheme for used face masks, which turns them into new value-added products such as oil absorption fabrics.

Borealis and the Reclay Group established a new joint entity, called Recelerate. Combining the waste management expertise of Reclay and the high-quality recycling capabilities of Borealis, Recelerate is powered by a smart systems-thinking approach to ensure more post-consumer lightweight packaging is sorted and recycled into high-quality materials. Such an approach will offer brand owners the insights from the latest material developments and practical recycling expertise, and combine that with the EPR licensing capabilities of the Reclay Group, rewarding optimal packaging design for the future.

Outlook

In 2023, Borealis will focus on the commercial ramping up of its circular portfolio and make further investments in mechanical and chemical production capacities, to move closer to the targets for 2025 and 2030. The Group will continue to support technology development for better sorting and recycling solutions and explore alternative business models such as closed-loop systems, and has an aspiration to publish long-term targets for its circular transition journey.

20230713190857

Energy & Climate

Goals for 2022	Key Achievements of 2022
Emit less than 1,527 kilotonnes CO_2e under the EU Emissions Trading System (ETS) for Hydrocarbons & Energy (HC&E) and Polyolefins (PO) [1] locations and 2,996 kilotonnes CO_2e for Fertilizers, Melamine and Technical Nitrogen Products (TEN)	CO_2e emissions accounted for by the EU ETS system of 1,346 kilotonnes CO_2e for HC&E and PO [2]. Fertilizers, Melamine and TEN had ETS emissions of 2,022 kilotonnes CO_2e and Rosier of 8.1 kilotonnes CO_2e.
Improve energy performance in all business segments Achieve energy performance of: – 3.80 MWh primary energy (prim)/tonne in HC&E – 1.30 MWh primary energy (prim)/tonne in PO – 1.12 MWh prim/tonne in Fertilizers, Melamine and TEN	– HC&E: Energy performance 3.84 MWh/tonne compared to target of 3.80 MWh prim/tonne – PO: Energy performance 1.36 MWh/tonne compared to target of 1.30 MWh prim/tonne – Fertilizers, Melamine and TEN: Energy performance 1.24 MWh/tonne compared to target of 1.12 MWh prim/tonne
Increase share of energy from renewable sources (HC&E and PO only)	28% renewable electricity sourced towards the ambition of 100% by 2030.
Develop an implementation roadmap for the climate strategy and improve related carbon governance for the HC&E and PO businesses	– Climate strategy communicated internally and externally via multiple channels – Established cross-functional Climate Strategy Coordination team, to drive carbon management across the Group – Mapped current and planned initiatives to reduce greenhouse gas (GHG) emissions and assessed alignment with climate science – Developed digital tool to simulate the impact of Borealis' projects on GHG emissions to support decision-making – Achieved third-party validation of Scope 1, 2 and 3 GHG emissions

The evolution of industry is having a major impact on the natural greenhouse effect. Over the last century, the burning of fossil fuels, such as coal and oil, has increased the concentration of atmospheric greenhouse gases (GHG). The clearing of land for agriculture, industry and other human activities has also contributed to that increase. These changes to the atmospheric GHG composition are having major effects on the environment and society. Most importantly, our planet will become warmer, more evaporation and precipitation will occur, while the sea level will rise.

The COP 21 Paris Agreement calls on all countries to keep the global temperature increase to well below 2°C and to pursue efforts to limit the increase to 1.5°C above pre-industrial levels. At COP 26, which took place in 2021, countries made collective commitments to curb methane emissions, to halt and reverse forest loss, align the finance sector with net zero by 2050, accelerate the phase-out of coal and end international financing for fossil fuels.

As one of the largest and most diversified industries in Europe, and as a significant emitter of GHGs, the chemical industry plays an important role in helping to achieve long-term GHG emission reductions in a European and global context. To understand a company's impact on climate change, an emissions inventory or corporate carbon footprint can be calculated. The Greenhouse Gas Protocol, which is a globally accepted methodology for calculating GHG emissions, divides corporate emissions into three distinct scopes:

- Scope 1: direct emissions that occur at the source and are controlled by the reporting company
- Scope 2: emissions stemming from the generation of energy purchased by the company
- Scope 3: all other indirect emissions occurring in a company's value chain

This framework guides Borealis, and many other companies, in pursuing climate targets in a meaningful way.

1) 2) Excluding Rosier

Governance
In 2022, Borealis established a Climate Strategy Coordination team to drive its transformation to a net-zero business. The team is led by the Director Sustainability and Public Affairs, with the CEO as sponsor and the Executive Board as its Steering Committee. As sustainability is a core part of the Group Strategy, the topic is integrated into almost all areas of the organisation. The team is therefore cross-functional and brings together expertise and initiatives from throughout the Group in a focused way. The team is structured according to Borealis' emissions inventory and hotspots identified in the Group's Scope 1, 2 and 3 emissions, ensuring that the people responsible for these areas are connected and can drive change in a harmonised way, to maximise the impact for the Group. This approach also fosters transparency and ownership, to enable Borealis to effectively execute its climate strategy.

The Climate Strategy Coordination team reports progress to the Responsible Care Committee and the Energy & CO_2 Committee. → chapter Corporate Governance, p. 56

Within Fertilizers, Melamine and TEN, energy and GHG emissions are governed by the Energy & CO_2 Committee, which is headed by the business's CEO. To align the energy management system across the business, Fertilizers, Melamine and TEN has an energy management team with a presence in each location. The Energy & Plant Optimisation Team is working to identify the business's full GHG reduction potential and create a roadmap to achieve it. The roadmap is part of the top ten priorities in the business's 2025 strategy and is overseen by its management team.

Borealis' Climate Strategy
PO and HC&E
Climate change mitigation and economic success must go hand in hand, to ensure that the innovations needed for global climate protection continue to be developed. Whilst it is essential for the Group to reduce emissions in its operations, Borealis is also contributing to avoiding and reducing value chain emissions, during the life cycle of its products.

Borealis is fully committed to reducing the carbon footprint of its operations and to achieving net-zero operations by 2050 or sooner. In 2022, Borealis launched its Group Strategy 2030, which stated its ambition to:

- reduce total Scope 1 and 2 emissions to 2.6 million tonnes by 2025 and to less than 2 million tonnes by 2030; and
- source 40% of electricity from renewable sources by 2025 and 100% by 2030.

The Scope 1 and 2 emissions target corresponds to a reduction of 50% in 2025 and 60% in 2030, against its base year emissions (2019), with the reduction including the divestment of Fertilizers, Melamine and TEN.

The Group has identified its preferred technologies for mitigating Scope 1 and 2 emissions in the period to 2030, with the selection based on the required product quality, the supply of feedstock, market demand and economic and technological feasibility. Depending on the location, market, the availability of end-of-life products and the legislative framework, the options may include feedstock derived from biogenic, mechanically or chemically recycled plastics and capturing CO_2.

A real step change in Scope 3 emissions can only be achieved through co-operation across the whole value chain and therefore Borealis is working with its value chain partners towards this goal.

Increasing Renewable Electricity for PO and HC&E operations
The 2030 renewable energy goal is an important part of the journey towards climate neutrality by 2050 or sooner. To achieve the goal, Borealis will use a combination of on-site investments, where possible, and long-term contracts known as power purchase agreements (PPAs). The projects targeted are as close as possible to the Borealis locations where the power is consumed. Borealis believes that more renewable power will be needed if industries such as petrochemicals are to electrify further (→ chapter Procurement of Feedstock, Electricity and Utilities, p. 145).

Driving Energy Efficiency
Energy consumption accounts for a significant proportion of Borealis' total production costs. Borealis' current ambition is to implement energy efficiency improvements equal to 20% of the absolute primary energy consumption in 2015, by 2030. Borealis sees energy efficiency as a cornerstone of its climate ambition, in line with the energy efficiency first principle, which is a priority for the EU and is supported by EU Commission recommendation (EU) 2021/1749.

20230711119868

Actions to improve energy efficiency fall into one of three levels, known as levers, for increasing optimisation.
The three levels of actions are as follows:
- Lever 1: As a first step, Borealis is implementing tools to run its plants as optimally as possible, such as introducing an Energy Trendboard, which helps operators to continuously focus on energy consumption.
- Lever 2: Running plants most effectively requires continual optimisation of plant design and control, and the implementation of improvement projects to remove potential barriers to optimisation.
- Lever 3: Another way to increase energy efficiency is to implement new technologies during periodic production line revamps and to seek energy integration through industrial clusters.

The base for any energy efficiency improvement is to implement and comply with ISO 50001, combined with continuous leadership engagement from key teams. Borealis' initiatives include energy teams at each production location that drive the location's energy planning process, increase awareness, act as a forum for energy issues and ensure ISO 50001 compliance. To progress beyond this baseline, all Borealis locations run energy screening programmes every four years, often with third-party support, to evaluate their energy performance and identify improvement opportunities.

To identify ways to improve energy efficiency, Borealis builds on the outcome of the energy assessments, focusing on the impact of energy and CO_2 prices. Subsequent actions are prioritised based on their benefit to the planet, in the form of environmental benefits, people (for example, through improved working conditions) and profit (such as the ability to generate cost savings). The prioritisation is also based on factors such as a risk and opportunity assessment, including social, environmental and economic aspects, total cost of ownership, internal rate of return and organisational capacity.

Due to the divestment of Fertilizers, Melamine and TEN and the ambition to have 100% renewable power by 2030, Borealis is investigating how to revise the Group's current overall energy ambition, to ensure it is in line with Borealis' renewable energy and climate ambitions. A Group-wide energy assessment is ongoing to provide insights for this exercise.

Driving Transformation Towards a Circular Economy
To achieve its climate ambition, Borealis is also increasing its capacities for circular economy solutions, gradually introducing renewable and recycled feedstock for its own production → chapter Circular Economy, p. 119, → chapter Procurement of Feedstock, Electricity and Utilities, p. 145.

Sustainable Polyolefin Products and Solutions
Borealis also plays a role in solving society's climate challenges, by providing sustainable polyolefin solutions. For example:
- Society's conversion to renewable power needs a high level of interconnectivity in the electricity grid over longer distances. Borealis' Borlink™ technology ensures reliable power transportation from wind and other renewable energy sources → chapter Innovation, p. 90.
- Borealis also enables the transportation of renewable energy by providing a high-voltage direct current (HVDC) cable compound based on its Borlink technology, which is being used in cross-linked polyethylene (XLPE) power cables that qualified for the tender for the "German Corridor projects".
- Borealis' advanced photovoltaic films (Quentys™) optimise the production of renewable solar energy.
- Plastics are raw materials for efficient electric vehicle system components and reduce emissions in transportation by enabling lightweight components for vehicles.

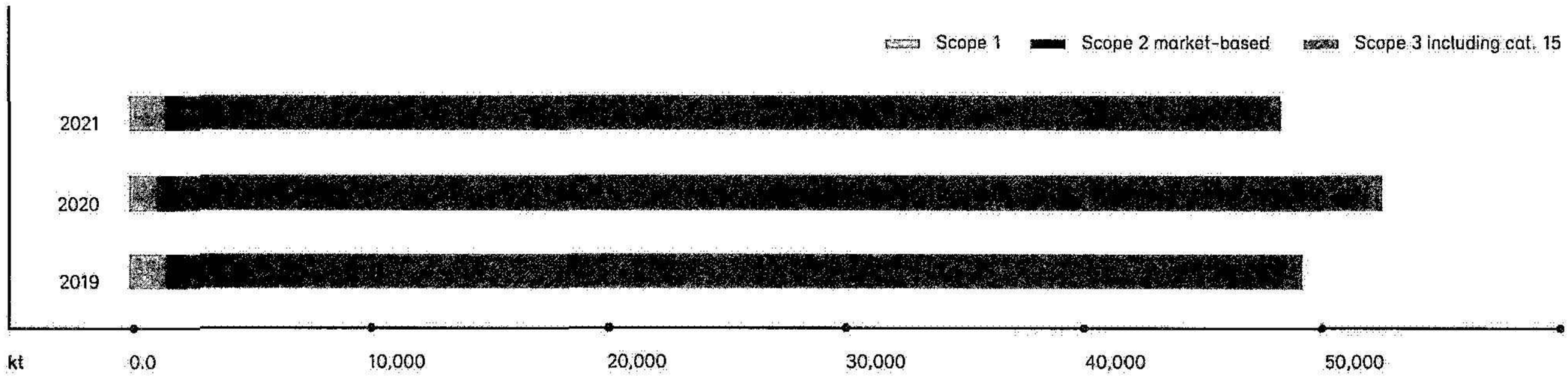
Fertilizers, Melamine and TEN
Fertilizers, Melamine and TEN is committed to Borealis' goals for climate neutrality by 2050. For example, the business is:
- implementing roadmaps to reduce GHG emissions;
- investing to improve energy efficiency, under the current capital expenditure framework;
- pursuing cross-industry partnerships for breakthrough decarbonisation projects that are part of EU funding schedules, such as the IPCEI (Important Projects of Common European Interest) on hydrogen, for the locations in Linz (Austria) and Ottmarsheim (France);
- conducting a study of carbon capture and storage, with other companies, to decarbonise hydrogen for ammonia; and
- developing digital tools to support end users' needs-based and precise application of products, thereby making more efficient use of resources.

Measurement and Calculation of Borealis' Carbon Footprint
Borealis calculates its corporate carbon footprint following the GHG Protocol and includes EU ETS emissions. Borealis uses a broad range of emission factors, which are a means to calculate the GHG emissions for a given source. Each EU member state has its own emission factors, so natural gas use in Austria, for example, would have the specific Austrian emission factor applied to it. Other emission factors are standard factors from scientific literature or inventories or are measured by a certified laboratory. All EU ETS emission factors are permitted and approved by the relevant authorities.

The Group reports:
- the previous year's Scope 1 and 2 location-based emissions;
- Scope 2 market-based emissions prior to that; and
- Scope 3 emissions for the year prior to that.

Borealis uses 2019 as the base year for its GHG targets. This will be adapted when needed, according to the GHG Protocol accounting rules. As a result of OMV's 75% ownership of Borealis, the Group's emissions are also included in the OMV Group emissions inventory and base year emissions. Any decision to shift the base year emissions will therefore be affected by the materiality of the change versus the OMV Group emissions. While under the Protocol accounting rules, the divestment of Fertilizers, Melamine and TEN should be seen as a base year adjustment, the operations and emissions will no longer be part of Borealis' inventory. Borealis has 2019 as its base year for emissions because the majority of its assets were operating for the full year, pre-pandemic. It is also in line with the base year of OMV Group, which owns approximately 75% of Borealis. This base year is set for all scopes.

Fig. 37: **Borealis HC&E and PO GHG according to Greenhouse Gas Protocol for 2019–2021** [1) 2)]



GHG emissions in kilotonnes (kt) CO_2e	2022 [1)]	2021 [2)]	2020 [2)]	2019 [2)]
Scope 1	1,383	1,556	1,181	1,569
Scope 2 market-based	–	799	767	864
Scope 2 location-based	565	591	631	632
Scope 3 upstream	–	10,391	10,413	10,227
Scope 3 downstream (excluding cat 15)	–	14,374	13,491	14,119
Scope 3 excluding cat. 15	–	24,765	23,904	24,346
Scope 3 including cat. 15	–	45,377	50,514	48,848

1) At the time of publication of this report, no final data is available for Scope 2 market-based and Scope 3 emissions in 2022. The data includes the emissions of Rosier (Scope 1 = 14.6 kt CO_2e, Scope 2 = 1.5 kt CO_2e). // 2) Fertilizers, Melamine and TEN and Rosier excluded. Small shifts in emissions occured due to minor updates, corrections and final EU-ETS verifications by authorities of member states.

20230711119869

Borealis' Scope 1 and 2 calculations include all companies where the Group owns more than 50% and has operational control. Emissions of companies not under operational control or with less than 50% ownership are included in Scope 3.15 (investments).

Performance 2022

Scope 1 and EU ETS

Scope 1 involves direct emissions from Borealis' sites and includes internally generated power and steam (before furnaces) and flaring, which make up a large part of Borealis' Scope 1 emissions. Borealis takes into account all greenhouse gases in the Scope 1 [1], calculation as defined in the GHG protocol [2]. Borealis does not report direct biogenic CO_2 emissions as they were negligible in 2022. Biomass in the feedstock is mostly allocated to the product using ISCC mass balancing.

In 2022, Borealis produced 1,346 [3] kilotonnes of EU ETS CO_2 equivalent emissions. This is less than the 1,527 kilotonnes in 2021 due to reduced production as a result of COVID-19 and the energy crisis resulting from the war in Ukraine. For 2023, Borealis has set a target for the HC&E and PO divisions to emit no more than 1,436 kilotonnes of EU ETS CO_2 equivalent emissions.

Fertilizers, Melamine and TEN's CO_2 equivalent emissions in 2022 decreased to 2,022 kilotonnes versus 2,325 kilotonnes in 2021, due to emission reduction projects and lower production.

Scope 2

Scope 2 emissions involve indirect CO_2 equivalent emissions caused by Borealis' consumption of externally generated electricity, external steam and energy that the Group purchases and brings into its facilities from other sources. It is expressed as market-based or location-based emissions, as defined in the Greenhouse Gas Protocol.

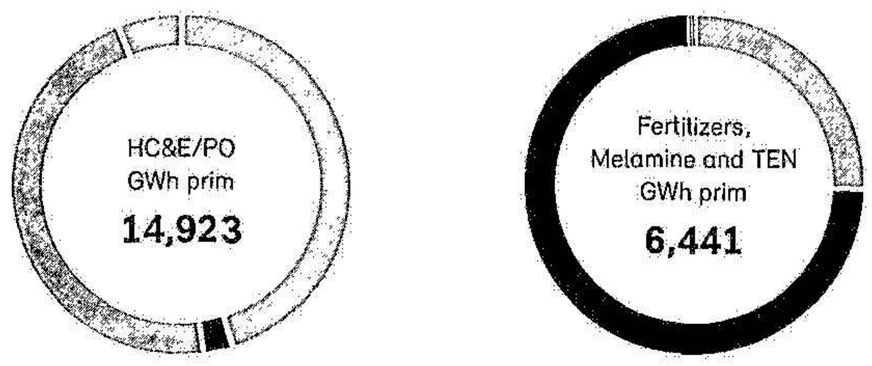
Borealis' main sources of energy are electricity, heat (primarily from steam), natural gas and fuel gas. Borealis documents, tracks and follows up on all sources of energy each month, for every location.

Data on all of Borealis' energy consumption is collected as it is metered, then converted to the equivalent in primary energy using the Group's environmental data management tool. This allows Borealis to summarise different energy sources using one consumption figure, enabling comparability across plants and production lines. Borealis aims in the future to track energy consumption and the realised energy improvement projects both on primary and final energy, which is the actual energy consumed. Ensuring transparency helps the Group to identify energy improvement opportunities that are in line with its climate strategy, which is essential for continuous reduction of emissions. Some emissions from energy (Scope 2 – market-based) can only be estimated when data from suppliers are final, at the end of Q1 of the following year. Borealis therefore finalises its corporate carbon footprint for the previous year, by the end of June. ETS emissions are subject to external verification by EU member states.

Scope 2 emissions (location-based) for HC&E and PO in 2022 were 563 kilotonnes, which is 4.57% less than in 2021. Scope 2 (market-based) emissions in 2021 were 799 kilotonnes CO_2, which was more than the 767 kilotonnes in 2020. Some of the increase in 2021 compared to 2020 was due to changes in the residual power emission factors in some member states and sourcing of power from waste incineration, despite the increased sourcing of renewable energy (21.4% in 2021 versus 10.5% in 2020). In 2022, HC&E and PO sourced approximately 28.0% of renewable power.

In 2022, Borealis' total energy consumption was 21,364 GWh Prim, compared to 21,730 GWh Prim in 2021,

Fig. 38: **Total energy consumption per source in 2022**

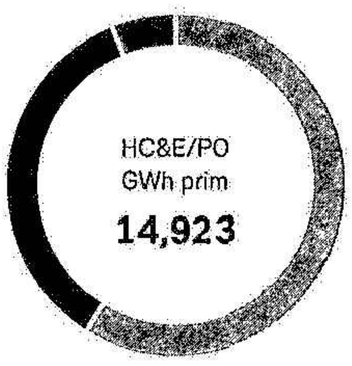


	HC&E/PO [1]	Fertilizers, Melamine and TEN
Electricity	45.0%	25.6%
Natural gas	3.0%	74.0%
Fuel gas	46.0%	0.3%
Steam	6.0%	0.1%

1) Including Rosier

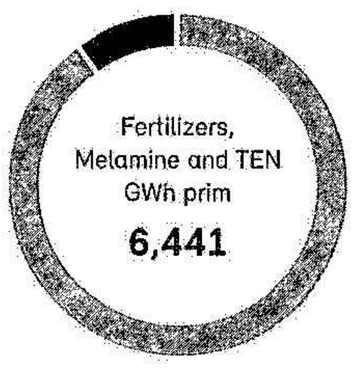
1) Emissions of company cars are not reported for 2022. Borealis is assessing how to report them in future // 2) CO_2, N_2O, SF_6, HFC, PCF, CH_4 // 3) 8.1 kilotonnes of CO_2e in 2022 from Rosier operation not included.

Fig. 39: **Total energy consumption per product group in 2022**



HC&E/PO

Hydrocarbons	59%
Polyolefins	35%
Infrastructure, offices, warehouses, research, Rosier	6%



Fertilizers, Melamine and TEN

Fertilizers, Melamine and TEN	90%
Infrastructure, offices, warehouses, research, Rosier	10%

of which 14,923 GWh Prim was for PO and HC&E [1] and 6,441 GWh Prim for Fertilizers, Melamine and TEN.

This represents a decrease of 1,221 GWh prim for PO and HC&E [2] due to reduced operations as a result of the energy crisis and an increse of 855 GWh prim for Fertilizers, Melamine and TEN.

In total, 251 GWh Prim of energy in the form of steam or heat were sold (61 GWh Prim for PO and HC&E, and 190 GWh Prim for Fertilizers, Melamine and TEN).

Energy efficiency improvement is expressed as the sum of the improvement measures of projects that are individually evaluated compared to business as usual. To evaluate the objective, this amount is divided by the absolute energy consumption in 2015 (24 TWh primary energy). Borealis has implemented projects that will achieve 10.35 % of the 20% reduction by 2030. Consequently, 1,916 GWh of primary energy savings were achieved by the end of 2022. The reduction in energy consumption to the end of 2021 included improvements achieved in the Fertilizers, Melamine and TEN division. From 2022, only the achievements of HC&E and PO are added to the total reduction in energy consumption and are divided by their baseline energy consumption. The reported achievement is then normalised to the original ambition.

Fig. 40: **Total fuel consumption per source in 2022**

in GWh Prim	HC&E/PO [1]	Fertilizers, Melamine and TEN
Total fuel consumption from non-renewable sources	7,282	4,822
Total fuel consumption from renewable sources	0	0

1) Including Rosier

Non-renewable resources [2]***:*** *The amount of commercial liquid fuels used is insignificant. Fuels and steam consumed are mainly used for processes. Data for cooling consumption are currently not available.*

Renewable power sourcing ambition *is expressed in % of the power used in the HC&E and PO businesses that is from renewable sources such as wind, solar, biomass or hydro and connected directly to Borealis' internal grids or sourced on the European markets through power purchase agreements (PPAs), always covered by guarantees of origin. Borealis intends to reach 100% by 2030 and explores co-ownership of renewable power assets.*

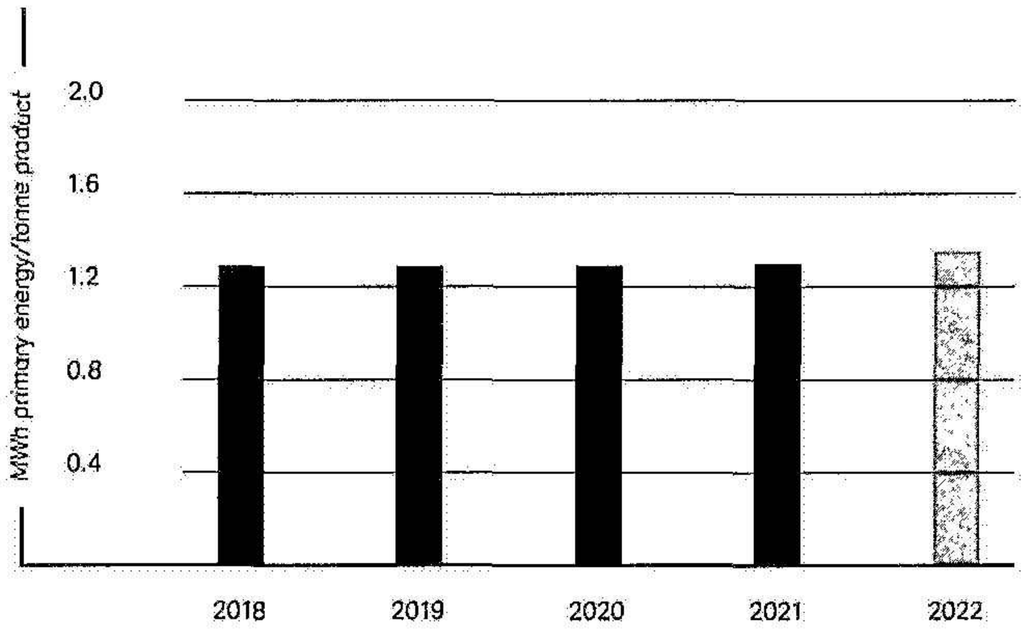
Final energy consumption of PO and HC&E [3]***:*** *2,681 GWh electricity, 845 GWh steam, 6,826 GWh fuel gas and 456 GWh natural gas. Energy consumption is converted into primary energy as follows: fuels (including natural gas): 100% conversion to energy, factor 1; steam 90% boiler efficiency, factor 1.11; electricity: 40% efficiency, factor 2.5.*

Final energy consumption of Fertilizers, Melamine and TEN: *660 GWh electricity, 6.4 GWh steam, 19.2 GWh fuel gas and 4,803 GWh natural gas. Energy consumption is converted into primary energy as follows: fuels (including natural gas): 100% conversion to energy, factor 1; steam 90% boiler efficiency, factor 1.11; electricity: 40% efficiency, factor 2.5.*

1) 2) 3) Including Rosier

20230711119870

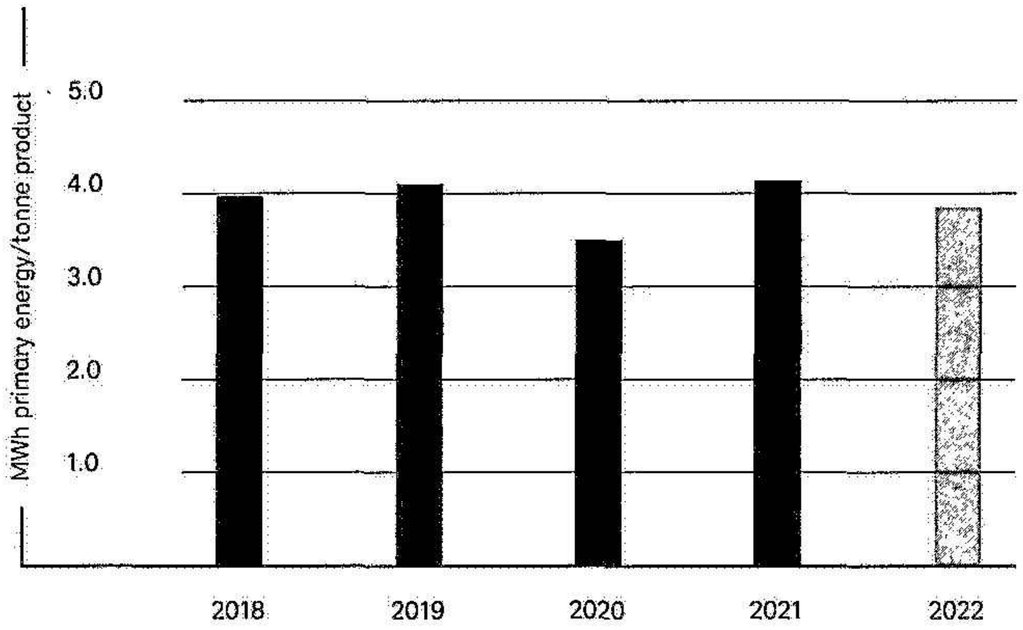
Fig. 41: **Polyolefins production energy intensity 2018–2022** [1]



Year	Polyolefins actual
2018	1.284
2019	1.283
2020	1.286
2021	1.300
2022	1.362

1) Polyolefin production intensity is referenced to sum of all assets producing plastics.

Fig. 42: **Hydrocarbons production energy intensity 2018–2022** [1]



Year	Hydrocarbons actual
2018	3.960
2019	4.088
2020	3.507
2021	4.121
2022	3.836

1) Hydrocarbon production intensity is referenced to the sum of production of ethylene, propylene and aromatics from all assets.

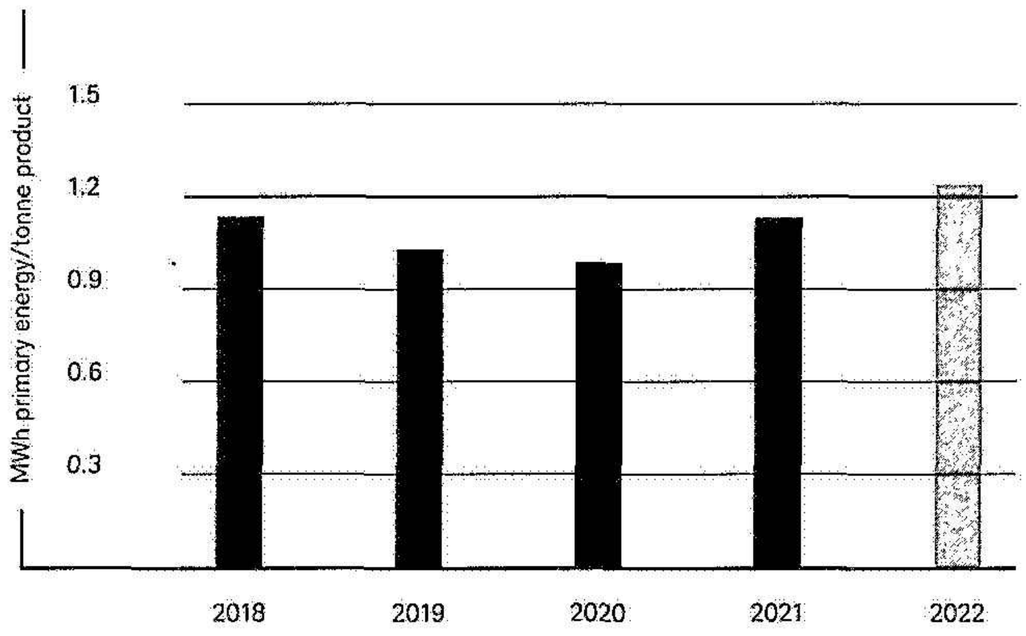
Figures 39 and 40 show the activities for which Borealis used energy. Figures 41, 42 and 43 show the Group's energy intensity since it established its Energy Roadmap for each business unit.

Scope 3

Scope 3 emissions include other indirect emissions in the value chain, both downstream and upstream. For Borealis, the following Scope 3 categories are material and therefore included in the calculation under the Greenhouse Gas Protocol:

- 1 Purchased goods and services
- 2 Capital goods
- 3 Fuel and energy-related activities not included in Scope 1 or 2
- 4 Upstream transportation and distribution
- 5 Waste generated in operations
- 10 Processing of sold products
- 11 Use of sold products
- 12 End-of-life treatment of sold products
- 15 Investments

Fig. 43: **Fertilizers, Melamine and TEN production energy intensity 2018–2022**



Year	Fertilizers, Melamine and TEN actual
2018	1.136
2019	1.028
2020	0.999
2021	1.172
2022	1.240

Categories 6 to 9, 13 and 14 are not included in the calculation, as they are not material for Borealis.

As Borealis transitions to being climate neutral by 2050, circular and bio-based materials will be key levers to reduce GHG emissions. The Group has therefore opted to calculate Scope 3 category 12 (end-of-life treatment of sold products), based on the recycled and biogenic content of the products it produces. By taking this conservative and fully transparent approach, Borealis is assuming the burden of recycling and emissions in its own circular transition.

Borealis uses general mass and spend-based emissions factors to calculate Scope 3 emissions. In future reporting, the Group will strive to include supplier and customer-based emission factors, when they become available.

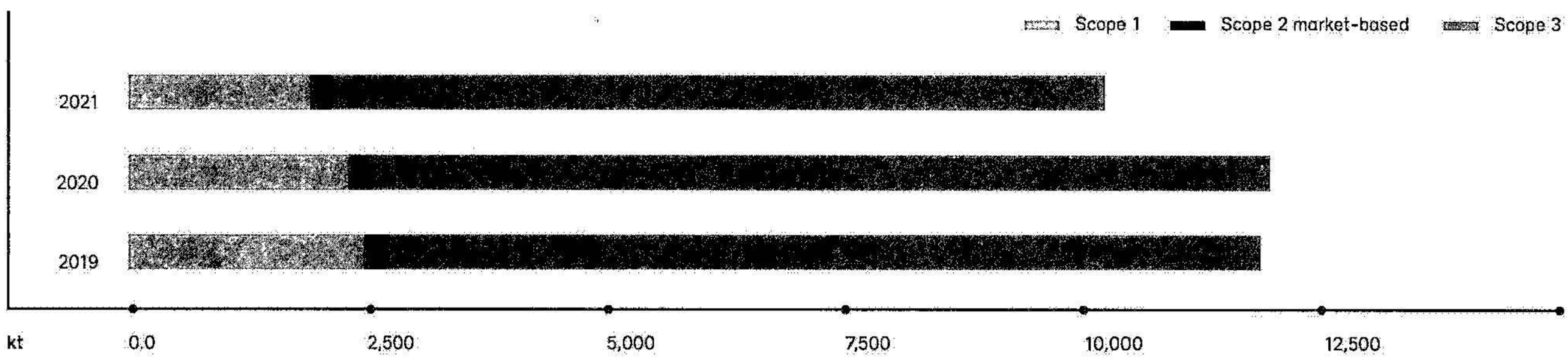
A major part of Borealis' Scope 3 emissions falls into category 15 (investments). This includes the Group's stake in Borouge, as a result of which 40% of Borouge's Scope 1, 2 and 3 emissions are taken into account. Borouge's Scope 3 emissions are extrapolated by using the same ratio of Scope 3 to the total of Scopes 1 and 2 as Borealis, while excluding category 15. A similar approach is taken for Borealis' financial stake in Baystar™ (Texas, US).

Activities 2022

In 2022, Borealis continued its engagement in the following key strategic partnerships:

- Antwerp@C, a consortium with the Port of Antwerp (Belgium) and seven leading chemical and energy companies. The consortium is investigating the building of CO_2 infrastructure in the port, which is one of Europe's larger integrated energy and chemicals clusters. This infrastructure could support carbon capture, utilisation and storage (CCUS) applications and reduce the CO_2 emissions within the port by half between now and 2030.
- The Cracker of the Future Consortium, in conjunction with four petrochemical companies, which is investigating how to use renewable energy instead of fossil-based energy to operate steam crackers. These crackers are used to produce base chemicals that are primarily turned into plastics and they represent the industry's principal opportunity for reducing GHG emissions. The companies

Fig. 44: **Borealis Fertilizers, Melamine and TEN greenhouse gas emissions according to Greenhouse Gas Protocol for 2019–2021** [1) 2)]



GHG emissions in kilotonnes (kt) CO_2e	2022 [1) 2)]	2021 [2)]	2020 [2)]	2019 [2)]
Scope 1	1,540	1,903	2,319	2,500
Scope 2 market-based	–	225	237	237
Scope 2 location-based	133	166	188	192
Scope 3	–	8,103	9,399	9,183

1) At the time of publication of this report, no final data is available for Scope 2 market-based and Scope 3 emissions in 2021. Data excluding Rosier. // 2) In 2021 and 2020, double counting occurred in the area of sales of CO_2 as a product to third parties. The emissions were included in both the Scope 1 ETS and Scope 3.11 use phase emissions. This was adjusted in this year's reporting period so that the emissions only occur in Scope 3.11 use phase. Scope 1 emissions over 2019 to 2021 corrected for double counting. Scope 3 emissions corrected over 2020 to 2021 due to double counting.

20230711l1987

Fig. 45: **Reduction of GHG emissions** [1]

tonnes CO_2 equivalent	HC&E/PO [2]	Fertilizers, Melamine and TEN
GHG emissions reduced	8,886	4,959

1) Reductions occured directly as a result of reduction initiatives. // 2) All Kyoto gases are included. Base year: 2019 (most representative year before COVID). Reductions took place in scope 1 and 2. Only marginal reductions in scope 3 by small amount of recycling and bio-based feedstock.

Fig. 46: **GHG emission intensity**

GHG emissions per total production	HC&E/PO [1]	Fertilizers, Melamine and TEN [2]
GHG emissions intensity ratio	0.204	0.324

1) Total production includes PO, HC&E, COM (compounding activities) and CES. Scope 1 and scope 2 (location-based) are included in the intensity ratio. All Kyoto gases are included. // 2) Total production includes Fertilizers, Melamine and TEN. Scope 1 and scope 2 (location-based) are included in the intensity ratio. All Kyoto gases are included.

have agreed to invest in R&D and knowledge sharing, as they assess the possibility of transitioning their base chemical production to renewable electricity.

In 2022, Borealis initiated a number of activities, including:

- Creating a team in HC&E to focus on the future footprint of the assets with the highest Scope 1 and 2 emissions. The team analyses and compares technical solutions to reduce the assets' footprint and takes into account actions and innovations inside and outside the Group.
- Developing robust internal pricing for CO_2 emissions in PO and HC&E. Together with the regulatory and policy framework, this will enable sustainable investments and help make the transition to net zero possible.
- Extending the Group's compliance with the energy management standard ISO 50001:2018. A series of internal audits was undertaken to prepare for certification of the energy management system.
- Improving the extruder in Burghausen (Germany), which has an expected saving of 8 GWh/year primary energy.
- Reducing natural gas consumption in the regenerative thermal oxidisers in Linz Polyolefins, which will have an expected primary energy saving of 4.3 GWh/year.
- Increasing the share of renewable energy consumed from 21.2% in 2021 to approximately 28% in 2022, as well as signing PPAs to lock in renewable energy supply for future years (→ chapter Procurement of Feedstock, Electricity and Utilities, p. 145).
- Together with VERBUND, erecting a new photovoltaic park to supply power to Borealis' operations in Schwechat, Austria. The construction phase began in May 2022 and was completed by the end of 2022. It is projected to reach around 4.7 megawatt-peak (MWp), with an annual energy yield of around 5.6 gigawatt hours (GWh). This is roughly comparable to the amount of energy consumed annually by 1,400 Austrian households.

Scope 3 reduction actions included:

- The carbon capture and utilisation (CCU) initiative "Carbon2ProductAustria" (C2PAT) is currently in the concept development phase for an industrial-scale installation. The overall aim is to produce high-quality products from "unavoidable" CO_2 emissions and green hydrogen. The project is planned to serve as a blueprint for other industries in the future, especially for the "hard-to-abate" sectors. It will contribute to Borealis' circularity journey and is a next step towards more independence from fossil raw materials, by closing the carbon cycle. To implement C2PAT, Lafarge, Verbund, OMV and Borealis have joined forces to develop the project. This will be followed by modelling this new value creation cycle and, based on learning from this "virtual pilot" in relation to technology, the value creation cycle, market development and the legal framework, aims to enable large-scale installation before 2030.

Building Awareness and Partnering Across Industries to Foster Learning

Borealis takes part in a number of initiatives to raise awareness and foster learning, both within the Group and externally. These include:

- Participating in the Expert Advisory Group of the Science Based Targets initiative (SBTi), contributing to the development of science-based target methodologies for the chemicals sector, with decisions on the final methods being made by the SBTi. The methods developed in this project will be available at no cost to all stakeholders, with the aim of supporting alignment with the Paris Agreement.
- Launching a collaborative research and development programme to drive industry change in Finland.

The initiative, named "Sustainable Plastics Industry Transformation" or SPIRIT, aims to drive the transformation of the plastics industry in Finland through four main activities:

- replacing conventional fossil fuel-based feedstocks with renewably sourced ones;
- developing technologies and processes for the mechanical and chemical recycling of plastics;
- decarbonising production operations through electrification, as well as the use of hydrogen and renewable energy sources; and
- exploring enablers for the green transition, including design for recycling, standardisation, improved traceability and collection systems.

The project has received a commitment for funding from Business Finland and is leveraging the platform to accelerate learnings in the Finnish industry, in collaboration with other partners. Learnings are also shared within the Group, to maximise knowledge exchange. (→ chapter Circular Economy p. 119, → chapter Innovation p. 90)

- Co-funding a research project, FUTNERC, with the Swedish Energy Agency and Preem, which aims to accelerate the transformation of the chemical industry to achieve net-zero greenhouse gas emissions from refineries and chemical plants by 2050.
- Rolling out Group-wide awareness training to all employees on climate change and Borealis' role. The Group held several workshops to communicate Borealis' carbon footprint and inspire all employees to take action in their areas of responsibility.
- Launching "Neoni" at K-Fair 2022, which is a new CO_2e emissions calculator for Borealis products and is planned to be available for customers in Q1 2023. (→ chapter Digital Transformation p. 95)

Fertilizers, Melamine and TEN

- Fertilizers, Melamine and TEN and VERBUND have jointly installed a rooftop photovoltaic array at the Chemical Park, Linz. The array has a surface area of 4,794 square meters, making it one of the ten largest in the province of Upper Austria. The facility can produce around 1 megawatt-peak and supply around 1 GWh annually, roughly equivalent to the electricity consumption of 250 households. The solar power will enable Fertilizers, Melamine and TEN to reduce the annual CO_2 emissions of this location by 350 tonnes each year.
- Fertilizers, Melamine and TEN has begun a decarbonisation project with VERBUND, which will use green hydrogen to produce fertilizers, melamine and technical nitrogen at Linz on an industrial scale and in a more sustainable way. Green hydrogen is the key to decarbonising industrial products and processes, particularly in areas that are difficult or impossible to electrify. The joint project is taking place within the IPCEI framework and entails the production of green hydrogen at an industrial electrolysis plant (60 MW) using electricity from renewable sources and deionised water. The oxygen generated by water splitting during the electrolysis process will be used directly in production. The electrolyser will also provide grid services for the transmission network. The electrolysis plant is scheduled to start operations in 2025, with projected annual CO_2 emissions reductions of up to 90,000 tonnes.

Outlook

Borealis' energy and climate objectives for 2023 are to:

- establish a data management process for climate-related data and develop an integrated tool for CO_2 management, to actively manage the portfolio of emission-reduction projects;
- set up an accounting model based on a CO_2 budget for Scope 1 and 2;
- evaluate the feasibility of setting science-based targets;
- set up carbon management governance across the Group;
- limit ETS emissions to 1,436 kilotonnes of CO_2e (HC&E and PO);
- achieve energy performance of 3.984 MWh Prim Energy/ tonne in Hydrocarbons;
- achieve energy performance of 1.289 MWh Prim Energy/ tonne in Polyolefins; and
- investigate the current energy ambition, to ensure it is in line with the Group's renewable energy and climate ambitions.

20230711119872

Environmental Management

Goals for 2022	Key Achievements of 2022
Enhance credibility and transparency of Operation Clean Sweep (OCS) as the best tool to prevent unintentional pellet loss	Proactively contributed, as a member of the Plastics Europe OCS taskforce, to the development of a third-party OCS audit and certification scheme
Prepare Borealis for the publication of the European Best Available Technique (BAT) reference document on the common Waste Gas management and treatment systems in the Chemical sector (WGC BREF)	Completed full gap assessment and handed it over to Borealis' technical development organisation, to initiate studies and projects to close the identified gaps
Further strengthen and enhance Borealis' water management	Developed water management framework and rolled out a water management plan for eight locations
Develop and roll out new minimum requirements for flaring, to support the zero non-emergency target	Published and rolled out new instruction and built new database and dashboard for improvement projects follow-up

Borealis' environmental management encompasses managing its energy consumption and efficiency, emissions to the environment (air and soil), its use and discharge of water, operational waste, and its overall environmental performance, ensuring compliance with all applicable laws and regulations.

CO_2 emissions and energy consumption are among the most material impacts arising from Borealis' production processes and their reduction are therefore the main drivers of Borealis' environmental performance improvement. Nevertheless, emissions to air, water use, waste and effluents also play a significant role in high-quality health, safety and environmental (HSE) management. As a consequence, they are included in the Group's HSE management processes and are monitored as part of the environmental objectives of each location.

Governance

At Group level, environmental management is the responsibility of the Health, Safety, Environment and Quality (HSEQ) function, which reports directly to the Chief Executive Officer. HSEQ defines the Group's standards and processes for its environmental management system.

Borealis has a number of networks that bring together environmental experts from across the Group. The Environmental network holds regular meetings with the location environmental experts, to discuss and agree on activities to continuously improve the environmental management system and performance. This includes drafting and reviewing new instructions, resolving matters identified by internal and external audits, and reviewing environmental performance and potential risks and opportunities. The team also shares lessons learned and improvement actions implemented, as well as discussing authority permits for projects and legal compliance.

The Group also has a network for Operation Clean Sweep (OCS), with regular meetings with the OCS specialists to discuss lessons learned, share improvements and drive performance.

The HSE manager's network defines the HSE strategy and improvement actions, and shares information, for example learnings from incidents, best practices, gap closing or audit actions. The network includes the Head of HSSE, local HSE managers and Group HSE experts. Borealis' environmental experts also contribute to the Public Affairs team, to help formulate Borealis' position on environmental issues.

At a location level, the local HSE team includes environmental experts and reports to the location leader. The local leadership meets each month to discuss HSE performance, including environmental KPIs and other indicators, as well as performance of key projects. Every location also has an HSE Forum, where employee representatives are consulted and informed about the HSE management system. The HSE Forum also promotes worker participation.

Managing Environmental Risks

At least every three years, the Group performs a detailed and systematic environmental risk and opportunity assessment for every plant, in all locations. The assessments are also performed as needed, if there have been major changes, near misses, incidents or accidents, or if potential improvements have been identified. The risk assessments are based on an

evaluation of the legal framework and possible upcoming changes, any deviations from permit limits and stakeholder input. Risks above a certain level are added to the Group risk management tool.

Based on these assessments, Borealis defines and documents HSE objectives and targets for each location. Clear responsibilities and timelines are agreed and reviewed at Group HSE level. The consolidated outcomes, including HSE performance, are reported to the Executive Board.

Borealis also conducts a regular stakeholder engagement process, with all significant environmental risks assessed for how they could affect the Group's neighbours and other stakeholders in the community. The engagement approach for each aspect is then defined and can range from newsletters to participation in or initiation of round-tables, to one-on-one discussions with key stakeholders. Matters that can be managed locally are dealt with by local senior managers. Bi-monthly public affairs calls ensure a thorough exchange of information between Group and location management.

All Borealis production locations are part of an ISO 14001-compliant environmental management system. In 2022, the Group's global ISO certification was split due to the anticipated divestment of Fertilizers, Melamine and Technical Nitrogen Products (TEN), with that business successfully achieving its own independent multi-site ISO certification.

Borealis also uses an environmental data management system and reporting software. This ensures control of data flows from varied sources, in multiple formats and on different schedules, as well as the traceability and transparency required for reporting and auditing.

The Group is committed to complying with all relevant environmental laws, regulations, standards and other legal requirements, such as operational permits. This ensures that the Group can continue to operate and is protected from fines, reputational damage and the costs of impact mitigation. The Group reviews all cases of non-compliance and takes action to prevent them from reoccurring.

Borealis is also committed to implementing the principles of Responsible Care®, the chemical industry's voluntary commitment to continuous improvements in HSE performance (→ chapter Corporate Governance, p. 56), as well as the Product Stewardship standard of Fertilizers Europe. The Group uses Cefic's self-assessment web tool annually, to help it continually improve its approach to Responsible Care. The tool has numerous features, including benchmarking performance against peers and cross-referencing performance against the United Nations Sustainable Development Goals and other standards.

Activities 2022

Preparing for Publication of EU Best Available Techniques Reference on Common Waste Gas Treatment in the Chemical Sector (WGC BREF)

Borealis' intensive preparations for the WGC BREF during 2021 included building a full inventory for each polyolefin plant in accordance with requirement no. 2 (BAT 2 – Best Available Technology). In 2022, following the publication of the final draft of the WGC BREF, the Group used the inventories to conduct a full gap assessment against the 26 applicable BAT requirements. The assessment then was handed over to the locations' technical experts, to define work packages and projects to close the identified gaps. The decision on the WGC BREF was published on 12 December 2022 and the Group will have four years to ensure all its plants meet the requirements.

Revision of the BREF LVIC (Large Volume Inorganic Chemicals)

After a consultation in April 2022, Borealis joined the kick-off meeting organised by the EU Commission in October 2022 to define the scope of the revision of the BREF LVIC "Large Volume Inorganic Chemicals", which will design the future mandatory emission limits for ammonia, nitric acid and fertilizer plants.

Reducing the Environmental Footprint in Fertilizers, Melamine and TEN

In collaboration with its suppliers, the Fertilizer business has developed new bags which contain 30% recycled plastic materials and started to deliver to customers with products packaged in the new bags in the second half of the year.

Carbon footprinting enables a business to identify and analyse greenhouse gas emissions throughout the product value chain. Fertilizers, Melamine and TEN has taken an important step in providing certified emissions data to its customers and stakeholders, by achieving PAS2050:2011 carbon footprint certification.

20230711119873

Emissions to Air

Borealis' emissions to air result from its production processes and from combustion for energy generation. In addition to carbon dioxide and nitrous oxide (→ chapter Energy & Climate, p. 125), these emissions comprise:

- *nitrogen oxide (NO_x) emissions, created by the burners in* steam boilers, thermal oxidisers, flares and furnaces;
- volatile organic compounds (VOC), which are fugitive emissions of hydrocarbons, occurring due to high pressure and temperature; and
- dust and ammonia (NH_3) emissions, from production and handling solid material in fertilizer plants.

Borealis' emissions to air are identified using a mix of direct *measurements (for example, in the stack) and calculations* based on measured fuel consumption and emission factors. The level of complexity (for example, where several units use one stack) and the magnitude of the emission dictate whether to measure in the stack or use the fuel consumption. In most cases the emission factors are provided by local or national authorities, as they form part of the permit or the reporting requirements (for example, the emission factors provided may state that 1m³ of natural gas burned in a steam boiler produces x mg of NOx). In some cases, the factors are literature-based. Borealis follows all related legal requirements and the stipulations in its permits. In addition, Borealis has established its own requirements for measuring and following up on key pollutants. Deviations from the norm are reported within the Borealis incident management system and then investigated and addressed through corrective actions. The approach taken depends on the magnitude of the emissions' impact and their criticality. Actions are prioritised using the principles following the Group's Risk Management Policy, in line with Borealis' sustainability management approach. High-risk issues and proposals with significant potential for improvement are regularly discussed by and addressed to the Executive Board.

Volatile Organic Compound Emissions

Borealis' goal is to reduce its VOC emissions by detecting and repairing leaks quickly. In 2022, Borealis' VOC emissions were 2,608 tonnes for Hydrocarbons & Energy (HC&E) and Polyolefins (PO), compared to 2,871 tonnes in 2021. The decrease mainly resulted from several turnarounds in the locations, resulting in production stopping for close to two months. VOC emissions for Fertilizers, Melamine and TEN were 357 tonnes in 2022, compared to 386 tonnes in 2021.

Flaring

Flaring is a necessary safety measure used in the Group's *hydrocarbon and polyolefin plants, in which excess gases* which cannot be recovered or recycled are safely burned. However, it causes CO_2 emissions, although these are a minor part of the Group's overall CO_2 emissions, as well as NOx emissions. In addition, flaring means inefficient use of the Group's resources and nuisance to Borealis' neighbours, and also has legal implications, such as permit stipulations or restrictions to emergency flaring (→ chapter Energy & Climate, p. 125).

The Group has set a target for zero non-emergency flaring by 2030. Turnarounds, regular maintenance of the plant's assets and other internal and external factors influence the achievement of these targets.

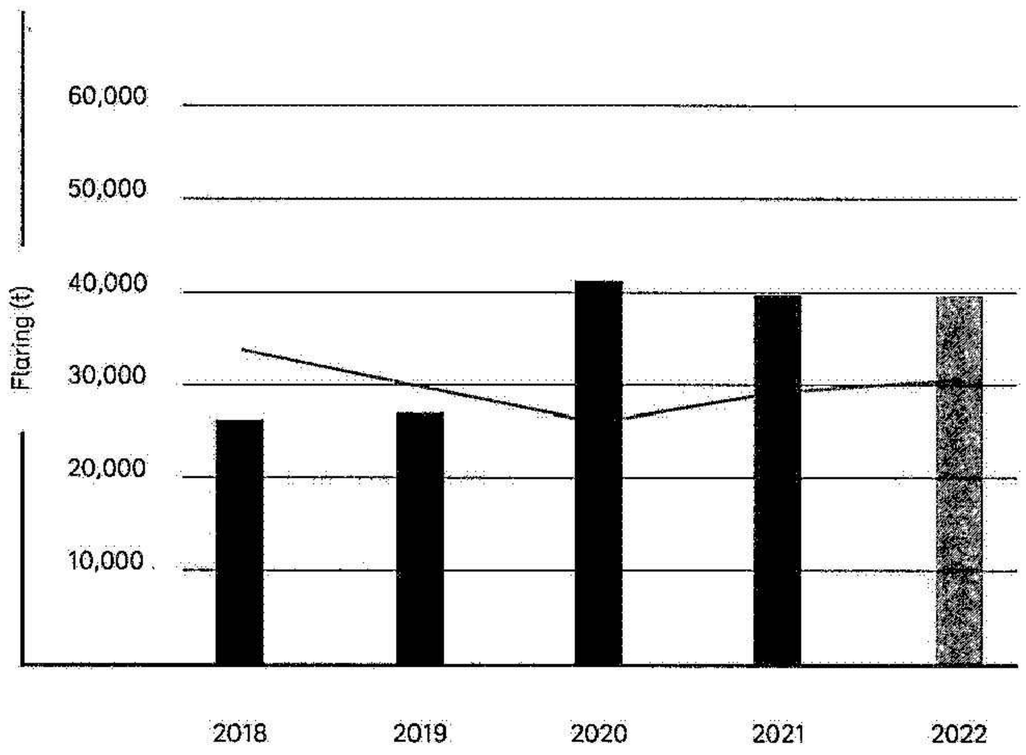
In particular, flaring increases in years with higher numbers of turnarounds, which are scheduled events during which a plant is temporarily taken out of operation to carry *out important maintenance works and inspections. This* inevitably leads to more flaring, as plants or lines must be safely shut down, emptied and ramped up again.

In 2022, best practices, refined definitions and uniform minimum requirements, for example for measurements, have been summarised in a new document in the Borealis Management System. The Group's project and risk database has also been updated to track flaring projects and monitor progress towards the 2030 target.

Flaring losses in 2022 were 40 kilotonnes for HC&E and PO, compared to 38.5 kilotonnes in 2021. The effort to reduce upsets and implement flaring improvements continued, but several turnarounds as well as external power failures led to significant start-up and shut-down flaring, as well as emergency flaring during 2022.

At 14,113 tonnes, non-emergency flaring losses for HC&E and PO in 2022 were lower than in 2021 (15,950 tonnes) and below the target of 15,982 tonnes.

Fig. 47: **Flaring performance 2018–2022**



Year	Actual	Target
2018	26,273	34,200
2019	27,619	30,000
2020	42,543	27,500
2021	38,538	29,000
2022	39,955	30,479

Dust Emissions

Dust reduction and prevention is a focus for all Borealis operations and for improvement projects. In the Group's fertilizer locations, which are the main contributor, these emissions are continuously measured. Borealis' polyolefin production plants monitor dust emissions using spot samples, which is why only dust emissions from the fertilizer production sites are reported below. In 2022, the total dust emissions from the fertilizer production (including Rosier) units totalled 502 tonnes compared to 511 tonnes in 2021. However, several production units encountered problems in measuring dust emissions. Due to the wetness of the dust, the standard used to quantify dust was inaccurate, leading to inconsistent results from the analysis. Work with leading metrology companies is ongoing to better characterise particulate emissions.

NO_x Emissions

Borealis measures most of its NO_x emissions, with the remainder being calculated using a standardised emission factor. Absolute NO_x emissions in 2022 were 1,102 tonnes for HC&E and PO, compared to 1,314 tonnes in 2021. NO_x emissions for Fertilizers, Melamine and TEN were 943 tonnes in 2022, compared to 1,275 tonnes in 2021.

Ammonia Emissions

Ammonia emissions are a consequence of either failures during the ammonia production process or leaks during storage or transportation. These emissions amounted to 8 tonnes for HC&E and PO, compared to 19 tonnes in 2021. Emissions for Fertilizers, Melamine and TEN were 550 tonnes in 2022, compared to 415 tonnes in 2021. The decrease in emissions was due to lower production.

Sulphur Oxide (SO_x) Emissions

Borealis does not produce SO_x emissions, as it only uses gaseous fuels (natural gas and hydrocarbons) where no sulphur is present.

Nitrous Oxide Emissions

The production of nitric acid causes emissions of nitrous oxide, also known as laughing gas (N_2O), which is a highly relevant greenhouse gas with a global warming potential of about 298 times that of CO_2. An additional step done in one unit in the existing elaborate waste gas treatment, which involves injecting methane into the catalyst system, further reduces N_2O emissions by up to 90%.

Water Management

Borealis needs water to operate its plants and sites. Cooling is the largest use of water. Other uses include feeding boilers, cleaning, sanitary uses and firefighting.

Borealis' environmental experts in each operation continuously monitor water consumption as part of the Group's environmental monitoring programme, as well as to comply with the permit limits set by the respective local authorities.

The Group looks to minimise its water use where possible, for example by recycling water in its production process. It also looks to improve the quality of the water it discharges through filtration, neutralisation and biological wastewater treatment.

20230711119874

In addition to ensuring legal compliance, Borealis uses tools such as the WWF (Worldwide Fund for Nature) water risk filter to assess areas of concern, such as baseline water stress or interactions with neighbours and other stakeholders. This helps the Group to steer and prioritise improvement projects.

Water availability varies by location. A detailed water inventory was carried out in 2020 and 2021, which served as the basis for a risk assessment and fostered Borealis' understanding of its water usage, water emissions and water-related risks at each site and across the Group as a whole.

The results showed that four of the Group's sites are in locations with critical water availability and are therefore subject to stringent water permits. Borealis prioritised these locations, which were the first to implement the Group's newly developed water management principles during 2022. As a consequence, the Group finalised water management plans in 2022 which have been rolled out initially to seven locations (Antwerp, Beringen, Geleen, Itatiba, Kallo, Monza, and Rockport). These locations were prioritised due to their baseline water stress levels. In addition to improved data quality and follow up of water flows, the water management plans generate insights and propose projects to reuse water and use it more efficiently. By the end of 2023, all locations of HC&E/PO will have to have a water management plan in place, as defined by the Group management system. Newly acquired locations will have three years to comply with this requirement.

The water management plans will cover all aspects, from withdrawal of water, to its use and finally to its discharge, as well as the impacts this generates on the water bodies (source and receiving) effected. Borealis uses WWF's Water Risk Filter to analyse the impacts. Following the establishment of water management plans for all locations, targets and goals will be defined across the Group.

Water Withdrawal

The majority of the water Borealis uses in its operations is withdrawn from surface water, for example, from water bodies such as rivers and oceans. The remainder is extracted from groundwater, wastewater from another organisation, municipal water supplies or other water utilities. In some locations, rainwater is also collected and used.

In addition to setting minimum requirements for measurement and reporting, the water management principles require the locations to define, evaluate and report water withdrawal reduction measures, such as rainwater collection and usage, water saving, substitution, recycling and closed-loop systems.

Borealis' water withdrawal in 2022 was 407 million m^3 for HC&E and PO, compared with 448 million m^3 in 2021, and 250 million m^3 for Fertilizers, Melamine and TEN, compared with 286 million m^3 in 2021. Part of the decrease in consumption resulted from normal fluctuations, due to the varying intensity of maintenance activities and weather conditions. For example, if rivers, lakes and the sea become very warm due to heat waves, then Borealis requires much more water to keep up its production levels during the summer. The remainder of the decrease stemmed from the reduction in production volume.

Fig. 48: **Borealis' water withdrawal by source in 2022** [1)]

Sources	2022 HC&E/PO	2022 Fertilizers, Melamine and TEN
Water withdrawal	**407 million m^3**	**250 million m^3**
Freshwater		
Ground freshwater	0.0%	0.0%
Surface freshwater	1.4%	96.9%
Freshwater from public supply	0.5%	0.1%
Freshwater from other sources (rainwater, recycling, third party)	0.1%	0.0%
Non-freshwater		
Ground non-freshwater	1.5%	3.0%
Sea water	96.3%	0.0%
Non-freshwater from other sources (rainwater, recycling, third party public supply)	0.2%	0.0%

1) All water withdrawal is measured in accordance with local legal requirements. Borealis only regards drinking water supplied by municipalities as freshwater. The water taken from the sea, lakes and rivers, as well as ground water, varies quite significantly over the course of a year in respect of dissolved solvents, which is why it is regarded as "other water".

Fig. 49: **Borealis' water withdrawal from locations with water stress by source in 2022**

Sources	2022 HC&E/PO	2022 Fertilizers, Melamine and TEN
Water withdrawal from locations with water stress	**1.1 million m³**	**0.4 million m³**
Freshwater		
Ground freshwater	0.0%	0.0%
Surface freshwater	0.0%	0.0%
Freshwater from public supply	4.0%	19.4%
Freshwater from other sources (rainwater, recycling, third party)	0.0%	0.0%
Non-freshwater		
Ground non-freshwater	68.3%	80.6%
Sea water	0.0%	0.0%
Non-freshwater from other sources (rainwater, recycling, third party public supply)	27.7%	0.0%

Fig. 50: **Borealis' water discharge by waterbody in 2022** [1)]

Sources	2022 HC&E/PO	2022 Fertilizers, Melamine and TEN
Water discharge	**405 million m³**	**164 million m³**
To freshwater environment		
Freshwater discharged/ returned to groundwater aquifer	0.0%	0.0%
Freshwater discharged/ returned to fresh surface water	0.0%	0.0%
To non-freshwater environment		
Water discharged/returned to groundwater aquifer (non-fresh)	0.0%	0.2%
Water discharged/returned to non-fresh surface water	1.2%	81.2%
Water discharged/returned to seawater	97.9%	0.0%
To others		
Water discharged/returned to offsite water treatment	0.9%	18.6%
Wastewater discharge to beneficial/other user (third party)	0.0%	0.0%
Water discharge/returned to evaporation pond	0.0%	0.0%

1) No water bodies are affected by water discharge and/or run off.

Wastewater Discharge

The volume and nature of the wastewater Borealis generates depend on the type of production at its locations. Borealis therefore installs water treatment techniques that are appropriate for each plant's production process. These techniques can include filtration, neutralisation, osmosis, gravimetric and biological water treatment.

All Borealis plants are connected to wastewater treatment installations, consisting of internal treatment units, external plants or both. Water is then discharged primarily into a surface water body such as the oceans or rivers. This is also likely to be the water body the water was originally withdrawn from, thereby limiting the environmental impact as much as possible. In Grandpuits, France, Borealis has no surface water body close by and no permit to discharge into one. Discharges are therefore made into a special salted groundwater aquifer instead. Each of the Group's operations carefully monitors wastewater flows and contaminants, to ensure that all parameters are within permitted levels, and reports this regularly to the relevant authorities.

Recycling and Reusing Water

To increase water-use efficiency, Borealis seeks, whenever possible, to recover its process water or to reuse wastewater. For example, in some operations cooling towers use recycled water or rainwater. This is not possible in all locations, as it depends on permit stipulations and on the water body. Borealis prioritises reductions in energy consumption and CO_2 emissions. As water consumption and energy use are closely linked, due to the energy recovery from cooling water, the Group may also on some occasions decide to increase its water withdrawal in order to recover more energy.

20230711119875

At Borealis' operations in Grandpuits, Grand-Quevilly, Linz and Ottmarsheim, cleaning production equipment during maintenance generates water containing nutrients. This is partly recycled and partly valorised as liquid fertiliser with low nutrient content.

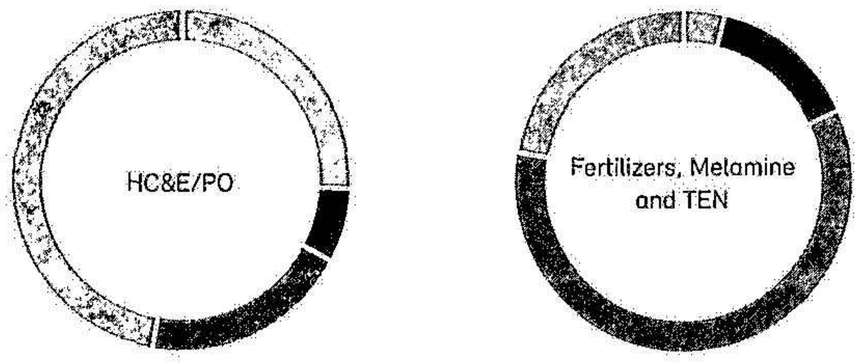
Waste

Borealis generates waste during production and during short regular shutdowns and plant turnarounds. Waste generated upstream or downstream of the Group's production is not included in its waste reporting. The most common types of waste produced in Borealis' operations include the non-recyclable polymers included in the polymer waste input to the Group's recycling plants, as well as excavated soil, wastewater treatment sludge, solvents, mixed industrial waste and inert construction material. Borealis aims to minimise the production of waste where possible, but its main objective is to treat waste as a resource and to better handle end-of-life products by making them circular.

Borealis monitors waste production and implements control measures in all its operations, based on the requirements of regulations and ISO 14001 standards. The Group has waste management plans for each location, which are coordinated by local environmental experts. All locations follow the "4R" rules: reduce, reuse, recycle and recover.

In all of the Group's locations, waste is collected by a certified third-party waste handling company, sorted and then brought to final treatment. For all waste that leaves its sites, Borealis receives a treatment statement and bill, including the collection and final treatment fee. Each Borealis site collects these documents and ensures the correct reporting of invoices and environmental data. The data in this report is accurate up to November 2022. Due to the early deadline for closing this Annual Report, December values have not been submitted by the waste handling companies. In order to have representative figures, December values are estimated based on the average of the last 11 months.

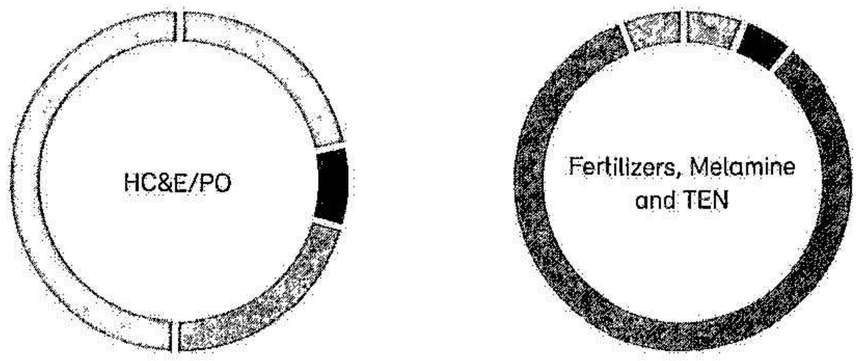
Fig. 51: **Waste treatment in 2022** [1)]



	HC&E/PO	Fertilizers, Melamine and TEN
Energy recovery	26%	4%
Landfill	7%	15%
Recycling	20%	59%
Other treatment	47%	22%

1) Environmental data might be subject to minor adjustments due to ongoing audits and missing third-party data at the time this report was finalised.

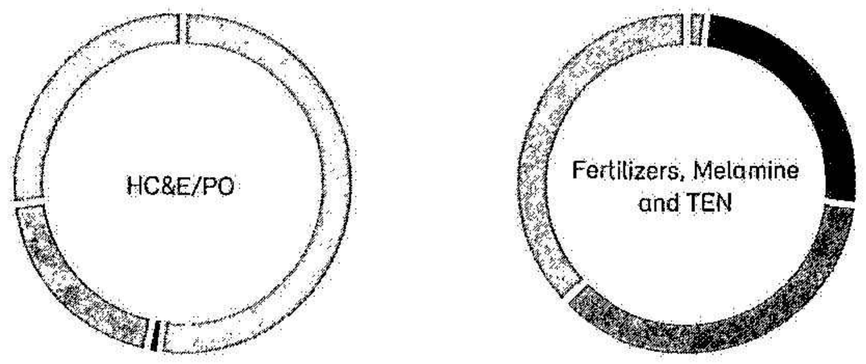
Fig. 52: **Non-hazardous waste treatment in 2022** [1) 2) 3)]



	HC&E/PO	Fertilizers, Melamine and TEN
Energy recovery non-hazardous	22%	6%
Landfill non-hazardous	8%	5%
Recycling non-hazardous	21%	83%
Other treatment non-hazardous [2)]	49%	6%

1) Environmental data might be subject to minor adjustments due to ongoing audits and missing third-party data at the time this report was finalised. // 2) "Other Treatment" category includes, for example, land treatment, biological treatment and physico-chemical treatment. // 3) Values were adjusted accordingly to ensure summation to 100.0%, with rounding errors kept to a minimum.

Fig. 53: **Hazardous waste treatment in 2022** [1) 2)]



	HC&E/PO	Fertilizers, Melamine and TEN
Energy recovery hazardous	52%	2%
Landfill hazardous	1%	25%
Recycling hazardous	20%	36%
Other treatment hazardous	27%	37%

1) Environmental data might be subject to minor adjustments due to ongoing audits and missing third-party data at the time this report was finalised. // 2) Values were adjusted accordingly to ensure summation to 100.0%, with rounding errors kept to a minimum.

The Group has implemented integrated manufacturing processes which recover as much co-product as possible. For example, the CO_2 emitted by the ammonia production site in Linz, Austria, is used in the production of urea at the same site. In the fertilizer production process, condensate from steam contains co-products which are reinjected into the process to minimise loss of resources. If a co-product cannot be reused and therefore becomes waste, the Group's preference is to recycle it, taking into account relevant regulations and environmental considerations.

The Group only employs accredited contractors for handling its waste streams. By-products of polymer production, such as non-prime material or material from cleaning activities, are used to the extent possible in the Group's recycling plants.

Non-recyclable waste has become one of the largest proportions of total waste for the Group and a main driver of the significant drop in the overall recycling percentage. Currently, this stream is used as secondary fuel in steel or cement production, but considerable research effort is going into finding a recycling solution for this stream as well.

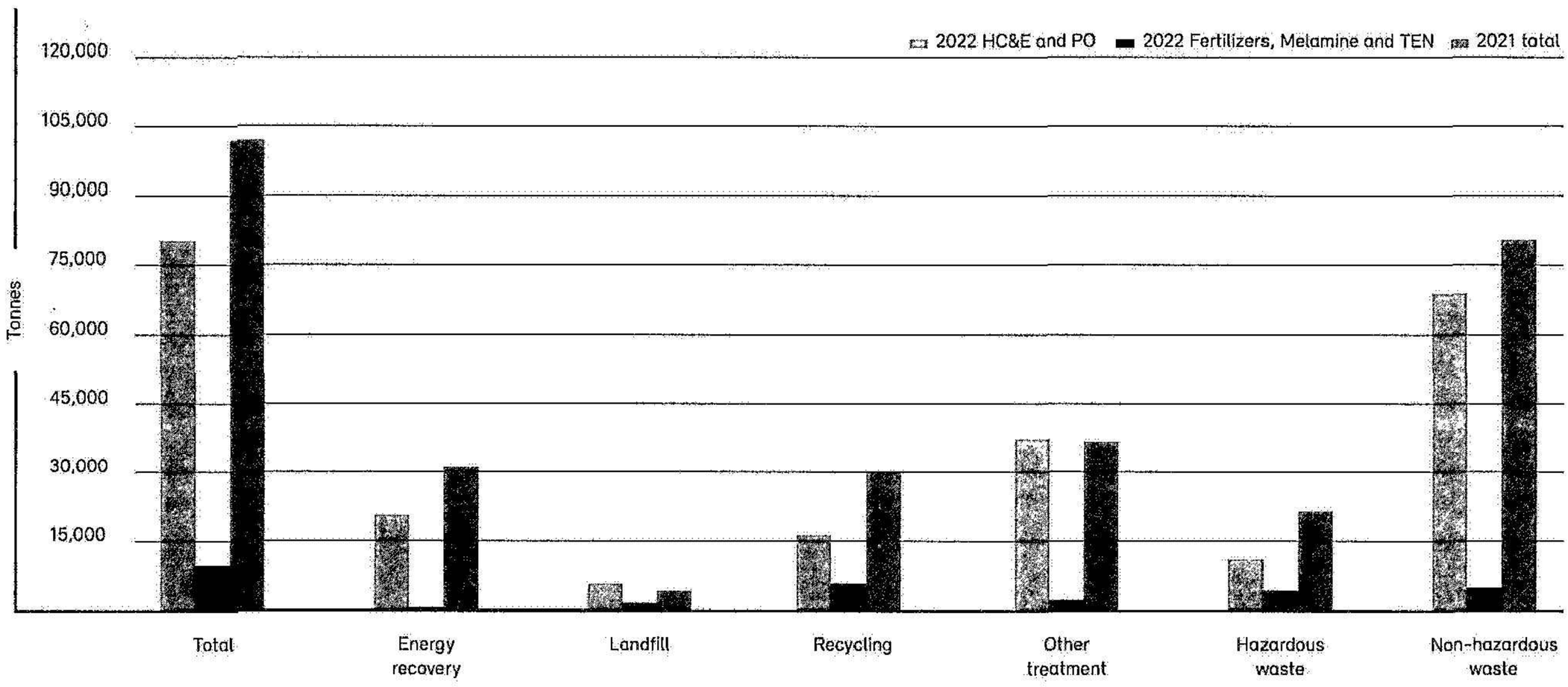
The majority of the Group's locations are in Europe, where data collection and reporting are clearly defined by the Waste Framework Directive. Regular internal audits and external audits by local authorities validate these waste figures.

In 2022, the Group's total waste volume was 82 kilotonnes for HC&E and PO and 10 kilotonnes for Fertilizers, Melamine and TEN, compared to 84 kilotonnes for HC&E and PO and 18 kilotonnes for Fertilizers, Melamine and TEN in 2021. Approximately 20% of HC&E and PO's and 59% of Fertilizers, Melamine and TEN's waste volume was recycled, 26% (HC&E and PO) and 4% (Fertilizers, Melamine and TEN) was recovered and 54% (HC&E and PO) and 37% (Fertilizers, Melamine and TEN) was disposed of, with 7% (HC&E and PO) and 15% (Fertilizers, Melamine and TEN) going to landfill and 47% (HC&E and PO) and 22% (Fertilizers, Melamine and TEN) receiving a different treatment.

Spills

The majority of Borealis' hydrocarbons in use are gaseous under ambient temperature and pressure, such as ethane, naphtha, ethylene or propylene. Therefore a leak in any equipment (for example a pipeline, flange or vessel) would lead to an emission to air rather than a spill.

Fig. 54: **Waste treatment comparison between 2021 and 2022 for all total waste, all treatments and the ratio of hazardous and non-hazardous waste** [1)]



1) Environmental data might be subject to minor adjustments due to ongoing audits and missing third-party data at the time this report was finalised.

20230711119876

There are some liquid hydrocarbon raw materials in use, such as peroxides or oils for lubrication. All of these chemicals are stored and handled in designated areas with sealed surfaces and run-off protection. A spill to environment with liquid hydrocarbons is therefore highly unlikely and almost only possible during transport on site.

Pellet Spills

Plastic pellet loss is an important type of spill for a plastic raw material producer. Pellets released unintentionally during production, transportation, conversion and recycling can end up in nature, rivers and oceans. Preventing pellet spills is therefore a core responsibility for the industry. Borealis is fully committed to zero pellet loss and has incorporated all elements of Operation Clean Sweep® (OCS), an international programme to mitigate pellet loss, into its internal instructions, at both Group and local levels, as well as across its supply chain. → chapter Logistics, p. 154

In 2021/2022, eight locations underwent an intensive two-day audit by Group experts in OCS, to thoroughly check compliance with the internal OCS requirements and the OCS standard. The audit covered all areas of the standard, from risk assessment and management, to work instructions, housekeeping and the training programmes for all employees. The audits showed continued growth in Borealis' OCS maturity and progress towards compliance with the upcoming third-party certification standard.

Furthermore, Borealis has proactively contributed to the development of a third-party audit and certification scheme for OCS led by Plastics Europe and launched at K-Fair 2022. With the latest audit recommendations now being implemented, all European Borealis locations are in a good position to pass the third-party certification audit in the next one or two years.

The Group's target is to achieve full third-party OCS certification of all its sites in Europe by the end of 2024. Non-European sites are required to fully comply with the Group's internal standard.

Discussions with recyclers about joining OCS is ongoing at the European level. Borealis' approach with its recycling sites is to await the European decision.
Other key activities in 2022 included participation in a public consultation in the EU, as well as the creation of auditor guidance documents, training packages and qualification requirements, and the certification framework. The European Commission is also addressing unintentional releases of microplastics. The current focus of the planned regulatory instruments is on tyres, synthetic textiles and pellets. The primary impact of this regulatory measure on pellets will be the cost and administrative requirements for labelling, reporting and certification (→ chapter Public Affairs, p. 48, → chapter Product Safety, p. 114).

Borealis' commitment to Zero Pellet Loss encompasses

- *Leading by example: Borealis was among the first signatories of the Plastics Europe OCS pledge and the Group is also a signatory of the "Zero Pellet Loss" pact in Austria,*
- *R&D investments: Borealis continuously invests in research and development, in its work processes and in separation technology, applicable to both pellets and powder.*
- *Value chain: Borealis engages with the value chain, including customers, distributors, warehouses and logistic providers, and works with governmental bodies and universities to increase the Group's knowledge and further improve the best available technologies.*
- *Operational excellence: the Group's actions include ongoing analysis, awareness campaigns and training for employees and contractors, reinforcing work practices and behaviours, putting in place effective pellet retention measures, such as sieves and pellet separators, as well as effective skimmer ponds and filtration units based on the best available technology.*

Outlook

The Group's priorities for 2023 are in line with those of previous years, with a focus on enhancing valorisation of side streams and researching industrial symbiosis. The purpose is to minimise the production of waste, consume fewer resources and better handle the end-of-life of Borealis' products. As in 2022, Borealis will continue its preparations to be compliant with the WGC BREF, as discussed under Activities 2022 above.

A major focus area will be to continue the roll-out of the water management plans in all locations, as well as to finalise the work on the OCS certification standard and achieve full certification of all Borealis sites.

Fig. 55: **Key environmental performance indicators 2018–2022** [1)]
See detailed background explanation of the performance in the respective section of this chapter

Issue	Unit	2022 HC&E/PO	2022 Fertilizers, Melamine and TEN	2021 total	2020 total	2019 total	2018 total
EU ETS CO_2 emissions	kilotonnes	1,355	2,022	3,878	4,050	4,625	4,302
N_2O emissions	tonnes	0	629	713 [2)]	1,143	1,351	1,330
Flaring performance	tonnes	39,955	–	38,538	42,543 [3)]	27,619	26,273
VOC emissions	tonnes	2,608	357	3,260	2,942	3,122	3,784
NO_x emissions	tonnes	1,102	943	2,589	2,842	3,000	3,035
Dust emissions	tonnes	10	492	511	342	455	437
NH_3 emissions	tonnes	8	550	435	686	881	727
Primary energy consumption	GWh	14,923	6,441	21,730	22,340	25,831	24,476
Water withdrawal	m^3 (million)	407	250	735	755	750	675
Waste generation	tonnes	82,425	9,958	102,023	97,905	86,109 [4)]	53,713

1) Environmental data might be subject to minor adjustments due to ongoing audits and missing third-party data at the time this report was finalised. // 2) Minor adaptations occured due to the annual ETS audit. // 3) Severe upsets led to significant emergency flaring during shutdowns; in addition, there was a lack of recycling capacity. // 4) The main reason for the increase is the integration of the plastics recycling company mtm plastics GmbH and mtm compact GmbH into the monthly group reporting.

Definitions

EU Emission Trading Scheme (ETS) CO_2 emissions: All greenhouse gas emissions (GHG) as per the European ETS expressed in CO_2 equivalents (since 2009 this indicator has replaced the reporting of direct carbon dioxide emissions).

Nitrous Oxide (N_2O) emissions: Emissions of N_2O (also known as laughing gas) are generated by the production of nitric acid in the fertilizer plants. N_2O is a GHG with a global warming potential (GWP) 310 times higher than CO_2.

Flaring losses: All streams sent to the flare, except streams that assure a constant flame (e.g. fuel gases to pilot burners, fuel gas purges to flare lines for safety reasons, steam, nitrogen).

Volatile Organic Compound (VOC) emissions: Emission of all organic compounds (from C1 to Cn) with a vapour pressure of 0.01 kilopascal (kPa) or more at either room temperature or at actual temperature when processed. The quantification is based on measurements and estimates. Total volatile organic carbon, expressed as C, includes methane.

Nitrogen Oxide (NO_x) emissions: Emissions of all nitrogen oxides from all relevant sources, including flares. The emissions are quantified as NO_x. When NO_x measurements are not carried out, emission factors correlated to the fuel type and heating value are used.

Dust: Emission of dust from the production of fertilizers.

NH_3 (Ammonia): Emissions of NH_3 from fertilizer plants, loading stations and water treatment of fertilizer locations.

Energy consumption: Consumption of all energy vectors (i.e. fuels, electricity and steam). Electricity and steam are converted into primary energy with standard conversion factors of 40% (electricity) and 90% (steam).

Water consumption: Total amount of fresh water withdrawn from surface or groundwater sources for any type of usage (e.g. cooling, steam generation, cleaning, sanitation).

Waste generation: Generation of all waste at company locations during normal operation as well as during special projects. Any substance or object that is to be discarded is included in the definition of waste. Exceptions are atmospheric emissions, liquid effluents and by-products with commercial value.

20230711119877

Procurement

Feedstock, Electricity and Utilities

Goals for 2022	Key Achievements of 2022
Progress sourcing strategy for the propane dehydrogenation plant (PDH2) in Kallo, Belgium	Signed a five-year USD 2.5 billion contract with Energy Transfer to source propane for Kallo from the US
Expand sourcing of renewable electricity	Signed Power Purchase Agreements with Axpo, Eneco and Verbund Signed a co-investment agreement with Verbund to build 4.8 MW solar PV plant in Schwechat, Austria Commissioned 1 MW solar farm in Linz, Austria
Sustain and increase volume of circular plastic, especially in renewable feedstock	Increased ownership share of Renasci and started production Started to supply cracker products, phenol and acetone made from renewable hydrocarbons to customers via the newly launched Borvida™
Conduct a feasibility study on the construction of a chemically recycled feedstock plant in Stenungsund, Sweden	*Feasibility study is being finalised*

To manufacture and deliver its products, Borealis purchases and sources feedstock, electricity and utilities, such as steam, nitrogen and boiler feedwater. The products and services the Group procures have an important influence on its business performance, including critical areas such as safety, environmental impact, quality, customer service and Borealis' financial performance. The Group therefore looks to carefully manage its sourcing activities to optimise performance in these areas. Borealis does this by developing specific sourcing strategies for individual product and service categories. The Group also looks to further improve the reliability of its feedstock supply by approving alternative sources.

Governance

Sourcing of feedstock, electricity and utilities is managed by the Hydrocarbons & Energy (HC&E) organisation. Dedicated teams are responsible for sourcing feedstock and cracker products for the Hydrocarbons (HC&E) business and assets, and electricity and utilities for both the Polyolefins (PO) and HC&E assets. The Senior Vice President HC&E is accountable for the HC&E business and organisation.

Sourcing of Feedstock

Olefins and Polyolefins

Borealis sources hydrocarbon feedstocks, such as naphtha, butane, propane and ethane, and converts them into ethylene, propylene and a range of co-products through its olefin units. The Group's main focus is on the quality, availability and cost of feedstock. Global sourcing of feedstock is crucial as it gives the Group a more diversified supplier base so it can obtain the right quality, remain competitive and avoid supply disruptions. A dedicated team of feedstock traders and product managers is responsible for sourcing the whole Borealis feedstock range. Feedstock and olefins required for Borealis' olefins and polyolefin production plants are either sourced from Borealis' majority shareholder OMV Group or purchased globally via strategic long-term supply agreements, short-term contracts and spot trading, covering deliveries from the US and Europe.

In March 2022, Borealis responded to the Russian invasion of Ukraine by terminating sourcing from Russia with immediate effect. The Group phased out all contracts as soon as possible, with the last feedstock delivery taking place at the beginning of June.

The immediate consequence of the decision was felt at Borealis' Porvoo (Finland) cracker, as due to limited inventory capacity and longer lead times, the feedstock slate had to be adjusted, leading to a lower production margin.

Borealis' HC&E teams reacted rapidly to find alternative sources of butane and naphtha for the Borealis crackers. The teams have been instrumental in diverting supplies towards the West and overcoming winter restrictions in Porvoo, which require ships to be purpose-built for sailing in icy waters, thereby mitigating the expected additional costs and safeguarding the competitivity of Borealis' crackers.

The cost of feedstock is closely linked to swings in the crude oil price. Borealis therefore implements hedging strategies and ensures that it develops and maintains a high-performing commercial sourcing team. The Group actively screens specific new markets, maintains its market knowledge through report subscriptions and by attending industry and market conferences, and engages with industry partners to share best practices. Borealis is a member of a number of industry groups, such as the European Chemical Industry Council (Cefic), and takes part in industry gatherings such as the European Petrochemical Association (EPCA) and the European Petrochemical Luncheon.

As part of the journey towards increased sustainability, Borealis has renewed International Sustainability & Carbon Certification PLUS (ISCC PLUS) in its plants in Kallo (Belgium), Beringen (Belgium), Schwechat (Austria), Porvoo (Finland) and Stenungsund (Sweden) and secured renewable feedstock deliveries in several locations.

Fertilizers, Melamine and Technical Nitrogen Products (TEN)
The Fertilizers, Melamine and TEN business consumes natural gas for its production sites as a primary feedstock. Natural gas is mainly consumed through its conversion to gaseous hydrogen through steam and is needed to produce ammonia.

In order to mitigate the volatility of gas prices in Fertilizers, Melamine and TEN, Borealis implemented a hedging strategy in close collaboration with the sales and operations team, to secure its margins.

During 2022, the situation for the European Fertiliser and Melamine industry remained difficult despite the lower gas prices towards the year-end, due to low demand and cheap feedstock imports into Europe. Therefore, and for economic reasons, Borealis continued with reduced production levels in its Fertilizer and Melamine production plants.

Performance 2022

Fig. 56: **Feedstock sourced for production of olefins and polyolefins (kt) 2018–2022**

kt	2022	2021	2020	2019	2018
HC&E/PO					
Feedstock for olefins	2,651	2,998	2,010	2,934	2,558
Olefins for polyolefin production	1,188	1,496	1,932	1,520	1,420

Fig. 57: **Feedstock sourced for production of fertilizers, melamine and TEN (GWh) 2018–2022**

GWh	2022	2021	2020	2019	2018
Fertilizers, Melamine and TEN					
Feedstock for fertilizer production	10,594	12,268	14,034	14,777	13,117

20230711119878

Non-renewable feedstock sourcing
Ethane contributes to the competitiveness of Borealis' European cracker assets and deliveries linked to the long-term supply agreement for US-sourced ethane continued in 2022. European ethane was less competitive due to the high natural gas prices and was largely replaced by US volume. Increasing propane and butane spreads against naphtha supported the light feedstock advantage in 2022 compared to historical performance.

As part of the supply strategy for the new world-scale PDH2 plant under construction in Kallo, Borealis signed a five-year USD 2.5 billion agreement with Energy Transfer, to supply propane from the US. The Very Large Gas Carrier currently under construction is expected to be delivered in Q2 2023, to supply propane for Kallo. The local logistical assets owned and operated by a third party to supply PDH2 were successfully commissioned and taken into use in Q1 2022.

Renewable feedstock sourcing
Borealis achieved a milestone in 2022, as it began to supply cracker products, phenol and acetone made from renewable hydrocarbons to its customers via the newly launched Borvida™ B portfolio (→ chapter Circular Economy, p. 119). Borealis' suppliers produce ISCC PLUS-certified hydrocarbons entirely from renewable raw materials, such as waste and residual oils and fats. Borealis then converts the hydrocarbons into ISCC PLUS-certified cracker products, phenol and acetone, which are finally used to produce high-performance plastics and chemical intermediates.

Chemical recycling
In 2022, Borealis increased its ownership share in Renasci to further safeguard its access to chemically recycled feedstock from Renasci's high-tech recycling centre in Oostende, Belgium. Borealis converts this feedstock into chemically recycled products, as per the ISSC PLUS mass balance methodology. In addition to increasing the supplier base with suppliers such as OMV and Neste, this development further supports Borealis' aim to become one of the leading global suppliers of chemically recycled base chemicals and polyolefins. Borealis' portfolio of Borcycle™ C products enables the transformation of plastic waste into circular high-performance products and applications (→ chapter Circular Economy, p. 119, → chapter Innovation p. 90).

The Renasci chemically recycled material requires special treatment during transportation, using iso-containers with nitrogen blankets to avoid reaction with oxygen and control the temperature. A dedicated supply chain concept has therefore been set up to transport the Renasci material in a safe and reliable way to the cracker in Porvoo, Finland.

In addition to sourcing chemically recycled material, Borealis is also investigating the viability of constructing its own chemical recycling plant at its location in Stenungsund, Sweden (→ chapter Circular Economy, p. 119).

Sourcing of Electricity & Utilities
Borealis sources electricity and utilities needed for its production processes. The Group's electricity contracts are generally spot-indexed and contracted on a one to three-year basis. Commodity pricing risk is managed using financial risk instruments.

The Group is actively scouting for industry alliances to prepare for a carbon-neutral future and has the goal for 100% of its electricity use to come from renewable sources by 2030, as part of the Group Strategy 2030. (→ chapter Energy & Climate, p. 125).

During 2022, Borealis continued to develop Power Purchase Agreements (PPA) to source renewable electricity on a longer-term basis. In Belgium, Borealis signed a PPA with Eneco, a Dutch energy supplier. The energy will be generated by an existing offshore wind park (Mermaid), located in the North Sea. In Sweden, Borealis signed a PPA with Axpo, a Swiss energy trader and supplier, to acquire renewable electricity for the Stenungsund facility. The electricity will be generated by a new onshore windfarm (Hultema), located in central Sweden.

In a co-investment agreement with Verbund, Borealis also commissioned a solar PV plant (4.8 MWP) at its production location in Schwechat, Austria, and simultaneously entered into a 10-year PPA for renewable hydroelectricity from two existing hydro plants in Austria, which are part of Verbund's portfolio. In 2022, Borealis sourced 28% of its electricity from renewable sources and is on track to reach its 2030 target.

Utilities are sourced on a longer time horizon of ten to fifteen years and very often within the context of petrochemical clusters, enabling delivery by pipelines from neighbouring industry.

Borealis' Hydrocarbon plants are also affected by the increasing prices for electricity and natural gas. To mitigate the impact, Borealis has actions in place, including using financial risk instruments for electricity, replacing natural gas with cheaper feedstock to the maximum extent possible, and maximising production and sales of natural gas priced products.

Fertilizers, Melamine and TEN follows the same energy and utilities sourcing strategy as for olefins and polyolefins production described above, with a focus on spot indexation and a one to two-year horizon. Commodity pricing risk is also managed using financial risk instruments.

Outlook

Borealis' objectives for 2023 in feedstock, electricity and utility procurement are to:

- further increase global sourcing of feedstock at competitive prices, for the crackers and PDH units;
- further increase renewable feedstock sourcing through increased volumes from existing renewable feedstock contracts and exploring alternative sources, including taking an investment decision on the Group's own chemical recycling plant; and
- continue to progress towards the target of sourcing 100% renewable electricity by 2030 through additional PPAs and solar panel investments, with a need to source an additional 400-600 GWh/a of electricity from renewable sources.

20230711119879

Raw Materials, Packaging, Technical Supplies and Services

Goals for 2022
Increase cost savings through automation and improvement of procurement process and tools
Further strengthen sustainability criteria in procurement decisions
Develop fit-for-purpose contracting strategies for planned projects in the circular economy
Keep Fertilizers, Melamine and Technical Nitrogen Products (TEN) plants at full capacity, due to lower Russian offer on fertilizers

Key Achievements of 2022
Number of automatically created purchase orders is monitored as a KPI All procurement benefit initiatives have been documented and tracked in a central tracking tool
Continue to execute on-site Together for Sustainability (TfS) audits at raw material and packaging (RMP) suppliers located in high-risk countries
Despite constrained engineering capacities in the market, all resources needed for projects were contracted
Maintained uninterrupted supply of raw materials in all plants

Borealis requires timely and reliable supplies of high-quality raw materials, packaging, technical supplies and services, so it can manufacture products and deliver them to customers, as well as support the growth and maintenance of the Group's assets.

The Group seeks to make responsible procurement decisions, which take into account both the total cost of ownership of the products and services it buys, and their sustainability. This can include factors such as suppliers' health, safety and environmental performance, the ability to reuse or recycle products, and suppliers' adherence to Borealis' ethical standards. Borealis takes a strategic approach to managing its most important suppliers and uses a range of tools to help assess their sustainability performance.

Governance

Borealis' Polyolefins (PO) procurement organisation is responsible for procurement at Group and location level, with the exception of Hydrocarbons & Energy's (HC&E) trading activities, which are managed directly by the HC&E organisation. The organisational structure of procurement includes separate areas for procuring raw materials and packaging (RMP), business services and technical equipment, as well as local procurement and project services. To drive value creation and foster synergies, OMV and Borealis have agreed to collaborate closely by setting up one integrated procurement organisation. This was reflected in the adoption of the One Procurement Directive, which applies across the OMV Group, including Borealis.

Procurement activities related to Fertilizers, Melamine and TEN are handled by a separate team, which also procures energy, gas and CO_2 rights for that business only. The team operates in compliance with the Borealis Group procurement procedures. The only exception, as a result of the ongoing divestment process for the business during 2022, is that it is not required to implement revised processes arising from Borealis and OMV progressively aligning their procurement processes.

Responsible Sourcing

Borealis follows a defined process when purchasing goods and services to ensure legal compliance, product quality, consistency, reliability of supply and sustainability. To get the best value, Borealis applies the Total Cost of Ownership philosophy. This requires the Group to consider the full costs it will incur during the lifetime of the product or service, rather than looking only at the upfront cost. When defining and adopting sourcing strategies, Borealis also considers market and technology intelligence and supplier innovation potential.

After defining Borealis' procurement needs (including scope and specifications), reviewing the supply market and defining the sourcing strategy, the suppliers are selected. This includes the use of questionnaires and on-site audits for supplier qualification.

Every year, Borealis defines a set of strategic suppliers based on criteria such as revenue, innovation, impact on operability and potential for growth. The Group uses a supplier relationship management process for strategic suppliers, which combines KPI-based performance management with supplier segmentation and professional knowledge of business risks. Activities with strategic suppliers can include top management meetings and common innovation programmes. On a monthly basis, Procurement

monitors the performance of around 100 strategic suppliers, evaluating risks and taking mitigating actions where needed.

The procurement process takes account of sustainability aspects and these are reflected in Borealis' Ethics Policy for Business Partners, which is published on the Group's website. It defines the Group's approach to key aspects of business ethics when sourcing, such as anti-corruption, anti-slavery, compliance and child labour, as well as health, safety and the environment. New major and strategic suppliers must agree to the policy by signing the contract. The Group does not see significant sustainability risks with major suppliers in North America and Europe, where most have implemented similar codes of conduct and may also be members of Together for Sustainability (TfS). Despite the stringent processes in place, in July 2022 Borealis became aware of possible large scale social fraud and alleged human trafficking practices by its contractor IREM, at the construction site for the propane dehydrogenation plant in Kallo, Belgium. → About the Kallo Case, p. 35

Fig. 58: **Proportion of spending on local suppliers in 2022** [1) 2) 3)]

in %	HC&E/PO (Technical supplies only)
Procurement budget spent on local suppliers	50

1) Definition of local: Supplier Country and Country of the Ordering Company are the same. // 2) Definition for significant locations of operation: Austria, Belgium, Sweden and Finland. // 3) Local sourcing is not applicable for Fertilizers, Melamine and TEN.

Together for Sustainability

As part of the OMV Group, Borealis is a member of TfS, which is a joint initiative set up by the chemical industry. TfS enables its members to implement sustainable procurement by sharing the results of standardised supplier audits and assessments performed by independent experts, using a single standard of auditing and assessment. It is based on the principles of the UN Global Compact and Responsible Care®.

TfS covers areas of sustainable business practice, including environmental impact, health and safety, labour and human rights, management and governance. The audits and assessments benefit both members and suppliers, who only need to go through the process once and avoid multiple assessments by different customers.

All new Borealis suppliers are requested to provide a TfS or EcoVadis assessment or equivalent, with criteria on corporate social responsibility, sustainability and ethics. Future suppliers in higher-risk countries will be requested to provide a TfS audit report. EcoVadis, the world's largest provider of business sustainability ratings, having rated more than 75,000 companies worldwide, scores companies across four themes (environment, labour and human rights, ethics and sustainable procurement), as well as providing a scorecard dedicated to carbon.

During 2022, 276 Borealis suppliers of HC&E/PO were assessed against the TfS standard's social and environmental criteria. → see Fig. 59 and 60, p. 151

During 2022, Borealis organised individual meetings and webinars for suppliers on ESG topics. This supplier engagement included helping suppliers understand how to fill out the CDP Climate Change questionnaire and explaining to them why this is important to Borealis. Fifty suppliers were invited to two webinars that Borealis organised with CDP in 2022.

20230711119880

In addition, Borealis organised its first Sustainability Supplier Day in 2022. The aim was to interact and exchange experience with key suppliers and build a stronger and more sustainable supply chain. More than 30 suppliers were invited to take part.

Fig. 59: **Negative environmental impacts in the supply chain** [1)]

	HC&E/PO
Number of suppliers assessed	276
Number of suppliers identified	1
Percentage of suppliers with which improvements were agreed upon	0.4%
Percentage of suppliers with which relationships were terminated	0%

1) Fertilizers, Melamine and TEN does not report this data as TfS is currently not followed or measured. TfS is part of general purchasing terms and conditions.

Fig. 60: **Negative social impacts in the supply chain** [1)]

	HC&E/PO
Number of suppliers assessed	276
Number of suppliers identified	8
Percentage of suppliers with which improvements were agreed upon	8%
Percentage of suppliers with which relationships were terminated	0.1%

1) Fertilizers, Melamine and TEN does not report this data as TfS is currently not followed or measured. TfS is part of general purchasing terms and conditions.

Procurement of Raw Materials & Packaging (RMP)
Raw materials and additives play a vital role for Borealis, giving unique product properties which enable the Group to produce value-added speciality products. Reliable supply of these materials, on time and in accordance with the agreed quality and quantity, supports Borealis' operational excellence. When considering awarding contracts to RMP suppliers, greenhouse gas emissions and supplier sustainability efforts are given a weighting in the assessment.

Borealis buys certain polymer additives which are produced using renewable feedstock, such as palm oil or rapeseed oil. The majority of the additives that use palm oil are sourced from suppliers certified by the Roundtable on Sustainable Palm Oil.

Packaging materials are needed for all solid products that Borealis delivers to customers. They are essential for protecting Borealis' goods in transit and for preventing spills such as pellet loss into the environment. They also help customers to dose the goods accurately and are a vital means to support Borealis' ambition to continuously reduce transport energy consumption. The Group continuously looks to balance the cost of packaging with the volume of material used and its functionality, such as the packaging's ability to prevent damage, contamination or pellet spills. Packaging is an important part of the Group's approach to contributing to a circular economy, and where possible, Borealis uses reusable packaging, such as pallets, and its own recycled material for the production of packaging material.

Borealis uses dedicated procurement teams to source its raw materials and packaging for polyolefins, primarily from suppliers in Europe, North America, Japan, China and Korea. The Group maintains an approved list of suppliers. In RMP, about 90 suppliers are considered strategic. They represent around 80% of the total yearly spend on RMP.

Increasing supply chain resilience and dealing with inflationary pressures to safeguard competitive pricing for raw materials, goods and services were the major challenges throughout the year, both in RMP and other procurement activities.

During 2022, the main focus was business continuity in RMP, as well as normalising the cost structure after the significant price increases in 2021 caused by the COVID-19 pandemic. During 2022, Borealis continued to be successful in ensuring continuity of supply and, as a result, no major production interruptions occurred due to a shortage of RMP.

The European Council Directive 94/62 Consolidated reinforces the mandatory requirements for packaging to be allowed on the EU market. The Directive also considers other measures such as environmental taxation, which will increase the cost of taxes on waste packaging. Under the Directive, EU member states should take the necessary measures to attain the following targets:

- by 2025, 65% by weight of all packaging waste will be recycled, including 50% of plastic and 25% of wood; and
- by 2030, 70% by weight of all packaging waste will be recycled, including 55% of plastic and 30% of wood.To respond to the Directive, in 2021 Fertilizers, Melamine and TEN completed a project to incorporate at least 30% of recycled content for the 1-Loop fertilizer big bags by 2022.

Borealis works together with Pallet Return System (PRS), an initative of the polymer industry, dedicated to providing full-service, sustainable pallet pooling solutions. PRS collects and repairs pallets and brings them back in a pool for all their customers. On average, 50% of all Borealis' used pallets are returned and reused in the pool.
In 2022, 523,835 pallets were collected by PRS from our customers.

Fig. 61: **Packaging consumption based on 1,000 kg of fertilizers sold (kg) 2020–2022**

kg	2022	2021	2020
Fertilizers			
Big bags	0.72	0.74	1.02
Film	0.04	0.05	0.04
Total	**0.76**	**0.79**	**1.06**

Fig. 62: **Packaging consumption based on 1,000 kg of polyolefins sold (kg) 2020–2022**

kg	2022	2021	2020
Polyolefins			
Cardboard	1.80	1.63	1.57
Bags	2.03	2.07	2.05
Film	0.45	0.45	0.45
Other materials	0.03	0.03	0.02
Total	**4.31**	**4.18**	**4.09**

Procurement of Technical Supplies and Business Services
Technical Procurement encompasses all procurement activities related to the maintenance and growth investments of Borealis' assets globally. This includes engineering, construction contracting and procurement of equipment, materials, industrial and business services and spare parts. The Technical Procurement organisation is set up in category teams, who consider the commercial and technical aspects of a purchase. The category teams establish and maintain procurement for core services, such as mechanical maintenance activities, non-core services, such as scaffolding needed to support core services, and business services.

20230711119881

Major engineering services or EPCM (engineering, procurement, construction and management) contracts are sourced globally, while maintenance services are predominantly sourced within Europe.

Group-wide equipment roadmaps are developed for the different disciplines, based on sustainable asset care location masterplans. A location masterplan applies a long-term view to maximise an asset's lifetime, reduce risk and steer investment for maximum efficiency. All location master plans build up to an equipment roadmap, in which standardisation and volume bundling opportunities are explored and implemented via Group-wide Enterprise Frame Agreements with suppliers.

In 2022, the composition of the project portfolio clearly reflected the shift towards circularity as one of the cornerstones of Borealis' strategy, with an increased number of sustainability related projects. External engineering services required by these projects were in high demand and sourcing these services was challenging. However, despite these constraints, no project was delayed or put on hold.

During 2022, Technical Procurement continued to support Borealis' major construction projects in Texas, US, and Kallo, Belgium. Projects for mechanical and chemical recycling also progressed and required significant attention to support contract awards for the related engineering activities.

Outlook

In 2023, Procurement will:

HSSE
- strengthen the pre-qualification process for new suppliers, with a focus on health, safety, security and environment (HSSE) and sustainability, by fully implementing OMV Group's new contract management procedure;
- continue its high focus on security of supply, due to continuing global logistical challenges;

Circular Economy
- support Borealis' projects for chemical and mechanical recycling, by awarding and managing contracts for equipment and services needed in the different steps of the projects' lifecycle;
- improve sustainability in packaging usage, for example, through increasing the re-use of pallets and starting to use recycled material for packaging. Where possible, suppliers will be prompted to reuse packaging such as pallets and big bags;
- continue to support Borealis' growth projects and further develop technology projects, such as bio-based feedstock and energy efficiency initiatives, to support the Group's journey towards a circular economy;

Cost efficiency
- continue to increase cost efficiency and synergies through integrated management of procurement within the OMV Group;
- ensure price transparency of RMP as part of the final product recipe cost, to help manage price volatility in the market;

Human Rights
- further strengthen human rights compliance throughout the value chain, building on the improvements made in 2022 → chapter Ethics & Compliance, p. 69.

Logistics

Goals for 2022	Key Achievements of 2022
Reduce the number of safety incidents	Implemented transportation safety audits plan in line with the target, with clear commitment from audited parties to take the improvement actions defined Logistics accidents reported as severe were reduced by 50%, reported incidents were reduced by over 50% resulting in a 30% below the set safety index target.
Manage the impact on Borealis' Polyolefin business of the drop in capacity for road transportation, as a consequence of the European Transport Mobility Package	Managed the drop in capacity for road transportation largely by shifting to rail transportation, resulting in no major capacity loss and no delays for Polyolefin transportation.
Adapt supply chain for cracker locations to new geopolitical environment	Changed feedstock supply chain for cracker locations from Russia to the US, without any interruption to the feedstock supply
Fertilizers, Melamine and Technical Nitrogen Products (TEN) to hold logistics days with logistics service partners, to discuss strategic topics	Organised nine logistics days in six countries, to discuss safety, sustainability and digitalisation with logistics service partners, with the aim of increasing their safety awareness and performance
Fertilizers, Melamine and TEN to implement Shipper of Choice project	Begun Shipper of Choice project to make the business more attractive to carriers, reflecting lack of available capacity and increasing costs across the market, in order to secure transport solutions and build a reliable distribution setup

Borealis' businesses transport a combined volume of up to 11.1 million tonnes (7.6 million tonnes by HC&E and PO and 3.5 tonnes by Fertilizers, Melamine and TEN) of raw materials and finished products to the Group's sites or customers' premises each year.

Borealis outsources its logistics services to external suppliers, who are required to adhere to Borealis' safety, ethics and environmental standards. When Borealis is awarding contracts, it takes costs, service, quality, safety and sustainability into account. The weighting applied to each of these factors depends on the business's needs and can vary according to customer requirements, the type of products transported (dangerous or non-dangerous) and the business environment. However, at all times, Borealis' safety and ethical standards must be met. The primary sustainability aspects Borealis needs to address relating to logistics are safety, in particular potential accidents and spills, as well as smoking, speeding, alcohol use, working at heights without safety protection and a severe incident on the road as well as the reduction of greenhouse gas emissions, primarily in the form of carbon dioxide (CO_2).

Governance

Each business area is responsible for sourcing its own logistics requirements, with the respective Senior Vice President having overall responsibility for their organisation.

In Hydrocarbons & Energy (HC&E), logistics contracts for all modes of transport (sea transports, pipelines, rail, trucks, storage facilities) are managed by the Supply Chain Manager, with logistics coordinators in Belgium, Sweden and Finland responsible for the day-to-day execution of the transport agreements. The Supply Chain team also includes a Transportation Safety Expert, responsible for vessel vetting, transportation safety audits and incident management.

In Polyolefins, global logistics sourcing is part of the Product Asset Management and Supply Chain (PAM/SC) organisation, while there is also a strong link to the procurement organisation. The sourcing organisation works with four category managers, who are responsible for bulk transport, palletized transport, maritime (container) transport and external warehouse management.

20230711198B2

The PAM/SC organisation also includes the site logistics organisation, which is responsible for on-site activities such as loading, storage, dispatch, packaging and order execution. Each major site has a logistics manager reporting to a corporate manager, to ensure process and procedures are aligned.

In Fertilizers, Melamine and TEN, a Steering Committee consisting of the Director Sales, Manager Sales and Operations Planning and the Director Supply Chain, approves the scope and the outcome of the tender.

The Global Logistics Manager, who reports to the Director Supply Chain, is accountable for the overall logistics strategy. The logistics managers are responsible for defining the logistics strategy in their respective areas of responsibility and for implementing those strategies together with the logistic specialists. The logistics coordinators are responsible for executing the deliveries, in line with the negotiated contracts.

Transport Modes

Polyolefins

Polyolefins has approximately 130 providers of road transport, container transport, maritime transport, warehousing and on-site logistics services. Approximately 40 partners are responsible for 80% of the business with the largest one being 7%. All of Borealis' partners are either Safety & Quality Assessment for Sustainability (SQAS) qualified, certified by maritime or other qualification bodies, or are being qualified via the EcoVadis assessment, the world's largest provider of business sustainability ratings. The business manages its contracts for bulk transport, packed transport, maritime shipments and warehousing partly at a global level and partly at location level. The operation of logistics is managed by operation managers at each production location.

Hydrocarbons & Energy

Borealis has long-term partnerships with strategic logistics partners for its sea transport, pipelines, rail and truck deliveries. These long-term partners are encouraged to obtain sustainability ratings from EcoVadis. Road transport companies are required to have SQAS certification. Borealis tracks the fleet's safety performance and energy efficiency, as well as promoting the use of environmentally friendly bunker solutions. The Group also uses its dedicated time charter vessel, Navigator Aurora, as well as shorter-term time charter options (four to six months) to source US-based ethane or liquefied petroleum gas (LPG) for its flexible crackers in Stenungsund, Sweden, and Porvoo, Finland.

Fertilizers, Melamine and TEN

Fertilizers, Melamine and TEN has around 300 providers of road, maritime and rail transport. About 120 logistics service providers carry out 90% of the business's transport. Logistics service providers transporting dangerous liquid cargo are requested to have an SQAS certification, which is based on a predefined questionnaire supported by the European Chemical Industry Council (Cefic). About 90% are SQAS certified.

Fig. 63: **Total transported volumes per business segment in 2021–2022** [1)]

Business segment	2022 Transported volume (kt) HC&E/PO	2022 Transported volume (kt) Fertilizers, Melamine and TEN	2021 Transported volume (kt) HC&E/PO	2021 Transported volume (kt) Fertilizers, Melamine and TEN
Polyolefins	3,407	–	3,726	–
Hydrocarbons & Energy	4,162	–	3,478	–
Fertilizers, Melamine and TEN	–	3,501	–	3,753

1) Total Hydrocarbons & Energy volume transported (all INCOTERMS) is 7,5 kt, of which 4.2 kt were transported via own contracted transport.

Activities 2022

Vetting of Tankers and Barges

Borealis carries out regular vetting inspections on sea-going tankers and inland barges, with every vessel and barge being subject to Borealis' vetting approval. Contracted shipping companies also regularly undergo a Tanker Management and Self-Assessment audit. An online vetting system, called Mainstay, is used to vet vessels and barges used in the HC&E supply chain.

Securing Charter Vessel Capacity for HC&E

The estimated volume shipped in 2022 was 950 kilotonnes. As a result of the war in the Ukraine, in 2022 HC&E stopped its Russian feedstock supply, which had been imported via rail to the Group's cracker in Finland, and replaced it with supply sources in the US. To recover the gap, Borealis has entered into shorter-term Very Large Gas Carrier time charter agreements, to accommodate the transport of LPG from the US to the cracker in Finland.

Borealis also successfully concluded negotiations for a newly built time charter vessel. This will support the Group's LPG needs from 2023 onwards. The new vessel is designed with a dual fuel option, allowing the engine to run on LPG instead of conventional gas-oil-based bunkers, supporting the long-term strategy for reducing Borealis' environmental footprint.

Projects to Reduce CO_2 Emissions in Polyolefin Logistics

During 2022, Borealis implemented several projects to move transport of polyolefins from road to intermodal or internal waterways. These included:

- switching to river barges for transportation from inland sites in Belgium to sea ports;
- increasing intermodal transport by 5% from the Group's site in Austria to northern Italy; and
- increasing the volume the Group moves with partners who are part of the Responsible Care® programme.

Logistics Set Up for Renewable and Chemically Recycled Feedstock Sourcing

During 2022, HC&E further developed its supply chain solutions for transporting renewable feedstocks (bio-diesel and bio-propane) to the Group's production locations Porvoo, Stenungsund and Kallo (Belgium), as well as for customer deliveries. A dedicated supply chain solution has been set up for chemically recycled feedstock from Renasci to the Porvoo cracker, via a multimodal solution with iso-containers and vessels.

Shipper of Choice

The logistics market is currently challenging, with insufficient capacity and rising costs, and these challenges are expected to increase going forward. Fertilizers, Melamine and TEN has therefore launched a project to maintain or increase its supply chain reliability, by making it a more attractive customer to carriers and logistics service partners. The business conducted three surveys in order to understand their needs and identify the gaps to work on. This resulted in an action plan which is being implemented by smaller teams.

Operation Clean Sweep

Borealis is fully committed to zero pellet loss and therefore takes part in Operation Clean Sweep® (OCS), an international programme to mitigate pellet loss. During 2022, Borealis implemented spot checks at all locations on the quality of bulk truck cleaning, in relation to pellet spills during filling. All reported deviations are entered into Borealis' carrier performance rating system, which also includes haulier consequence management. Borealis is also conducting a study into installing an automatic pellet blowing station that would automatically clean the trucks from over-spilled pellets, which will be further rolled out next year. (→ chapter Environmental Management, p. 135).

Improving Polyolefin Circularity through the PackCycle Project

Borealis launched the PackCycle project in 2020, with the aim of improving the circularity of the flexible packaging used in transporting and distributing the Group's products to its customers, such as plastic sheets used in pallet packaging. Once successfully implemented across Borealis' operations, the Group will support the adoption of post-consumer recycled (PCR)-based plastic sheets at sheet producers and users, in line with its EverMinds™ ambition to accelerate action on circularity of plastics across the value chain. The PackCycle project underlines Borealis' commitment to accelerating action on circularity by developing this PCR packaging solution in collaboration with Ecoplast and implementing it across all of the Group's European operations.

20230711119883

European Transport Mobility Package

As part of Mobility Package, a new set of rules for the road transport sector came into force across the EU. The Mobility Package is essential for ensuring effective implementation and enforcement of the road transport legislation, balancing the social protection of drivers and the freedom of operators to provide cross-border transport services. To help the sector correctly apply these rules, the Commission prepared an initial set of guidance documents, which will be gradually complemented by further guidance, where necessary.

As a result of the Mobility Package, there was a significant drop in capacity for road transport, due to a lack of drivers. Despite this, Borealis did not incur significantly reduced performance for road transport of its Polyolefin products. The Group did face problems with intermodal transport but was still able to avoid major delays with any customers. Overall, Borealis reduced its claims related to late deliveries by 25% against 2021.

Transportation Safety

Transportation safety is key for Borealis. The Group requires all logistics partners to report the following accidents and spills to the environment that occur during transportation:

- any injury or fatality to their own personnel, as well as contractors;
- any damage to property of any party involved in the accident;
- all material damage while transporting Borealis' goods to the final customer;
- any public disruption;
- pellet spills during bulk loading or transport to the final customer; and
- any intervention by the emergency services.

Within 24 hours of an accident, the logistics partner must send a report to Borealis which includes information on the cause of the accident. The Group collaborates closely with its supply chain contractors and has a process in place to define improvement actions for every incident.

Borealis looks to continuously improve transport safety in different modes of transport, as a submitting member of the Oil Companies International Marine Forum, Chemical Distribution Institute and European Barge Inspection Scheme. As part of this, the Group follows an annual transport safety audit plan. In 2022, Borealis performed four transportation safety audits.

In 2021, the Group introduced TRI as an indicator for logistics incidents. Borealis tracks the transport safety performance of its logistic providers using a key performance indicator (KPI) based on definitions provided by the Cefic to classify incidents.

Fig. 64: **Logistics Incidents**

Actual	2022	2021
PO		
Severe incidents	28	56
Medium incidents	71	80
Low incidents	201	267
HC&E		
Severe incidents	2	3
Low/medium incidents	28	23
Fertilizers, Melamine and TEN [1]		
Severe incidents	1	-
Medium incidents	2	-
Low incidents	13	-
Total Fertilizers, Melamine and TEN	**16**	**29**

1) Data cannot be compared as we switched to Cefic classification in 2022. Classification of incidents has only started as of 2022. Thus, only the total value is reported in 2021.

Safety Boost Programme
As part of the safety boost programme, Fertilizers, Melamine and TEN undertook various initiatives to improve safety during transportation and port activities. In 2022, nine logistics days were organised, to which the main carriers and logistics service providers were invited. The theme of the days was Let's Act Together, to underline the importance of working together on the business's strategic topics of safety, sustainability and digitalisation.

Spills or Losses During Transportation
Spills of hydrocarbons are potentially dangerous and may create significant exposure for people and the environment, given the nature and volumes of the products being moved. Extra-high precautionary safety measures are therefore put in place and followed up with the supply chain contractors to mitigate the risks of spills, including pellet spills (→ chapter Environmental Management, p. 135).

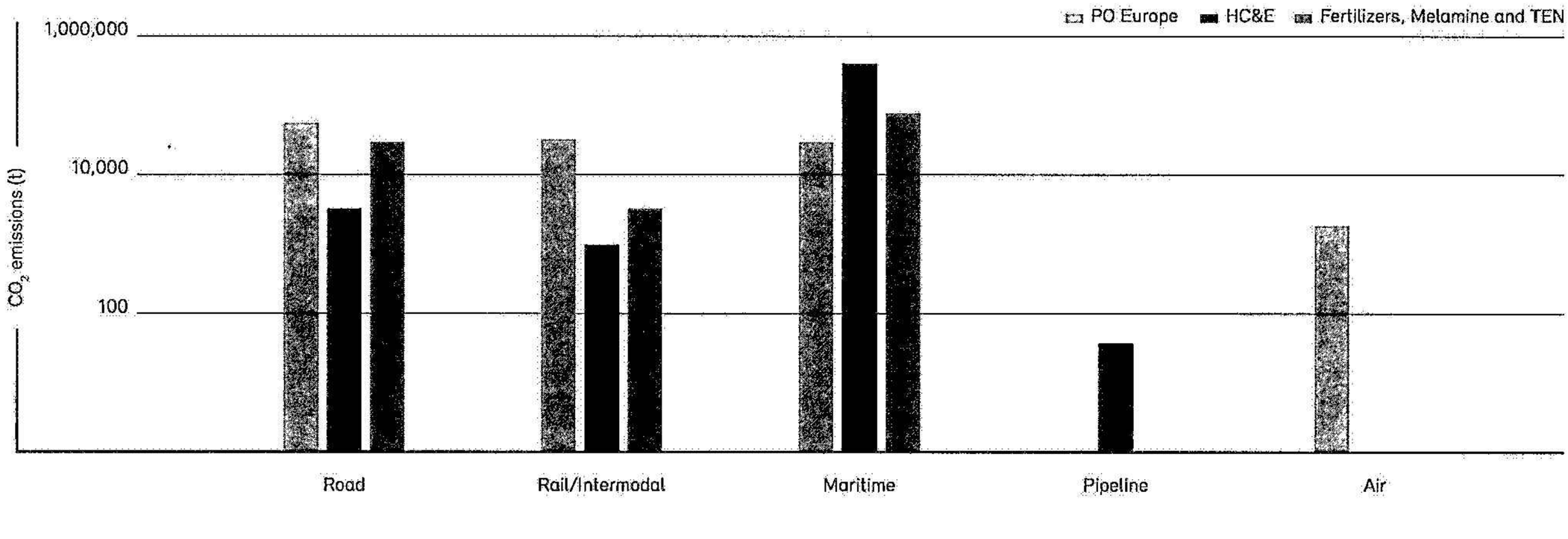
In compliance with the Agreement Concerning the International Carriage of Dangerous Goods by Road, drivers transporting dangerous goods require a special licence and training, and must operate under restrictions, such as parking only in secure areas. In accordance with the Explosive Precursor Regulation, any suspicious transaction, disappearance or potential theft of fertilizer with a high nitrate content must be reported to the authorities, as it can be used as an ingredient for explosives.

During 2022, no significant spills were reported to Borealis.

CO_2 Emissions from Transportation
Wherever possible and feasible, Borealis seeks to transport products off-road via rail, barges, vessels or pipelines, and to optimise logistics by using terminals which are closer to the customer, requiring shorter transport distances.

Deep sea shipping produces significant emissions of CO_2, sulphur oxides and nitrous oxides, which may be subject to stricter global targets in future. When contracting new long-term shipping capacity, a key decision element therefore is the option to run ships on cleaner gas fuels than traditional gas-oil-based bunkers.

Fig. 65: **Borealis' CO_2 emissions by mode of transport in 2022, according to the Global Logistics Emission Council framework (t)** [1) 2)]



	Road	Rail/Intermodal	Maritime	Pipeline	Air
PO	64,552	35,387	33,813	–	1,970
HC&E	3,442	1,101	409,825 [3)]	49.72	–
Fertilizers, Melamine and TEN	32,461	3,271	84,396 [4)]	–	–

1) According to GLEC calculation methodology. For PO, maritime emissions come directly from shipping lines. // 2) Pipeline is only applicable for HC&E, Air is only applicable for PO // 3) Due to the war in Ukraine the transportation of feedstock via gas shipments coming from US has been greatly increased, which explains the increase in CO_2 emissions compared to 2021. Additionally, a CO_2 tracker has been implemented in HC&E, making the reporting more accurate. // 4) Due to higher gas prices, more ammonia was imported by vessel resulting in a significant increase in CO_2 emissions compared to 2021.

20230711 9884

Performance 2022

In total, around 31% of Borealis' european polyolefins and 62% of Fertilizers, Melamine and TEN's products are transported by road, with the result that road transport generates the large majority of Borealis' emissions from logistics activities (→ as shown in Fig. 65, p. 158).

The Group is trialling LNG, hydrogen and electric trucks to replace trucks using diesel, thereby reducing emissions from road transport.

Outlook

Polyolefins

- improve logistics reliability for customers, especially for those where the distance from the Borealis production plant is exceptionally long;
- continue the logistics safety boost plan, including enhanced safety audits at sites, rolling out more digital solutions that contribute to safety, such as standardised truck driver training and use of virtual reality and focusing on changing behaviours of drivers not adhering to the safety rule on working at heights; and
- complete the Polyolefin PackCycle project during 2023, with the conversion to up to 80% PCR for key packaging elements.

Hydrocarbons & Energy

- maintain a high focus on transport safety, as a main priority for suppliers and customers;
- continue to reduce costs through the optimisation of transport routes and contract negotiations with key service providers; and
- continue to reduce the environmental footprint of transportation, to reduce GHG emissions.

Vienna, 22 February 2023
Executive Board:

Thomas Gangl m.p.
Chief Executive Officer

Mark Tonkens m.p.
Chief Financial Officer

Wolfram Krenn m.p.
Executive Vice President
Base Chemicals & Operations

Philippe Roodhooft m.p.
Executive Vice President
Joint Ventures & Growth Projects

Lucrèce De Ridder m.p.
Executive Vice President
Polyolefins, Circular Economy Solutions
and Innovation & Technology

20230711119885

Independent Limited Assurance Report on the Consolidated Non-financial Report 2022 [1)]

We have performed a limited assurance engagement of the Consolidated Non-financial Report 2022 of Borealis AG, Vienna, and its subsidiaries (the "Group") for the year ended 31 December 2022.

Management's responsibility
The Management is responsible for the preparation of the Consolidated Non-financial Report 2022 in accordance with the requirements of section 267a UGB and the "EU-Taxonomy Regulation" (EU-Regulation 2020/852) as well as the GRI Standards 2021. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of the Consolidated Non-financial Report 2022 that is free from material misstatement, whether due to fraud or error.

Auditor's Responsibility
Our responsibility is to express a limited assurance conclusion based on our procedures performed and evidence obtained.

We performed our engagement in accordance with the professional standards applicable in Austria with regard to KFS/PG 13 "Other assurance engagements", KFS/PE 28 "Selected issues in connection with the assurance of non-financial statements and non-financial reports pursuant to sections 243b UGB and 267a UGB as well as sustainability reports" and the International Standards on Assurance Engagements (ISAE) 3000 (Revised) "Assurance engagements other than audits or reviews of historical financial information". These standards require that we comply with our ethical requirements, including rules on independence, and that we plan and perform our procedures by considering the principle of materiality to be able to express a limited assurance conclusion based on the assurance obtained. As provided under section 275 para. 2 UGB (liability provision regarding the audit of financial statements of small and medium-sized companies), our responsibility and liability towards the Company and any third parties arising from the assurance engagement are limited to a total of EUR 2 million.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement; consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

The selection of the procedures lies in the sole discretion of the auditor and comprised the following:
- Critical assessment of the Group's analysis of materiality considering the concerns of external stakeholders
- Analysis of risks regarding the essential non-financial matters / disclosures
- Updating the overview of the policies pursued by the Group, including due diligence processes implemented as well as the processes used to ensure an accurate presentation in the report
- Updating the understanding of reporting processes by interviewing the relevant employees and inspecting selected documentations.
- Evaluating the reported disclosures by performing analytical procedures regarding non-financial performance indicators, interviewing relevant employees and inspecting selected documentations
- Examining the consolidated non-financial report regarding its completeness in accordance with the requirements of section 267a UGB, the "EU Taxonomy Regulation" (EU Regulation 2020/852) as well as the GRI Standards 2021
- Examining the process for greenhouse gas balancing and the related reporting regarding completeness and appropriateness in accordance with the GHG Protocol Corporate and Value Chain Standards
- Evaluating the overall presentation of the disclosures and non-financial information.

1) We draw attention to the fact that the English translation of this report is presented for the convenience of the reader only and that the German wording is the only legally binding version.

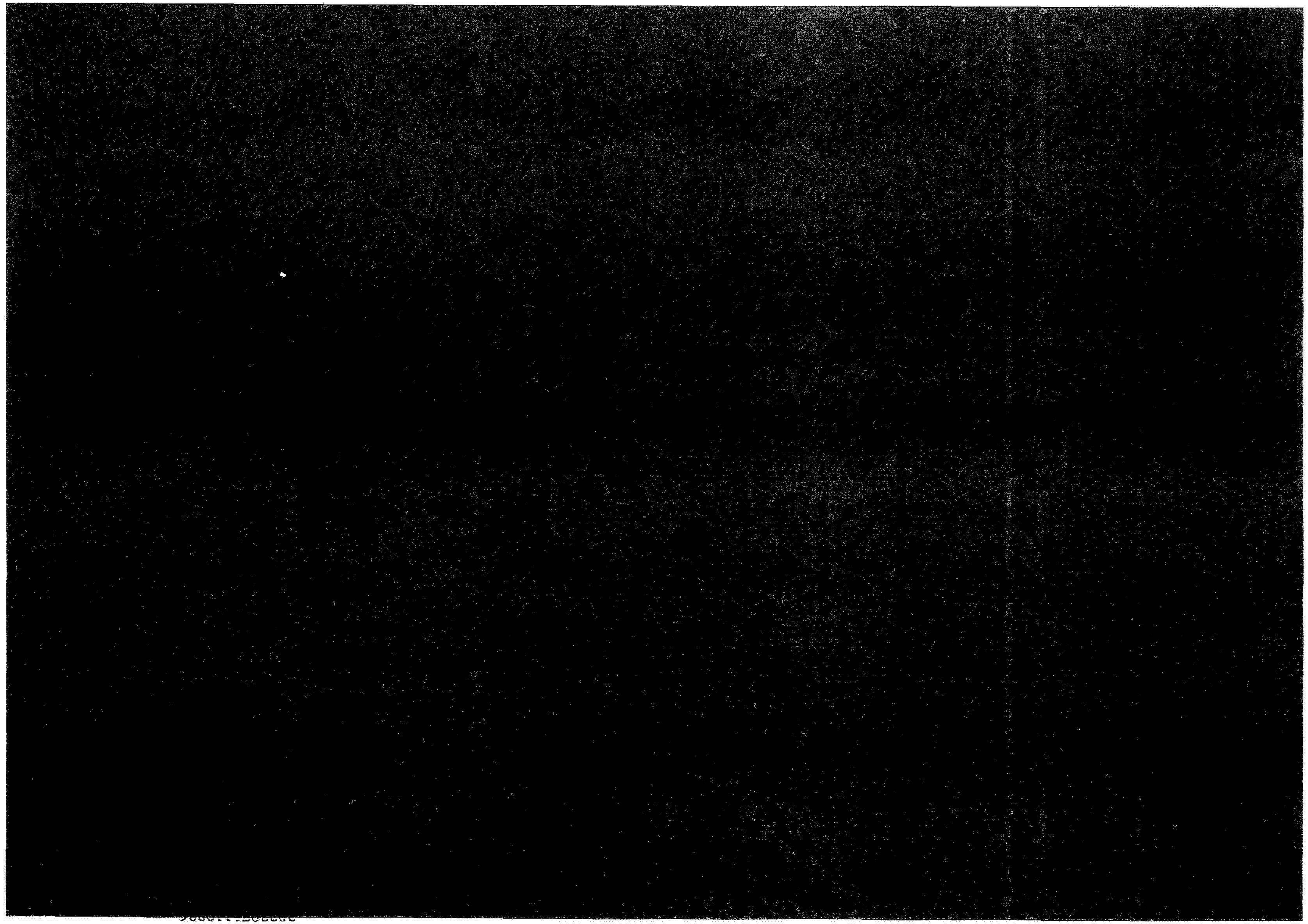
The following is not part of our engagement:
- Examining the processes and internal controls particularly regarding their design, implementation, and effectiveness,
- Performing procedures at individual locations as well as measurements or individual evaluations to check the reliability and accuracy of data received,
- Examining the prior-year figures, forward-looking information, or data from external surveys,
- Checking the correct transfer of data and references from the (consolidated) financial statements to the non-financial report; and
- Examining the information and disclosures on the website or further references on the internet.

Neither an audit nor a review of financial statements is objective of our engagement. Furthermore, the disclosure and solution of criminal acts, as e.g., embezzlement or other kinds of fraud, and wrongful doings, nor the assessment of the effectiveness and profitability of the management are objectives of our engagement.

Conclusion
Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Consolidated Non-financial Report 2022 is not prepared, in all material aspects, in accordance with the requirements of section 267a UGB and the "EU Taxonomy Regulation" (EU Regulation 2020/852) as well as the GRI Standards 2021.

Vienna, 22 February 2023
PwC Wirtschaftsprüfung GmbH

Alexander Riavitz m.p.
Austrian Certified Public Accountant



Auditor's Report [1) 2)]

Report on the Consolidated Financial Statements

Audit Opinion

We have audited the consolidated financial statements of Borealis AG, Vienna, and its subsidiaries (the Group), which comprise the consolidated balance sheet as of 31 December 2022, the separate consolidated income statement, the consolidated statement of comprehensive income, the consolidated cash flow and the consolidated statement of changes in equity for the financial year then ended, and the notes to the consolidated financial statements.

In our opinion, the accompanying consolidated financial statements comply with legal requirements and give a true and fair view of the financial position of the Group as of 31 December 2022, and of its financial performance and cash flows for the financial year then ended in accordance with International Financial Reporting Standards as adopted by the EU (IFRSs) and the additional regulations of section 245a Austrian Company Code.

Basis for Opinion

We conducted our audit in accordance with Regulation (EU) No. 537/2014 (hereinafter EU Regulation) and Austrian Generally Accepted Standards on Auditing. Those standards require the application of the International Standards on Auditing (ISAs). Our responsibilities under those provisions and standards are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements" section of our report. We are independent of the Group in accordance with Austrian Generally Accepted Accounting Principles and professional requirements, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained until the date of the auditor's report is sufficient and appropriate to provide a basis for our opinion by this date.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the financial year. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

We have structured key audit matters as follows:
– Description
– Audit approach and key observations
– Reference to related disclosures

1. Recoverability of Property, Plant and Equipment and Intangible Assets including Goodwill

Description

In the consolidated financial statements of Borealis AG, Vienna, as of 31 December 2022, an amount of EUR 3,759.4 million (25.6% of total assets) is presented under "property, plant and equipment" and "right-of-use assets" and an amount of EUR 634.0 million (4.3% of total assets) is presented under "intangible assets" which includes goodwill in the amount of EUR 132.8 million (0.9% of total assets).

Goodwill is tested for impairment at least annually. The carrying amounts of property, plant and equipment and intangible assets are reviewed for impairment triggers on each reporting date and whenever triggering events occur that indicate that property, plant and equipment and intangible assets including goodwill may be impaired. For this purpose, Borealis AG, Vienna, estimates the recoverable amount using the discounted cash flow method.

Property, plant and equipment and intangible assets including goodwill are allocated to cash-generating units ("CGUs"). The carrying amounts of the CGUs are compared to the recoverable amounts (value in use) derived from the valuation model. As far as the recoverable amount is lower than the carrying amount, an impairment is recognised.

1) We draw attention to the fact that the English translation of this auditor's report according to section 274 UGB (Austrian Company Code) is presented for the convenience of the reader only and that the German wording is the only legally binding version.

20230711119887

Given the complexity of the impairment model, the estimation uncertainty involved in the derivation of data and parameters used and the immanent discretionary decisions, the recoverability of property, plant and equipment and intangible assets including goodwill is considered as a key audit matter.

Audit Approach and Key Observations
As part of our audit of the consolidated financial statements, we have evaluated the determination of CGUs.

We have assessed the annual process, the procedure for budgeting and the impairment test for property, plant and equipment and intangible assets including goodwill. In particular, we have verified the appropriateness of the significant assumptions used in the valuation model.

We evaluated whether the assumptions used to derive the future cash flows are based on the most recent five-year plan prepared by management and approved by the Supervisory Board. We confirmed the accuracy of the five-year plan by performing an analysis of historic budget deviations.

We have further evaluated the tenability of assumptions used to determine the discount rates. Our internal specialists have evaluated whether the assumptions used for the discount rates as well as the growth rates for the perpetuity are in line with external market and industry data.

Additionally, we carried out own sensitivity analyses to determine the impact of parameter changes (changes in discount rate and cash flows) on the recoverable amount. Furthermore, we have assessed whether the long-term profitability in the terminal value period is plausible. We also evaluated whether the disclosures in accordance with IAS 36 made by Borealis AG, Vienna, in the notes to the consolidated financial statements are complete and accurate.

Our audit procedures have verified the appropriateness and tenability of the valuation model used by the entity to carry out an impairment test as required by IFRS (impairment test in accordance with IAS 36) as of 31 December 2022. The assumptions and parameters used in the valuation are appropriate. The disclosures required by the relevant standards are complete and appropriate.

Reference to Related Disclosures
Management has disclosed this key audit matter under "7. Depreciation, Amortisation and Impairment" in the consolidated financial statements.

2. Discontinued Operation – IFRS 5 – NITRO
Description
Borealis nitrogen business unit ("NITRO") including fertilizers, technical nitrogen and melamine products, excluding its interest in Rosier S.A., Belgium was presented as asset held for sale and as a discontinued operation as of 31 December 2021. Based on the binding offer received by EuroChem Group AG, Switzerland on 2 February 2022, which valued the business on an enterprise value basis of EUR 455 million, Borealis had recognised an impairment in the amount of EUR 443.7 million in line with IFRS 5 as of 31 December 2021. In March 2022, Borealis announced it had declined the offer of EuroChem Group AG.

In June 2022, a binding offer was received from AGROFERT, a.s., Czech Republic and subsequently accepted in July 2022. The valuation of the business on an enterprise value basis amounts to EUR 810 million which indicated a fair value less cost of disposal above the carrying amounts of the assets held for sale. Based on the valuation performed, management has recognised a gain in fair value less cost of disposal in the amount of EUR 266.4 million as of 31 December 2022 in line with IFRS 5

We considered the accounting treatment of this transaction in the consolidated financial statements as a key audit matter because of the size of the transaction, the complexity of the accurate and complete classification of assets and liabilities of the disposal group and the measurement of the fair value less cost of disposal in line with IFRS 5.

Audit Approach and Key Observations
We held meetings and performed inquiries with the Borealis M&A and legal departments to obtain an understanding of the status of the negotiation and the disposal process.

We read and reviewed the information available in relation to the status of the sales process as of 31 December 2022 to evaluate whether the criteria of IFRS 5 have still been met and whether the accounting treatment of NITRO as asset held for sale and as a discontinued operation is still appropriate.

We performed procedures to verify the completeness and accuracy of the assets and liabilities presented as held for sale and the results stated as discontinued operation, including measurement in accordance with IFRS 5.

Our audit procedures included reviewing and challenging management's valuation of the gain recognised based on the fair value less cost of disposal of NITRO as of 31 December 2022; we note that up to closing of the transaction, the calculation of some amounts is based on judgment.

Our audit procedures have verified the appropriateness of NITRO being classified as asset held for sale and as a discontinued operation. Our audit procedures have furthermore confirmed the recognised gain based on the fair value less cost of disposal. The disclosures required by the relevant standards are complete and appropriate.

Reference to Related Disclosures
Management has disclosed this key audit matter under "8. Discontinued Operation and Other Changes" in the notes to the consolidated financial statements.

3. Recoverability of the carrying amounts of investments in associated companies and joint ventures
Description
As of 31 December 2022, the carrying amount of investments in associated companies and joint ventures amounted to EUR 2,796.9 million. Under IAS 28 Borealis assesses the recoverability of the investments in associated companies and joint ventures on each reporting date whenever triggering events occur that indicate that equity accounted investments may be impaired.

For the equity accounted investment Bayport Polymers LLC (Baystar), US, impairment indicators were identified as of 31 December 2022. For this purpose, Borealis AG, Vienna, estimates the recoverable amount using the discounted cash flow method. Given the complexity of the impairment model, the estimation uncertainty involved in the derivation of data and parameters used and the immanent discretionary decisions, the recoverability of equity accounted investments is considered as a key audit matter.

Audit Approach and Key Observations
We evaluated management's assessment of the recoverability of the carrying amount of investments in associated companies and joint ventures by evaluating if and how management determines a need of impairment. Where an impairment test was required, we evaluated management's assumptions.

We have assessed the annual process, the procedure for budgeting and the impairment test of investments in associated companies and joint ventures. In particular, we have verified the appropriateness of the significant assumptions used in the valuation model.

We evaluated whether the assumptions used to derive the future cash flows are based on the most recent five-year plan prepared by management and approved by the Supervisory Board. We confirmed the accuracy of the five-year plan by performing an analysis of historic budget deviations.

We have further evaluated the tenability of assumptions used to determine the discount rates. Our internal specialists have evaluated whether the assumptions used for the discount rates as well as the growth rates for the perpetuity are in line with external market and industry data.

Additionally, we carried out own sensitivity analyses to determine the impact of parameter changes (changes in discount rate and cash flows) on the recoverable amount. Furthermore, we have assessed whether the long-term profitability in the terminal value period is plausible. We also evaluated whether the disclosures in accordance with IFRS 12 made by Borealis AG, Vienna, in the notes to the consolidated financial statements are complete and accurate.

20230711119888

Our audit procedures have verified the appropriateness and tenability of the valuation model used by the entity to assess the recoverability of equity investments in associated companies and joint ventures as of 31 December 2022. The assumptions and parameters used in the valuation are appropriate. The disclosures required by the relevant standards are complete and appropriate.

Reference to Related Disclosures
Management has disclosed this key audit matter under "9. Investments in Associated Companies and Joint Ventures" in the notes to the consolidated financial statements.

Other Information
Management is responsible for the other information. The other information comprises the information included in the financial report, but does not include the consolidated financial statements, the management report for the Group and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and the Audit Committee for the Consolidated Financial Statements
Management is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the EU (IFRSs) and the additional regulations of section 245a Austrian Company Code, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Audit Committee is responsible for overseeing the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements
Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the EU Regulation and with Austrian Generally Accepted Standards on Auditing, which require the application of ISAs, will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with the EU Regulation and with Austrian Generally Accepted Standards on Auditing, which require the application of ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit.

We also:
- identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risks of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit.
  We remain solely responsible for our audit opinion.

We communicate with the Audit Committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit Committee with a statement that we have complied with all relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Audit Committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements
Comments on the Management Report for the Group Pursuant to Austrian Generally Accepted Accounting Principles, the management report for the Group is to be audited as to whether it is consistent with the consolidated financial statements and as to whether the management report for the Group was prepared in accordance with the applicable legal regulations.

Management is responsible for the preparation of the management report for the Group in accordance with Austrian Generally Accepted Accounting Principles.

We conducted our audit in accordance with Austrian standards on auditing for the audit of the management report for the Group.

Opinion
In our opinion, the management report for the Group was prepared in accordance with the applicable legal regulations and is consistent with the consolidated financial statements.

Statement
Based on the findings during the audit of the consolidated financial statements and due to the obtained understanding concerning the Group and its circumstances no material misstatements in the management report for the Group came to our attention.

2023071119889

Additional Information in Accordance with Article 10 of the EU Regulation

We were elected as statutory auditor at the ordinary general meeting dated 21 February 2022. We were appointed by the Supervisory Board on 21 February 2022. We have audited the Company for an uninterrupted period since the financial year 2016.

We confirm that the audit opinion in the "Report on the Consolidated Financial Statements" section is consistent with the additional report to the Audit Committee referred to in Article 11 of the EU Regulation.

We declare that no prohibited non-audit services (Article 5 para. 1 of the EU Regulation) were provided by us and that we remained independent of the audited company in conducting the audit.

Responsible Engagement Partner

Responsible for the proper performance of the engagement is Alexander Riavitz, Austrian Certified Public Accountant.

Vienna, 22 February 2023

PwC Wirtschaftsprüfung GmbH

Alexander Riavitz m.p.

Austrian Certified Public Accountant

2) This report is a translation of the original report in German, which is solely valid. Publication and sharing with third parties of the consolidated financial statements together with our auditor's report is only allowed if the consolidated financial statements and the management report for the Group are identical with the German audited version. This auditor's report is only applicable to the German and complete consolidated financial statements with the management report for the Group. For deviating versions, the provisions of section 281 para. 2 UGB apply.

Group Management Report

All amounts in the management report are not considering the reclassification of the discontinued operation and related balances held for sale.

Safety Performance
In 2022, Borealis reported a Total Recordable Injury Rate (TRIR) per million working hours of 2.9. This is a deterioration compared to the TRIR rate of 2.3 in 2021. The ratio reflects 60 incidents in which individuals were injured as well as one fatal accident involving a contractor in Grandpuits, France. Borealis expresses its deepest regret for this tragic fatality and all other incidents.

In line with its "Goal Zero" aim to eliminate all accidents and incidents, Borealis has developed and implemented new measures to enhance safety performance, including the new "B-safe" programme, whose pilot was launched in December in Belgium. B-safe will be successively rolled out across the Borealis Group by mid-2024. All Borealis employees and Executive Board members will receive one to three-day training sessions. Programme focus is on pro-active intervention to prevent safety incidents, risk identification measures, learning from past incidents, and promoting a generally heightened awareness of the importance of looking out for others on the job.

Ethical Labour Practices
The absolute top priority for the Borealis Group is to ensure the safety of all people working at and for Borealis. The Executive Board welcomes all efforts undertaken by Borealis senior management to implement further measures to achieve the ultimate "Goal Zero" of no accidents or incidents whatsoever, and to ensure that all people working for Borealis and its subcontractors can do so safely, and while heeding the highest ethical standards.

Ukraine and Geopolitical Conflict
The Borealis Executive Board and senior management have taken concrete measures in response to the war in Ukraine and the current geopolitical situation. Borealis has no production operations in either Russia or Ukraine, and employs only a limited number of persons in Russia. The Group's key priority is to ensure the safety of our people while doing the utmost to maintain business continuity. In light of international sanctions and other applicable laws, Borealis has reassessed its business transactions with Russia and has stopped sales to Russia and Belarus.

Operations at Borealis production sites around the world have not been interrupted, yet contingency plans are in place should supply disruptions occur. Measures are being implemented on a continual basis to ensure stable material procurement for all Borealis production sites. We remain in close, direct contact with our suppliers and customers, and update them regularly on pertinent developments.

Business Overview
Pronounced volatility has characterised the Brent crude market in 2022. Prices increased sharply as a result of the war in Ukraine, from 75 USD/bbl in December 2021 to a June 2022 peak of 118 USD/bbl. As fears of an economic downturn multiplied, prices eased to 81 USD/bbl by December. Overall, the average 2022 Brent Crude oil price of 99 USD/bbl exceeded the 2021 average of 71 USD/bbl.

From the beginning of 2022, naphtha prices developed in a similar vein as the price of oil, increasing steadily from 698 USD/t in December 2021 to a peak of 996 USD/t in March 2022. Increased naphtha availability in Europe caused by lighter refinery feedstock, and lower demand from China, put downward pressure on the price, which stood at 559 USD/t at year's end. Ethylene and propylene contract prices were also impacted by the naphtha price development. Ethylene started the year at 1,273 EUR/t and, supported by healthy demand in the spring turnaround season, peaked in April at 1,665 EUR/t. Due to limited demand, particularly in July, prices declined, ending the year at 1,270 EUR/t. The price of propylene rose from 1,288 EUR/t in January to 1,675 EUR/t in April, closing out the year at 1,170 EUR/t.

Following the historic high levels reached in 2021, polyolefin margins slowly normalised in the first half of 2022, supported by a busy spring turnaround season, particularly in the second quarter. As of the third quarter, margins deteriorated due to plummeting demand resulting from the global GDP slowdown, and inflationary pressure on customers. In the meantime, the robust recovery of the international container freight market, which in December 2022 had approached pre-COVID levels, allowed imports to surge. Towards the end of the year, polyolefin margins recovered slightly thanks to low operating rates. In a similar way as in 2009, un-planned outages and high US ethane prices limited any increase of imports to Europe, and margins remained lower than at the start of the year.

20230711119890

Strategy
In June, Borealis announced the launch of the Borealis Strategy 2030, a strategic evolution with sustainability at its core. Its two main pillars – geographic expansion and company transformation – build on the strong Borealis foundation of dedication to safety first, our people, innovation and technology, and performance excellence. The strategy sets forth ambitious new targets for both decarbonisation and the volume growth of circular economy products and solutions in the Borealis Polyolefins and Hydrocarbons businesses. Underlining the customer-centric approach to accelerating the transformation to a circular economy is a newly evolved purpose, "Re-inventing Essentials for Sustainable Living".

Joint Ventures and Global Growth
Geographic expansion is a key pillar of the Borealis Strategy 2030. Borealis is committed to achieving sustainable growth by way of joint ventures, mergers and acquisitions, and through the execution of major new construction projects on several continents. Closer geographic proximity to growth markets, and in particular the Middle East, Asia and North America, will enable Borealis to supply ever larger volumes of advanced and sustainable base chemicals and polyolefins to its global customers.

In June, Borouge, the strategic joint venture founded by Borealis and Abu Dhabi National Oil Company (ADNOC) in 1998, became the largest-ever IPO in Abu Dhabi when it was listed on the Abu Dhabi Securities Exchange (ADX). The IPO offered 10% of Borouge's total issued share capital and raised over USD 2.0 billion in gross proceeds. It drew USD 83 billion in orders and was oversubscribed by nearly 42 times in aggregate.

Borouge continued to drive growth in 2022. February saw the ground-breaking ceremony for Borouge 4, the new USD 6.2 billion facility under construction at the Borouge complex in Ruwais (UAE). Once operational, Borouge 4 will help meet growing demand for polymers in the Middle East and Asia, and will also supply feedstock to the adjacent TA'ZIZ Industrial Chemicals Zone. The successful start-up of PP5, the fifth Borouge polypropylene (PP) unit, also took place in February, boosting total Borouge PP capacity by more than 25%. The new PP5 unit is leveraging the proprietary Borstar® technology to deliver greater quantities of polymer-based material solutions for a wide range of industries, from packaging and consumer goods, to pipe and infrastructure.

The largest Borealis growth project underway in North America is the Baystar™ joint venture with TotalEnergies in Port Arthur, Texas. A new ethane-based steam cracker was started up in July 2022. With an annual production capacity of one million tonnes of ethylene, the cracker supplies feedstock to Baystar's existing polyethylene (PE) units. In the future, it will also supply ethylene to the new, 625,000 metric-tonne-per-year Borstar PE unit once construction and ramping up have been completed. Baystar is a crucial growth anchor as it enables Borealis to bring Borstar to North America for the first time.

Progress was made in the first half of 2022 at the new world-scale propane dehydrogenation plant (PDH) in Kallo (Belgium). However, construction was stopped after misconduct on the part of the site's contractor, IREM, was uncovered. Borealis suspended, then terminated all contracts with IREM and its subcontractors due to non-compliance with fundamental contractual principles. Work resumed in October following a re-tendering process. Borealis has zero tolerance for non-compliance in all aspects of its operations and has since implemented more extensive controls and monitoring measures to ensure full future compliance.

Borealis NITRO Divestment
The divestment process of the Borealis nitrogen business unit encountered delays as of the first quarter of 2022. A binding offer received from EuroChem in February was declined in March after assessing the consequences of the war in Ukraine and related sanctions. In June, Borealis received a binding offer from Czech-based AGROFERT that valued the business on an enterprise value basis at EUR 810 million. Pending regulatory approval, closing is anticipated for the first quarter of 2023. The Executive Board is confident that AGROFERT, a leading European player on the fertilizer market, is committed to maintaining supply security and the long-term development of production facilities.

Rosier Divestment
On 16 June 2022, Borealis converted into equity of Rosier S.A. a total of EUR 55 million, consisting of EUR 50 million intercompany loans, and EUR 5 million receivables, thus increasing its shareholding from 77.47% to 98.09%. As announced in September 2022, Borealis and YILDRIM Group's YILFERT Holding signed an agreement for the acquisition

of Borealis' shares at a valuation of EUR 35 million. On 2 January 2023, Borealis completed the divestment of its shares in Rosier S.A., shedding the 98.09% of the shares it previously owned, and no longer owns any shares in Rosier S.A.

Circular Economy

With sustainability at its core, the Borealis Strategy 2030 is a natural evolution of the Group's circular economy journey, which began in 2014 with the pioneering launch of the Daplen™ portfolio of PP compound solutions containing post-consumer recycled (PCR) plastics for use in the automotive industry. By 2022, Borealis was continuing to lead the way towards circularity by increasing the share of circular products (such as recycled and renewable-based polymers, and renewable hydrocarbons) in its overall production output. Borealis aims to boost its current annual production capacity of 100,000 tonnes to 600,000[1)] tonnes by 2025, and to 1.8[2)] million tonnes by 2030. The transition from conventional fossil fuel-based feedstocks to more renewably-based ones is thus well under way.

The Borealis commitment to leading the industry in this transition is represented by its EverMinds™ platform, which joins value chain partners and other stakeholders in accelerating circularity, in part by facilitating value chain co-operation. An ever-increasing number of products and applications are being designed from the ground up to be eco-efficient. Design for recycling and reuse help save precious resources while minimising material waste.

Borealis has further stepped up activity in the area of mechanical recycling. As announced in October, planning has started for the construction of a novel and advanced recycling plant on a commercial scale in Schwechat, Austria, to augment the three existing polyolefin recycling operations currently operated by Borealis in Europe. The plant will be based on the proprietary Borcycle™ M technology, which transforms polyolefins-based post-consumer waste into high-performance polymers. Once operational in 2025, the new plant will have an annual production capacity in excess of 60 kilotonnes. These large volumes will ensure the ample supply of high-quality recyclate to fulfil growing demand for circular products and solutions.

In May, Borealis and its partner Reclay Group announced the formation of a new entity, Recelerate. The shared aim is to close the loop on plastics circularity by rethinking the way that plastics are collected, sorted and processed in order to significantly increase the amount of light packaging waste that is actually recycled.

As a valuable supplement to mechanical recycling, chemical recycling valorises residual waste streams which would otherwise be landfilled or incinerated. The chemical recycling process yields circular feedstock with the same high quality as fossil fuel-based feedstock. This makes it ideal for use in high-end applications with stringent quality and safety standards, such as in food packaging and healthcare. As of 2021, Borealis has procured pyrolysis oil for the chemical recycling process from Belgium-based Renasci with which it manufactures Borcycle C circular polyolefins and base chemicals at several of its own production locations. Since then, Borealis has increased the stake it holds in Renasci step by step: from 10% in 2021, to just over 27% in November 2022, and as of January 2023, to a current majority shareholding position of 50.01%. This further bolsters both the partnership and the Borcycle C portfolio. At the Stenungsund, Sweden production facility, results of a feasibility study for the construction of a new chemical recycling unit are expected in early 2023. Taken together, these activities complement existing collaboration with OMV in which the patented ReOil® technology is used in chemical recycling processes.

In June, Borealis launched the Borvida™ portfolio of circular based chemicals: Borvida B is produced using non-food waste biomass, while Borvida C is made of chemically-recycled waste. The traceability of these ISCC Plus-certified products – which include ethylene, propylene, butene and phenol – is ensured thanks to the mass balance method of documenting and tracking renewable-based content across complex manufacturing systems. The Borvida portfolio will be extended in due course with the Borvida A range sourced from atmospheric carbon capture.

Innovation and New Technologies

Borealis is investing in R&D and new technologies in order to accelerate Value Creation through Innovation, particularly in the circular sphere. The K 2022 trade fair held in Germany in October was the ideal stage for showcasing the many new products and material solutions generated through innovation and collaboration.

1) 2) Global capacities including joint ventures (Borouge)

20230711119891

Centre stage was taken by the Borstar® Nextension Technology, a step change for performance-based polyolefins. The unique combination of Borstar technology and single-site Borstar Nextension catalysts improves PP properties and produces a wider range of tailored polyolefins. Borstar Nextension facilitates easier recycling because its use in multilayer applications allows for the replacement of multiple different materials with only one material; it thus encourages design for recycling by enabling monomaterial solutions. The single-site catalysts for this breakthrough technology are manufactured at a newly-built Borealis plant in Porvoo, Finland. Two BorPure™ and a nonwoven grade based on Borstar Nextension technology were also launched in October, each offering superior performance combined with circularity and material efficiency.

Grades from The Bornewables™ portfolio of premium circular polyolefins based on renewably-sourced feedstock are being used to develop an increasing number of novel applications, many of which are generated through value-chain collaboration. To name just a few of the products made using grades from the Bornewables and presented at the K 2022: the MAM Original Pure climate-neutral baby pacifier; a coffee-to-go cup in the Tupperware ECO+ product line; a reusable and fully recyclable lightweight plastic bottle co-developed by Borealis and Trexel; and a series of rigid food packaging applications based on Bornewables and Borcycle C co-developed by Borealis and ITC. In Pipe, collaboration with Uponor resulted in the first PE-X pipes based on Bornewables feedstock, while co-operation with NUPI produced next-generation PP-RCT pipes based on Bornewables.

Other circular highlights of 2022 include three fully recyclable, PE monomaterial pouch solutions; lightweight and ultra-lightweight reusable cups made of Borealis PP using the patented Bockatech EcoCore plastic foaming technology; a series of flexible packaging formats incorporating 50% PCR; and the world's first shoe made from carbon emissions, On's Cloudprime, containing high-performance, easy-to-process ethylene vinyl acetate foam supplied by Borealis. In June, the first Borcycle M jacketing compound containing up to 50% PCR was launched, thereby promoting enhanced circularity in the Wire & Cable sector. Finally, in the automotive sector, Borealis announced in October that collaboration with Tier One supplier Magna had produced the first and largest-ever all-thermoplastic tailgate for the new Volkswagen Multivan, a prime example of customer-centric innovation resulting in high-performance yet lighter-weight parts that help reduce the carbon footprint of vehicles.

Around 500 people are active in R&D at the Borealis Group. This figure includes scientists and researchers at the Innovation Headquarters in Linz, Austria, and the two innovation centres in Stenungsund and Porvoo.

Borealis continues to be among the top-ranked companies in Austria with respect to patent filings. In 2022, Borealis filed 128 new priority patent applications at the European Patent Office. This is just short of its previous record of 133 patent applications filed in 2021. As of January 2023, the Borealis Group holds around 11,500 individual patents or patent applications which are subsumed in approximately 1,450 patent families. The growing number of patents is proof positive of the Group's dedication to Value Creation through Innovation.

Energy and Climate

Borealis aims to reduce its Scope 1 and Scope 2 emissions from 5.1 million tonnes per year (from a 2019 baseline) to 2 million tonnes by 2030. To achieve this goal, a greater share of electricity obtained from renewable sources is being used in its own operations. By 2030, 100% of the electricity used in the Polyolefins and Hydrocarbons businesses should be of renewable origin. Emission reduction targets have been calculated on the basis of a 2023 divestment of the Borealis nitrogen business comprising fertilizers, melamine and technical nitrogen products.

Several long-term power purchase agreements (PPA) were signed in 2022. In February, a PPA signed with Fortum will use wind to help power operations in Finland, thereby reducing Scope 2 emissions at this location by 28,000 tonnes/year. In October, a ten-year PPA was signed with Axpo Nordic to supply wind power to Borealis' operations in Sweden, with projected Scope 2 emissions reductions of 10,000 tonnes/year. In December, Borealis signed its second PPA with Eneco. This ten-year agreement entails the supply of electricity generated from the offshore wind farm Seastar. It will reduce annual Scope 2 emissions at Borealis' operations in Belgium by approximately 22,300 tonnes. The Borealis Group's first hydropower PPA was signed in December with long-term partner and leading Austrian energy company VERBUND.

As of January 2023, the ten-year PPA will supply an annual 220 gigawatt hours (GWh) of electricity generated from two hydropower plants on the Danube River to Borealis' operations in Schwechat.

Borealis is also erecting an increasing number of photovoltaic (PV) arrays to power portions of its own operations. Together with VERBUND, Borealis announced in May the commissioning of one of the largest rooftop PV arrays in Linz, Austria; and in November, joint plans to establish a new PV park to help power operations in Schwechat. Annual CO_2 emissions at production operations in Linz will be lowered by 350 tonnes and in Schwechat by nearly 1,200 tonnes.

Green hydrogen has been called a crucial lever in the energy transition because it can be used to decarbonise heavy industry. To this end, Borealis announced in September that it has again joined forces with VERBUND in a joint industrial-scale project in which green hydrogen will be used to produce fertilizers, melamine and technical nitrogen products. Operations are planned to commence at an electrolysis plant in 2025, with an annual projected CO_2 emissions reduction of up to 90,000 tonnes.

In October, Borealis launched an innovative tool developed by the in-house Borealis Digital Studio: Neoni is a novel CO_2 emissions calculation tool that contains cradle-to-gate data for over 500 polyolefin grades. Using digitalisation to drive decarbonisation is part of the customer-centric approach taken by Borealis to drive the transition to the circular economy.

Borealis is currently exploring the viability of carbon capture and storage. Among several projects in the pipeline is the Antwerp@C project. Engineering studies are currently underway to gauge the viability of shared CO_2 infrastructure that joins leading chemical and energy companies at the Port of Antwerp. This effort would reduce by 50% the overall CO_2 emissions originating from the port by 2030.

Financial Performance

Sales

Borealis sold 3.54 million tonnes of polyolefins in 2022, 10% less than in 2021. The decrease was mainly caused by lower demand in the consumer products segment due to the slowing economy. Borealis Fertilizers sales reached 3.21 million tonnes in 2022 versus the 3.91 million sold in 2021, a decline attributed to lower demand (as product prices spiked on the back of elevated gas prices), and relatively low-priced urea imports flowing into Europe. Melamine sales volumes of 84 thousand tonnes in 2022 were significantly below the 143 thousand tonnes sold in 2021; here, the combined effect of the global economic slowdown and increased imports from China led to reduced domestic demand starting in the third quarter.

Cost Development

The higher feedstock price environment saw an increase in 2022 production costs compared to 2021. Furthermore, higher inflation caused by the global economic recovery drove an increase in sales and distribution costs from EUR 721 million in 2021 to EUR 873 million in 2022; administration costs increased accordingly from EUR 251 million in 2021 to EUR 278 million in 2022. Guided by an unchanged commitment to Value Creation through Innovation, spending on research and development (consisting of costs for Borealis Innotech organisation and depreciation of R&D assets) declined from EUR 123 million in 2021 to EUR 112 million in 2022.

At the end of 2022, the number of employees (headcount) was 7,649, an increase of 141 on the previous year.

Operating Profit

Operating profit amounted to EUR 1,081 million compared to EUR 1,517 million in 2021. The Polyolefins operating profit declined from EUR 1,186 million in 2021 to EUR 526 million in 2022. However, due primarily to results achieved in the first half of the year, it remains one of the best ever for Polyolefins. The Base Chemicals segment delivered an operating profit of EUR 243 million in 2022, down from EUR 309 million in 2021. Despite an increase in indicator margins, the result was negatively impacted by the Stenungsund cracker turnaround, less favourable sourcing costs due to the war in Ukraine, and lower demand, particularly in the second half of 2022.

20230711119892

Operating profit was also supported by a very strong contribution from the Borealis nitrogen business unit amounting to EUR 339 million in 2022 compared to EUR 126 million in 2021, and particularly from Fertilizers, in which margins remained healthy despite soaring natural gas prices. Melamine faced sluggish demand and collapsing prices, particularly in the second half of the year.

Since the announcement of the start of the divestment process of the Borealis nitrogen business unit, assets within the scope of the divestment have been classified as assets held for sale.

Financial Income and Expenses

The increase in net financial expenses from EUR 9 million in 2021 to a net financial income of EUR 104 million in 2022 was mainly due to a favourable currency effect driven by the stronger US dollar and higher interest income from the member loan granted to the Baystar joint venture with TotalEnergies.

Taxes

Income taxes amounted to EUR 342 million, an increase of EUR 79 million from tax charges of EUR 263 million in 2021. The higher overall tax charge in 2022 is to a large extent driven by deferred taxes on measurement of discontinued operation.

Net Profit

The reduction in operating profit was almost fully offset by the increased contribution from Borealis joint ventures, rising from EUR 595 million in 2021 to EUR 1,001 million in 2022. Borouge business performance was affected by softer demand and lower sales prices. The Baystar result suffered from the full depreciation charge after the start-up of the cracker, and subsequent slow ramping up due to operational challenges. However, the positive one-off effects of the Borouge IPO (which contributed EUR 604 million to the result) and the updated fair value assessment of the disposal group related to the ongoing divestment process of the nitrogen business unit (which contributed EUR 266 million) compensated for the lower business result. At EUR 2,111 million, the 2022 net profit is thus the highest ever obtained by Borealis.

Capital Expenditure

Investments in property, plant and equipment amounted to EUR 667 million in 2022, compared to EUR 660 million in 2021. A large portion of the total investment relates to the new, world-scale PDH plant in Kallo; the upgrade and revamp of four cracker furnaces in Stenungsund; the upgrade of semicon units in Antwerp; and a new wastewater treatment unit in Stenungsund. Health, Safety and Environment (HSE) capital expenditure amounted to EUR 107 million, compared to EUR 88 million in 2021. Investments in intangible assets amounted to EUR 58 million in 2022, compared to EUR 60 million in 2021.

Depreciation, amortisation and impairment amounted to EUR 352 million in 2022. In 2021, the comparable figure of EUR 427 million included an impairment charge of EUR 39 million in relation to Rosier assets.

Financial Position

At year end, total assets and capital employed stood at EUR 14,685 million and EUR 11,952 million, respectively, compared to EUR 12,985 million and EUR 9,936 million at the end of 2021.

Return on capital employed (ROCE) after tax of 19% in 2022 was on the same level as in the previous year. This strong result was mainly driven by the high profitability despite the continued investment in growth projects. The five-year average ROCE of 14% also remains well above the Group's target of 11% through the cycle.

Cash Flows and Liquidity Reserves

Cash flow from operating activities was EUR 898 million, driven by strong operating profitability, and partially offset by a negative working capital development due to the increasing price environment. Cash flow further benefitted from the successful Borouge IPO (EUR 745 million) and the partial externalisation of the Baystar member loans (EUR 602 million), and was partially offset by the dividend of EUR 698 million distributed to Borealis shareholders from the 2021 result, and an equity injection into Borouge 4 (EUR 408 million). Net interest-bearing debt decreased to EUR -70 million at year end, down from EUR 223 million at the end of 2021. The table below shows the change in net interest-bearing debt.

EUR million	2022	2021
Change of net interest-bearing debt		
Cash flow from operating activities	898	967
Capital expenditure	-725	-720
Capital contributions to and financing and acquisition of associated companies and joint ventures	-668	-366
Dividends of associated companies and joint ventures and non-consolidated subsidiaries	595	1,943
Proceeds from disposal of shares in joint ventures	745	0
Repayments of financing by joint ventures	602	0
Acquisition of non-controlling interests	-1	-4
Other (mainly relating to foreign exchange differences)	48	-38
Dividend paid to equity holders of the parent and non-controlling interests	-699	-150
Additions lease liabilities	-503	-21
Total decrease (+)/increase(-) of net interest-bearing net debt	**292**	**1,611**

This resulted in a gearing ratio of -1% at the end of 2022, compared to 3% at the end of 2021. This gearing reflects a very strong balance sheet. Liquidity reserves, composed of undrawn committed credit facilities and cash balances, amounted to EUR 3,408 million at year end 2022, compared to EUR 2,717 million at year end 2021. Borealis additionally benefits from a well-diversified financing portfolio and a balanced maturity profile. The solvency ratio was 66% at year end 2022, compared to 62% at year end 2021.

Shareholders' Equity

Shareholders' equity at year end 2022 was EUR 9,785 million.

EUR million	2022	2021
Equity development		
Net result attributable to the parent	2,108	1,406
Exchange and fair value adjustment (net)	163	452
Gross increase/decrease	2,271	1,858
Dividend paid	-698	-150
Changes in consolidation scope	-10	0
Reclassification of cash flow hedges to balance sheet	46	51
Net increase/decrease	1,609	1,759
Opening equity	8,176	6,417
Closing equity	**9,785**	**8,176**

20230711190893

Risk Management

Borealis has a documented risk management process ensuring that all parts of the Group routinely identify and assess their risks, and develop and implement appropriate mitigation actions. Risk management contributes to achieving the Group's long-term strategies and short-term goals. Borealis believes that an effective risk culture makes it harder for an outlier, be it an event or an offender, to put the Company at risk.

Borealis captures emerging risks, risks that may materialise during the business plan period, and strategic risks that may affect the delivery of the Group's long-term strategy. In addition, Borealis distinguishes between "outside-in" and "inside-out" risks. Particular emphasis was placed in 2022 on the risks emanating from the war in Ukraine, which were assessed by a dedicated emergency management team.

The Group's overall risk landscape is periodically consolidated, reported, and reviewed. Borealis distinguishes between different risk categories as outlined below. While this list is not exhaustive, it does illustrate the most relevant risk types.

Strategic and reputational risks are those that may severely impact the Borealis Group's strategy or reputation. Strategic risks are often related to unfavourable long-term developments, such as market or industry developments, technology, innovation, a change in the competitive environment or a threat to the reputation of the Group.

Operational and tactical risks usually refer to unfavourable and unexpected short-term or mid-term developments, and include all risks that may have a direct impact on the Group's daily business operations. All operational risks are assessed according to documented guidelines and procedures that are administered by the respective business functions. A proactive approach to risk prevention management has been implemented in the Operations function, covering risks in the areas of Production; Health, Safety and Environment (HSE); Product Stewardship; Plant Availability and Quality. The risk management approach also safeguards the Responsible Care® approach towards risks in operations. The standard risk management process includes a common risk matrix and risk registers, built bottom-up from plant to portfolio level, enabling a common risk rating system for the whole of operations.

HSE risks are assessed according to the procedures and framework described in the Borealis Risk-based Inspection Manual. The HSE Director is responsible for managing all HSE-related risks and periodically reports the Borealis HSE risk landscape to the Executive Board.

Borealis assesses and discloses the potential negative impact of its activities on the environment and society, and related mitigation measures in its Non-financial Report in accordance with legal obligations (NaDiVeG). The main risks analysed are:

- Unplanned emissions from operations that might cause additional emissions to air or soil, and water pollution, waste, noise and other disturbances to the local community;
- Process safety incidents causing the sudden and uncontrolled release of explosive materials and release of potentially harmful toxins;
- Chemical substances that, if not handled properly and according to their intended use, could lead to negative impacts on human health;
- Environmental pollution caused by pellet loss or plastic littering; and finally,
- COVID-19 pandemic-related risks to business as well as Borealis employees.

Climate-related risks and mitigation actions are also specifically analysed according to TCFD (Task Force on Climate-Related Financial Disclosures) guidelines and disclosed in the Borealis Non-financial Report. Related transition risks are, for example, higher GHG emission prices, increasing operating costs, increasing pressure on usage of fossil fuel-based feedstock and a negative industry image. Physical risks are mainly related to potential supply-chain disruptions, due, for example, to extreme weather events or political unrest. However, the risks associated with climate change also represent opportunities for innovation, such as product portfolio extensions that include low-emission, circular and/or bio-based products as well as partnerships that help transform the industry towards climate neutrality.

Project-related risks are assessed in the Borealis project approval process. The applicable key risks related to an individual project are assessed. These risks include financial, market, technical, legal, patent infringement, strategic, operational, country-related and political factors. The risk assessment also reflects the probability of project completion within the estimated time frame and forecasted resource requirements, and the likelihood that key project objectives will be achieved. Project-related risks are managed by the project manager and reported to the Project Steering Committee.

Financial and market risks may refer to risks arising for instance from unexpected changes in market supply, demand, commodity prices, services or financing costs. Risks may also arise from liquidity, interest rates, foreign exchange rates, credit and insurance, the inability of a counterparty to meet a payment or delivery commitment, and may, for example, extend to incorrect assumptions or the inappropriate application of a model. The assessment of financial risk management is described in detail in note 17 of the consolidated financial statements. The Treasury & Funding Director and the General Counsel are responsible for reporting and coordinating the management of all financial risks.

Compliance risks focus on legal and regulatory risks, code of conduct (ethics policy), standards as well as contracting compliance. Doing business in an ethical manner is vital to the Group's good reputation and continued success. Tactical or generic risks are risks identified as part of standards or compliance. These risks mainly relate to processes or control weaknesses.

Information security risks relate to the confidentiality, integrity and availability of critical company information. The IT Director and the General Counsel support line managers with the assessment of information security risk and the development and implementation of risk mitigation actions.

The Executive Board periodically reviews the Group's key risks, defines the Group's risk tolerance levels, monitors the implementation of mitigation actions, and reports the key risks and mitigation steps to the Supervisory Board. The Executive Board safeguards the integration of risk assessment in its strategic planning.

The Supervisory Board is responsible for reviewing the effectiveness of Borealis' risk management practices and processes, risk appetite and tolerance levels, the Group's risk exposure and the effectiveness of mitigation actions. The Supervisory Board delegates some of these responsibilities to the Audit Committee, which is a sub-committee of the Supervisory Board.

All Borealis employees are responsible for managing risk, within their authority and in their field of work, in order to ensure that risk management is properly embedded in the organisation and reflected in the daily decision-making processes.

Changes to Shareholder Structure

The 25% share in the Borealis Group previously held by Mubadala was acquired by ADNOC as of November 2022. This acquisition deepens the existing strong relationship between Borealis and ADNOC, and supplements its current drive to extend its global footprint to thriving chemical and petrochemical markets in North America and Europe. The Executive Board is pleased to welcome ADNOC as a new shareholder and looks forward to working closely with it and the OMV Group to ensure the sustained success of the Borealis Group.

20230711119894

Changes to the Supervisory Board
As published in the Borealis Interim Consolidated Financial Statements in June 2022, several changes to the Borealis Supervisory Board took effect as of 10 February 2022. Alvin Teh joined the Supervisory Board, succeeding Musabbeh Al Kaabi; Saeed Al Mazrouei was newly appointed as Vice Chairman of the Supervisory Board. After the shareholder change from Mubadala to ADNOC in November, Khaled Salmeen replaced Saeed Al Mazrouei as Vice Chairman of the Supervisory Board, and Khaled Al Zaabi joined the Supervisory Board, replacing Alvin Teh.

Economic Development and Outlook
The Borealis Executive Board and its senior management are proud of the excellent full year 2022 results. Despite the very strong performance of both integrated polyolefins and fertilizer markets in the first half of the year, the weaker results in the final quarters are a clear sign of turbulence ahead. Borealis' management anticipates continued market volatility and an overall worsening market environment for its core business areas over the next years.

Yet as a trusted and reliable partner to its customers and the value chain, Borealis is well equipped to manage current and future crises. Supported by its strong foundation, Borealis will continue to make progress in expanding its geographic footprint while continuing to lead the industry transformation to a circular economy of plastics. By upholding its dedication to re-inventing essentials for more sustainable living, Borealis will keep providing innovative chemical and plastic solutions that create value for society.

Other Information
In accordance with Section 267a (6) of the Austrian Commercial Code (UGB), Borealis prepares a separate consolidated non-financial report.

As a company subject to non-financial reporting obligations according to Article 19a of Directive 2013/34/EU of the European Parliament and of the Council, Borealis falls within the scope of the EU Taxonomy. Applying the EU Taxonomy enables Borealis to be transparent about its sustainable economic activities and to demonstrate the development of the sustainability performance of all business areas within the Group. For 2022, Borealis discloses within the separate consolidated non-financial report the share of taxonomy-eligible and non-taxonomy-eligible economic activities in its total turnover, CAPEX and OPEX, as well as the taxonomy-alignment levels of these KPI's.

		2022 excl. NITRO [1]	2022 incl. NITRO [1]	2021 incl. NITRO [1]	2020 incl. NITRO [1]	2019	2018
Income and profitability							
Total sales and other income	EUR million	9,613	12,225	10,153	6,937	8,103	8,337
Operating profit	EUR million	703	1,081	1,517	351	605	496
Operating profit as percentage of total sales and other income	%	7	9	15	5	7	6
Net profit	EUR million	1,613	2,111	1,396	589	872	906
Return on capital employed, net after tax	%	–	19	19	8	11	13
Cash flow and investments							
Cash flow from operating activities	EUR million	602	898	967	1,083	872	517
Investments in property, plant and equipment	EUR million	544	667	660	614	376	326
Cash and cash equivalents	EUR million	2,226	2,242	1,551	83	83	50
Financial position							
Balance sheet total	EUR million	–	14,685	12,985	10,583	10,118	9,949
Net interest-bearing debt	EUR million	–	-70	223	1,833	1,569	1,327
Equity attributable to owners of the parent	EUR million	–	9,785	8,176	6,417	6,445	6,421
Gearing	%	–	-1	3	29	24	21
Health, Safety & Environment [2]							
Total Recordable Injuries (TRI) [3]	number/million work hours						
a. Old definition		–	–	–	1.7	1.6	1.3
b. New definition [4]		2.6	2.9	2.3	3.9	3.4	–
EU ETS CO_2 emissions	kilotonnes	1,355	3,377	3,878	4,050	4,625	4,302
Primary energy consumption	GWh	14,923	21,364	21,730	22,340	25,831	24,476
Flaring performance	tonnes	39,955	39,955	38,538	42,543 [5]	27,619	26,273
Waste generation	tonnes	82,425	92,383	102,023	97,905	86,109 [6]	53,713
Water withdrawal	m^3 million	407	657	735	755	750	675
Number of employees	full-time equivalents [7]	–	–	6,934	6,920	6,869	6,834
	headcount [8]	5,631	7,649	7,508	–	–	–

1) NITRO: Borealis Fertilizers, Melamine and Technical Nitrogen Business excl. Rosier. For further details, please refer to note 8. Discontinued Operation and Other Changes in the Notes to the Consolidated Financial Statements // 2) Environmental data might be subject to minor adjustments due to ongoing audits and missing third-party data at the time of closing of this report. // 3) Rosier is excluded from TRI 2022 excl. NITRO. // 4) Definitions have been adjusted in 2021 to be aligned with OMV definitions. A comparison to previous years is only possible with 2020. // 5) Severe upsets led to significant emergency flaring during shutdowns; further there was a lack of recycling capacity. // 6) The main reason for the increase is the integration of the plastics recycling company mtm plastics GmbH into the monthly group reporting. // 7) Full-time equivalents considers part-time employed staff only as 0.5 // 8) Number of employees is presented in headcount instead of full-time equivalents since 2022. A comparison to previous years is only possible with 2021.

Definitions

Capital employed: Total assets less non-interest-bearing debt
Return on capital employed: Operating profit, profit and loss from sale of operations, net result of associated companies and joint ventures plus interest income, after imputed tax, divided by average capital employed
Solvency ratio: Total equity, less goodwill, divided by total assets
Gearing ratio: Interest-bearing debt, less cash and cash equivalents, divided by total equity
HSE: Health, Safety and Environment

20230711119895

Vienna, 22 February 2023

Executive Board:

Thomas Gangl m.p.
Chief Executive Officer

Mark Tonkens m.p.
Chief Financial Officer

Wolfram Krenn m.p.
Executive Vice President
Base Chemicals & Operations

Philippe Roodhooft m.p.
Executive Vice President
Joint Ventures & Growth Projects

Lucrèce De Ridder m.p.
Executive Vice President
Polyolefins, Circular Economy Solutions
and Innovation & Technology

Consolidated Financial Statements

Consolidated Income Statement

EUR thousand	2022	2021	Note
Net sales	**9,332,809**	**8,591,970**	1, 2
Other operating income	279,791	131,400	29
Total sales and other income	**9,612,600**	**8,723,370**	
Production costs	-7,938,488	-6,488,739	6, 7, 14, 15
Gross profit	**1,674,112**	**2,234,631**	
Sales and distribution costs	-722,828	-593,710	6, 7, 14, 15
Administration costs	-238,663	-212,934	6, 7, 14, 15
R&D costs	-9,449	-17,993	3, 6, 7, 14, 15
Operating profit	**703,172**	**1,409,994**	
Net results of associated companies and joint ventures	397,113	594,872	9
Gain from disposal of equity accounted investments	604,171	0	9
Financial income	65,129	35,605	18
Financial expenses	-49,902	-41,276	18
Net foreign exchange gains/losses	85,943	-1,132	18
Profit before taxation	**1,805,626**	**1,998,063**	
Taxes on income	-192,494	-366,660	11
Net profit for the year from continuing operations	**1,613,132**	**1,631,403**	
Discontinued operation			
Profit (loss) from discontinued operation, net of tax	497,502	-235,332	8
Net profit for the year	**2,110,634**	**1,396,071**	
Attributable to:			
Non-controlling interests	2,532	-9,502	
Equity holders of the parent	2,108,102	1,405,573	

20230711119896

Consolidated Statement of Comprehensive Income

EUR thousand	2022	2021	Note
Net profit for the year	**2,110,634**	**1,396,071**	
Items that may be subsequently reclassified to the income statement			
Net gain/loss on translation of financial statements of foreign operations	133,664	283,973	
Reclassifications to the income statement during the period	-42,744	357	
Tax effect recognised in other comprehensive income	0	0	
Net gain/loss on long-term loans to foreign operations	-7,645	-2,100	19
Reclassifications to the income statement during the period	0	0	
Tax effect recognised in other comprehensive income	1,428	525	
Net gain/loss on loans to hedge investments in foreign operations	-12,208	-14,687	19, 22, 23
Reclassifications to the income statement during the period	3,009	0	
Tax effect recognised in other comprehensive income	1,674	3,672	
Fair value adjustments of cash flow hedges	348,464	462,138	19, 22, 23, 24, 25
Reclassifications to the income statement during the period	-385,114	-220,184	19, 22, 23, 24, 25
Tax effect recognised in other comprehensive income	14,483	-60,489	
Share of other comprehensive income of joint ventures accounted for using the equity method	-2,769	1,036	9
Items that will not be reclassified to the income statement			
Actuarial gains and losses	139,325	-4,453	15
Tax effect recognised in other comprehensive income	-35,543	1,569	
Share of other comprehensive income of joint ventures accounted for using the equity method	7,342	250	9
Net income/expense recognised in other comprehensive income	**163,366**	**451,607**	
Total comprehensive income	**2,274,000**	**1,847,678**	
Attributable to:			
Non-controlling interests	3,335	-9,482	
Equity holders of the parent	2,270,665	1,857,160	

Consolidated Balance Sheet

EUR thousand	31.12.2022	31.12.2021	Note
Assets			
Non-current assets			
Intangible assets	633,950	658,643	3, 4, 7
Property, plant and equipment			5, 7
Production plants	1,854,194	1,977,253	
Machinery and equipment	28,192	30,392	
Construction in progress	1,277,834	936,278	
Total property, plant and equipment	3,160,220	2,943,923	
Right-of-use assets	599,136	160,553	6
Investments in associated companies and joint ventures	2,796,851	2,526,406	9
Other investments	18,459	18,355	10, 28
Loans granted	628,305	1,015,018	10, 27, 28, 30
Other receivables and other assets	193,363	139,931	2, 10, 27, 28
Deferred tax assets	23,794	59,544	11
Total non-current assets	**8,054,078**	**7,522,373**	
Current assets			
Inventories	1,479,516	1,267,480	12
Receivables			
Trade receivables	788,440	1,113,786	26, 27, 28, 30
Income taxes	2,965	69,944	
Loans granted	65,712	0	10, 27, 28, 30
Other receivables and other assets	545,243	649,171	10, 27, 28, 30
Total receivables and other assets	1,402,360	1,832,901	
Cash and cash equivalents	2,226,207	1,540,973	27, 28
Assets of the disposal group held for sale	1,523,215	821,003	8
Total current assets	**6,631,298**	**5,462,357**	
Total assets	**14,685,376**	**12,984,730**	

20230711119897

Consolidated Balance Sheet

EUR thousand	31.12.2022	31.12.2021	Note
Equity and liabilities			
Equity			
Shareholders' equity			
Share capital and contributions by shareholders	1,599,397	1,599,397	13
Reserves	412,694	203,645	
Retained earnings	7,772,773	6,372,494	
Total shareholders' equity	9,784,864	8,175,536	
Non-controlling interests	7,122	-4,251	
Total equity	**9,791,986**	**8,171,285**	
Liabilities			
Non-current liabilities			
Loans and borrowings	1,512,201	1,526,278	20, 21, 28
Lease liabilities	563,239	134,084	6, 20, 21
Deferred tax liabilities	264,714	178,166	11
Employee benefits	276,512	415,839	15
Provisions	61,585	64,647	16
Other liabilities	36,185	13,494	21, 28
Total non-current liabilities	**2,714,436**	**2,332,508**	
Current liabilities			
Loans and borrowings	41,929	73,633	20, 21, 28
Lease liabilities	42,635	30,682	6, 20, 21
Trade payables	862,826	1,016,936	21, 28, 30
Income taxes	45,761	44,760	
Provisions	48,214	69,546	16
Contract liabilities	50,182	54,997	2
Other liabilities	387,249	599,086	21, 28, 30
Liabilities directly related to the disposal group	700,158	591,297	8
Total current liabilities	**2,178,954**	**2,480,937**	
Total liabilities	**4,893,390**	**4,813,445**	
Total equity and liabilities	**14,685,376**	**12,984,730**	

Consolidated Statement of Changes in Equity

EUR thousand	Share capital [1] and contributions by shareholders	Reserve for actuarial gains/losses recognised in equity	Hedging reserve	Reserve for unrealised exchange gains/losses	Retained earnings	Total attributable to the equity holders of the parent	Non-controlling interests	Total equity
Balance as of 1 January 2021	**1,599,397**	**-253,065**	**-5,731**	**-40,435**	**5,117,066**	**6,417,232**	**8,993**	**6,426,225**
Net profit for the year	0	0	0	0	1,405,573	**1,405,573**	-9,502	**1,396,071**
Other comprehensive income	0	-2,634	181,465	272,756	0	**451,587**	20	**451,607**
Total comprehensive income	**0**	**-2,634**	**181,465**	**272,756**	**1,405,573**	**1,857,160**	**-9,482**	**1,847,678**
Dividend payments	0	0	0	0	-150,000	**-150,000**	-46	**-150,046**
Changes in the consolidation scope	0	0	0	0	-145	**-145**	-3,716	**-3,861**
Reclassifications of cash flow hedges to balance sheet	0	0	51,289	0	0	**51,289**	0	**51,289**
Balance as of 31 December 2021	**1,599,397**	**-255,699**	**227,023**	**232,321**	**6,372,494**	**8,175,536**	**-4,251**	**8,171,285**
Net profit for the year	0	0	0	0	2,108,102	**2,108,102**	2,532	**2,110,634**
Other comprehensive income	0	111,124	-22,167	73,606	0	**162,563**	803	**163,366**
Total comprehensive income	**0**	**111,124**	**-22,167**	**73,606**	**2,108,102**	**2,270,665**	**3,335**	**2,274,000**
Dividend payments	0	0	0	0	-698,000	**-698,000**	-850	**-698,850**
Changes in the consolidation scope [2]	0	0	0	0	-9,447	**-9,447**	8,888	**-559**
Reclassifications of cash flow hedges to balance sheet	0	0	46,110	0	0	**46,110**	0	**46,110**
Reclassifications within Equity	0	376	0	0	-376	**0**	0	**0**
Balance as of 31 December 2022	**1,599,397**	**-144,199**	**250,966**	**305,927**	**7,772,773**	**9,784,864**	**7,122**	**9,791,986**

1) Share capital of Borealis AG (parent company) amounts to EUR 300,000.00 (EUR 300,000.00). // 2) The effect from changes in the scope of consolidation on retained earnings and non-controlling interests relates to increased shares in DYM SOLUTION CO., LTD and Rosier S.A. in 2022. For further details, please refer to note 8.

A dividend of EUR 698,000 thousand was paid in 2022 from the 2021 result.

The cumulative amount recognised in other comprehensive income from the disposal group as of 31 December 2022 is EUR -20,636 thousand (EUR -27,999 thousand), thereof EUR -877 thousand (EUR -891 thousand) relates to items that may be reclassified subsequently to the income statement.

20230711119898

Consolidated Cash Flow

EUR thousand	2022	2021	Note
Cash flows from operating activities			
Payments from customers	12,126,435	9,217,419	
Payments to employees and suppliers	-10,833,990	-8,065,967	
Interest received	31,265	27,462	18
Interest paid	-39,828	-38,137	18
Other financial income received/expenses paid	3,114	-14,828	18
Income taxes paid	-389,231	-158,750	11
	897,765	**967,199**	
thereof from discontinued operation	236,445	179,152	
Cash flows from investing activities			
Investments in property, plant and equipment	-666,657	-659,962	5
Investments in intangible assets	-58,073	-59,600	4
Dividends of associated companies and joint ventures and non-consolidated subsidiaries	595,379	1,943,012	9
Capital contributions to and financing and acquisition of associated companies and joint ventures	-668,026	-365,573	9
Proceeds from disposal of shares in joint ventures	745,068	0	9
Repayments of financing by joint ventures	601,685	0	30
	549,376	**857,877**	
thereof from discontinued operation	-122,462	-103,061	

EUR thousand	2022	2021	Note
Cash flows from financing activities			
Non-current loans and borrowings obtained	420	150,000	20
Current loans and borrowings obtained	1,330	122	20
Current loans and borrowings repaid	-76,612	-311,510	20
Principal elements of lease payments	-53,635	-41,721	6
Acquisition of non-controlling interests	-558	-3,861	
Dividends paid to equity holders of the parent	-698,000	-150,000	
Dividends paid to non-controlling interests	-850	-46	
	-827,905	**-357,016**	
thereof from discontinued operation	-7,336	-42,134	
Net cash flow of the period	**619,236**	**1,468,060**	
Cash and cash equivalents as of 1 January	1,551,487	83,404	
Effect of exchange rate fluctuations on cash held	71,682	23	
Cash and cash equivalents as of 31 December	**2,242,405**	**1,551,487**	
thereof reported under Cash and cash equivalents	2,226,207	1,540,973	
thereof reported under Assets of the disposal group held for sale	16,198	10,514	8

20230711119899

Notes to the Consolidated Financial Statements

Reporting Entity
Borealis AG (the Company or Group) is a company domiciled in Austria. The address of the Company's registered office is Trabrennstrasse 6–8, 1020 Vienna, Austria. Borealis is one of the world's leading providers of advanced and circular polyolefin solutions and a European market leader in base chemicals, fertilizers and the mechanical recycling of plastics.

Borealis Reports the Business Result in three Segments: In the Polyolefins segment, Borealis focuses on the application areas Mobility, Energy, Consumer Products, Infrastructure, Advanced Products and Business Development.

Base Chemicals essentially includes the following product ranges: Phenol, Acetone, Ethylene and Propylene.

The third segment is "Borealis NITRO" consisting of Fertilizers, Melamine and Technical Nitrogen Products. Since 2022, the Company's share in fertilizer production sites in the Netherlands and Belgium ("Rosier") is not part of this segment anymore.

Statement of Compliance
The consolidated financial statements have been prepared in compliance with the International Financial Reporting Standards issued by the IASB as adopted by the EU and additional Austrian disclosure requirements. The consolidated financial statements as of 31 December 2022 were authorised for publication by the Executive Board on 22 February 2023.

Basis of Preparation
The consolidated financial statements are presented in thousand euro (EUR thousand), rounded to the nearest thousand, hence rounding differences may arise. The consolidated financial statements are prepared on the historical cost basis, except for the following assets and liabilities, which are stated at their fair value: derivative financial instruments and financial assets at fair value through profit or loss (FVPL) or at fair value through other comprehensive income (FVOCI). Recognised assets and liabilities that are hedged are stated at fair value in respect of the risk that is being hedged.

Consolidation Principles
The consolidated financial statements include the financial statements of Borealis AG, the parent company, and all the companies over which it has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Companies in which the Group has a significant influence (interest of 20% or more), but no control or joint control, are considered associated companies. A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions on the relevant activities require the unanimous consent of the parties sharing control.

The consolidated financial statements are based on audited financial statements of the parent company and of each individual subsidiary. The consolidated financial statements have all been prepared in accordance with the Group's accounting policies. Items of a similar nature have been combined. Intra-group transactions (revenues and costs), intra-group profits, internal shareholdings and intra-group balances have been eliminated.

Acquired subsidiaries, associated companies and joint ventures are included in the consolidated financial statements from the date of control or significant influence, respectively, and until (joint) control or significant influence ceases. A remeasurement of the acquired net assets is made on the date of acquisition. Any remaining positive difference between the fair value of the assets and liabilities and the purchase consideration is capitalised as goodwill and subject to an annual impairment test. Any gain from a bargain purchase is recognised in the income statement. Investments in associated companies and investments in joint ventures are recorded under the equity method in the consolidated financial statements.

Significant Accounting Judgements, Estimates and Assumptions
The preparation of the Group's consolidated financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities and the disclosure of contingent liabilities, at the end of the reporting period. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods. The judgements,

estimates and assumptions mainly relate to the useful life and impairment of intangible assets and property, plant and equipment (note 4 and note 5), determination of lease liabilities (note 6), value of tax assets and liabilities and unused tax losses (note 11), inventory impairment (note 12), actuarial assumptions for employee benefits (note 15), future cash outflows for provisions (note 16), allowance for impairment in respect of trade receivables (note 27), estimate of fair value less cost of disposal (note 8) and are included in the description of the respective note for the position.

Foreign Currency

Transactions and Balances

Monetary assets and liabilities denominated in foreign currencies have been converted into euro (EUR) at the exchange rates quoted on the reporting date. Non-monetary items that are measured at historical cost in a foreign currency are translated using the exchange rate as at the date of transaction.

Foreign exchange gains and losses related to working capital are presented in the income statement as part of operating profit (other operating income and production costs). Otherwise, the foreign exchange gains and losses are recorded as financial items in the income statement. However, the exchange adjustments arising from the following items are recognised in other comprehensive income: conversion of the net assets of foreign subsidiaries and associated companies as of 1 January using the closing rate on 31 December, conversion of long-term intra-group receivables that are considered part of investments in subsidiaries or associated companies, conversion of long-term loans hedging net assets of foreign subsidiaries and associated companies or intra-group receivables considered part of investments in subsidiaries and associated companies and conversion of the net income of foreign subsidiaries calculated at monthly rates to figures converted using the exchange rates applicable as of the reporting date.

Group Companies

Consolidated financial statements are presented in euro (EUR), the functional currency of the parent.

Financial statements of foreign subsidiaries in functional currencies other than EUR have been converted at the exchange rates quoted on the reporting date for assets and liabilities. The income statements of foreign subsidiaries have been converted on the basis of monthly exchange rates. The exchange differences arising from the conversion are recognised in other comprehensive income.

Summary of Significant Accounting Policies

Income Statement

Revenue Recognition

Borealis' main business model is to produce, market and sell various goods (polyolefins, base chemicals, fertilizers and related nitrogen products) to its customers. Each sale typically includes an obligation to deliver one particular type of goods. No bundling of various goods in one contract currently exists and price is not interdependent on prices in other contracts, delivery of other goods or promises. In case of additional services provided as part of the contract that typically do not meet the requirements of a separate performance obligation in accordance with IFRS 15, no allocation of the transaction price to multiple performance obligations is necessary.

Revenue is recognised when control of the products has been transferred, i.e. when the products are delivered to the customer. All Borealis contracts for delivery of goods include INCOTERMS, such as DDP, CIF or FCA, which govern changes to the control of goods. This will be the point of revenue recognition by Borealis. Payment is generally due up to 90 days from delivery.

For some contracts, variable considerations have been agreed, typically volume discounts for goods purchased during the particular period, i.e. one year. Borealis regularly estimates the anticipated discount based on the best available data supported by a large number of similar contracts and historical information.

Generally, Borealis does not expect to have any contracts where the period between the transfer of the promised goods to the customer and payment by the customer exceeds one year. Consequently, Borealis does not adjust the promised amount of consideration for the effects of a significant financing component.

The Group typically provides warranties for general repairs of defects that existed at the time of sale, as required by law. These assurance-type warranties are accounted for under IAS 37 Provisions, Contingent Liabilities and Contingent Assets. No other warranties or rights to return are offered by Borealis.

20230711190900

Net sales comprise revenue from contracts with customers and revenue from other sources arising in the course of the ordinary activities of the Group, excluding value-added tax and after deduction of goods returned, discounts and allowances.

The Group recognises contract liabilities for consideration received in respect of unsatisfied performance obligations. If the Group satisfies a performance obligation before it receives the consideration, the Group recognises a contract asset or a receivable in its balance sheet, depending on whether something other than the passage of time is required before the consideration is due.

All transactions that are not representative of sales revenues are presented under Other operating income.

Research and Development
Research costs are charged to the income statement in the year they have been incurred.

Development costs relating to a definable product or process that is demonstrated to be technically and commercially feasible are recognised as an intangible asset to the extent that such costs are expected to be recovered from future economic benefits. The expenditure capitalised includes the costs of materials, direct labour and an appropriate proportion of direct overheads.

Other development costs not meeting these criteria are recognised in the income statement as an expense when incurred.

Results from Associated Companies and Joint Ventures
The proportionate share of the net profit or loss after or before tax, as appropriate, of these companies is included in the consolidated income statement.

Financial Income/Expenses
Interest income and expenses are included in the income statement using the effective interest rate at the amounts relating to the financial year.

Financial income/expenses also include borrowing costs, costs incurred on finance leases, realised and unrealised gains and losses from exchange and price adjustments of financial instruments, investments and items in foreign currencies not related to working capital.

Taxes on Income
The income tax charged to the income statement comprises expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted as of the reporting date, adjusted for the change in deferred tax assets and liabilities for the year and for any tax payable in respect of previous years. Income tax that relates to items recognised in other comprehensive income is recognised in other comprehensive income as well.

Balance Sheet
Intangible Assets
Intangible assets are stated at cost, less accumulated amortisation and impairment losses.

Goodwill arising from an acquisition represents the excess of the purchase consideration over the fair value of the net identifiable assets acquired. Goodwill is not amortised but is subject to an annual impairment test.

Licences and patents acquired externally are stated at cost, less accumulated amortisation and impairment losses. Amortisation is calculated according to the straight-line method based on an estimated useful life of 3–10 years.

Capitalised development costs are stated at cost, less accumulated amortisation and impairment losses. Amortisation is charged to the income statement on a straight-line basis over the expected useful life of the asset of 3–10 years. Development costs not yet amortised are subject to an annual impairment test.

Costs to purchase and develop software for internal use are capitalised and amortised on a straight-line basis over 3–7 years.

Emission rights are reported as intangible assets. They are measured at cost, if purchased on the market, or at fair value, if received through government grants. A liability to return emission rights for actual emissions made is recognised as well.

Property, Plant and Equipment

Property, plant and equipment is valued at cost, less accumulated depreciation and impairment losses. Cost comprises purchase price, site preparation and installation. Day-to-day servicing expenses are not included in the cost of the assets. If certain conditions are met, the costs of major inspections and overhauls are recognised in the carrying amount of the property, plant and equipment.

Production plants include land, buildings, related immovable machinery and equipment. Machinery and equipment are recognised at purchase price and any directly attributable costs.

Depreciation is made on a straight-line basis over the expected useful life of the components of the assets. The useful lives of major assets are determined individually, while the lives of other assets are determined in groups of similar assets. Land is not depreciated. Buildings are depreciated over 20–40 years, production facilities over 15–20 years and machinery and equipment over 3–15 years.

The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met. The estimated future costs of decommissioning are reviewed annually and adjusted as appropriate. Changes in the estimated future costs or in the discount rate applied are added to or deducted from the cost of the asset. Borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset are capitalised as part of the cost of that asset.

Impairment Losses

The carrying amounts of both property, plant and equipment and intangible assets are reviewed on each reporting date to determine whether there is any indication of impairment. If any such indication exists, and for annual impairment tests of goodwill and intangible assets with an indefinite useful life, the asset's recoverable amount is estimated as the greater of the fair value less cost of disposal and value in use. An impairment loss is recognised whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. Impairment losses are recognised in the income statement.

Leases

Leases are recognised as a right-of-use asset and a corresponding liability on the date at which the leased asset is available for use by the Group. Each lease payment is split between the liability and finance cost. The finance cost is charged to the income statement over the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

Liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable,
- variable lease payments that are based on an index or a rate,
- amounts expected to be payable by the lessee under residual value guarantees, if any,
- the exercise price of a purchase option, if it is reasonably certain that the lessee will exercise that option, and
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability.

Moreover, non-lease components are separated from the lease components for measurement of right-of-use assets and lease liabilities.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, which is generally the case for leases in the Group, the lessee's incremental borrowing rate is used, i.e. the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions.

The Group determines its incremental borrowing rate by obtaining interest rates from external financing sources and makes certain adjustments (to reflect the terms of the lease and the creditworthiness of the Company, amongst others).

20230711190901

Right-of-use assets are initially measured at cost comprising the following:
- the amount of the initial measurement of the lease liability,
- any lease payments made on or before the commencement date, less any lease incentives received,
- any initial direct costs, and
- costs, if any, of restoring the asset at the end of the lease term to the condition required by the terms and conditions of the lease.

After the commencement date, the right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term using a linear method of depreciation. If it is reasonably certain that the Group will exercise a purchase option, the right-of-use asset is depreciated over the underlying asset's useful life.

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in the income statement. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise office and IT equipment (such as water dispensers, coffee machines or franking machines), textiles or smaller containers.

Non-current Assets Held for Sale and Discontinued Operations

Non-current assets (or disposal groups comprising assets and liabilities) that are expected to be recovered primarily through sale rather than through continuing use are classified as held for sale. Prior to classification as held for sale, the assets (or components of a disposal group) are remeasured in accordance with IFRS 5. Thereafter, the assets (or disposal group) are generally measured at the lower of their carrying amount and fair value, less cost of disposal. Any impairment loss on a disposal group is first allocated to goodwill and then to remaining non-current assets on a pro rata basis; no loss is allocated to financial assets, deferred tax assets and employee benefit assets, which continue to be measured in accordance with the Group's accounting policies. Impairment losses on initial classification as held for sale and subsequent gains or losses on remeasurement are recognised in the income statement. Gains are not recognised in excess of any cumulative impairment loss.

A discontinued operation is a component of the Group's business, the operations and cash flows of which can be clearly distinguished from the rest of the Group and which:
- represents a separate major line of business or geographic area of operations,
- is part of a single co-ordinated plan to dispose of a separate major line of business or geographic area of operations, or
- is a subsidiary acquired exclusively with a view to resale.

Classification as a discontinued operation occurs at the earlier of disposal or when the operation meets the criteria to be classified as held for sale.

When an operation is classified as a discontinued operation, the comparative income statement is re-presented as if the operation had been discontinued from the start of the comparative year.

Associated Companies and Joint Ventures

Associated companies and joint ventures are accounted for using the equity method. The consolidated financial statements include the Group's share of the comprehensive income of equity-accounted investees.

Cash and Cash Equivalents

Cash and cash equivalents comprise cash in bank and liquid short-term deposits.

Inventories

Raw materials, work in progress and finished goods are stated at the lower of cost and net realisable value. Costs incurred are based on the first in, first out principle (FIFO method) and comprise direct materials, direct labour and an appropriate proportion of variable and fixed overhead expenditure, the latter being allocated on the basis of normal operating capacity. Cost includes the reclassification from equity of any gains or losses on qualifying cash flow hedges relating to purchases of raw material but excludes borrowing costs. Costs are assigned to individual items of inventory based on weighted average costs. Costs of purchased inventory are determined after deducting rebates and discounts. The net realisable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. Measurement of spare parts is based on the weighted average cost method.

Government Grants
Government grants include grants for research and development as well as investment grants. Government grants relating to assets are deducted from the carrying amount of the related asset and recognised in the income statement as a reduction of depreciation (production costs) over the useful life of the asset. Income from other government grants is shown as part of other operating income.

Provisions
A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation against third parties that can be reliably estimated and if it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions reflect the present value of future cash outflows. The cash flows are discounted at a current pre-tax rate that reflects the risks specific to the liability. The unwinding of the discount is expensed as incurred and recognised in the income statement as finance cost. For details on decommissioning provision, see significant accounting policies for property, plant and equipment.

Deferred and Income Taxes
Deferred tax assets and liabilities are computed individually for each company in accordance with the balance sheet liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for tax purposes. Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority.

Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, based on the laws that have been enacted or substantively enacted as of the reporting date.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available, against which the temporary differences and unused tax loss carryforwards can be utilised within a period of five years, based on a five-year business plan.

Deferred tax assets are reviewed on each reporting date and are remeasured to the extent that it is probable they will be realised.

As of 1 January 2021, selected Austrian Borealis group entities are part of the Austrian OMV tax group and tax charges resulting from tax allocation agreements are settled with OMV Aktiengesellschaft. Hence, income tax receivables/ liabilities from respective tax group members are no longer presented under the balance sheet item Income taxes, but under Other current receivables/liabilities.

Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends to either settle on a net basis, or to realise the asset and settle the liability simultaneously.

The uncertain tax positions, for example tax disputes, are accounted for by applying the most likely amount. The most likely amount is the single most likely amount in a range of realistically possible options. The Company evaluates the unit of account related to the uncertain tax positions on a case-by-case basis.

Reserves
A reserve has been established under the consolidated equity for unrealised exchange differences related to deferred foreign exchange gains and losses on intercompany loans, hedge loans and the equity of foreign operations. The hedging reserve contains fair value adjustments to financial instruments held for hedging purposes. The reserve for actuarial gains/losses recognised in equity contains the actuarial gains and losses on employee benefit plans.

Employee Benefits
Defined Contribution Plans
Obligations for contributions to defined contribution plans are recognised as an expense in the income statement as incurred.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The Group has no further payment obligations once the contributions have been paid. The contributions are recognised as employee benefit expenses when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in future payments is available.

26230711119902

Defined Benefit Plans
The Group's net obligation in respect of defined benefit pension plans and other post-employment benefit plans is calculated separately for each plan by estimating the amount of future benefits that employees have earned in return for their service in the current and prior periods. The benefit is discounted to determine its present value and the fair value of any plan assets is deducted. A qualified actuary performed the calculation using the projected unit credit method.

The discount rate used in the actuarial measurements is determined with a reference to long-term yields of AA-rated corporate bonds. In countries where no deep market for such bonds exists, the market yield of government bonds is used.

The Group has the following plans in place: defined benefit pension plans, post-employment medical plans, severance plans and other long-term employee benefit plans. Pension plans in place are both funded and unfunded. The plan asset funds are predominantly held in the form of insurance contracts.

The parameters of the pension promises vary from country to country. There are both plans open and closed to new entrants, contributory as well as non-contributory.

Post-employment medical plans mainly cover the medical expenses of retirees in Belgian companies. They are non-contributory and closed to new entrants. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans.

Severance plans cover employees of Austrian companies who started their service before 1 January 2003. They are entitled to receive severance payments upon termination of their employment or on reaching their pension age.

Furthermore, the Group operates severance plans in Italy and the United Arab Emirates. The benefits depend on the years of service and remuneration level. These plans are non-contributory and unfunded.

Other long-term employee benefits include jubilee schemes and pre-pension benefits. Jubilee schemes entitle the members to benefits in the form of a payment and/or additional paid holiday when reaching a defined length of service. These plans are non-contributory and unfunded.

All actuarial gains and losses relating to post-employment benefit plans are recognised in other comprehensive income. Actuarial gains and losses related to other long-term services are recognised in the income statement.

Past-service costs are recognised immediately in the income statement. Net interest expenses resulting from employee benefits are included in the consolidated income statement as part of the operating profit.

Fair Value
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants on the measurement date. The fair value measurement is based on the presumption that the transaction to sell the asset or transfer the liability takes place either on the principal market for the asset or liability or, in the absence of a principal market, on the most advantageous market for the asset or liability.

The principal or the most advantageous market must be accessible to the Group. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their best economic interest. A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

The Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximising the use of relevant observable inputs and minimising the use of unobservable inputs.

For assets and liabilities that are recognised in the financial statements on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by reassessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period. For the purpose of fair value disclosures, the Group has determined classes of assets and liabilities on the basis of the nature, characteristics and risks of the asset or liability and the level of the fair value hierarchy as explained in note 28.

Financial Instruments

Recognition and Derecognition

Financial assets and financial liabilities are recognised on the trade date, when the Group becomes a party to the contractual provisions of the financial instrument. Financial assets are derecognised when the contractual rights to the cash flows from the financial asset expire, or when the financial asset and substantially all the risks and rewards are transferred. A financial liability is derecognised when it is extinguished, discharged, cancelled or expires.

Classification and Initial Measurement of Financial Assets

Financial assets are initially recognised at their fair value, except for those trade receivables that do not contain a significant financing component and are measured at the transaction price in accordance with IFRS 15. For all financial assets which are not subsequently measured at fair value, the fair value on initial recognition is adjusted for transaction costs (where applicable). Financial assets, other than those designated and effective as hedging instruments, are classified into the following categories:

- amortised cost,
- fair value through profit or loss (FVPL),
- fair value through other comprehensive income (FVOCI).

The classification is determined by both:

- the entity's business model for managing the financial asset,
- the contractual cash flow characteristics of the financial asset.

Subsequent Measurement of Financial Assets

Financial Assets at Amortised Cost

Financial assets are measured at amortised cost if the assets meet the following conditions (and are not designated as FVPL):

- they are held within a business model whose objective is to hold the financial assets and collect their contractual cash flows,
- the contractual terms of the financial assets give rise to cash flows that are solely payments of principal and interest on the principal amount outstanding.

After initial recognition, these are measured at amortised cost using the effective interest rate method. Discounting is omitted where the effect of discounting is immaterial. The Group's cash and cash equivalents, trade receivables (except trade receivables under the factoring programme), loans granted and parts of other receivables fall into this category of financial instruments.

Financial Assets at Fair Value through Profit or Loss (FVPL)

Financial assets that are held within a different business model other than "hold to collect" or "hold to collect and sell" are categorised at FVPL. Furthermore, irrespective of the business model, financial assets whose contractual cash flows are not solely payments of principal and interest are accounted for at FVPL.

Derivative financial instruments for which hedge accounting is not applied fall into this category.

The Group has a pool of specifically designated trade receivables that are all subject to factoring. This pool of receivables represents a hold to sell business model and is measured using FVPL.

20230711119903

The category also contains equity investments. Equity investments are either measured at FVPL or at FVOCI. Until 31 December 2020, Borealis elected irrevocably to classify all of its non-listed equity investments as investments at FVPL.

Furthermore, the category contains marketable securities and bonds which are classified as a debt instrument. As such, marketable securities and bonds do not fulfil the solely payment of principal and interest (SPPI) criteria and have to be measured at FVPL.

Assets in this category are measured at fair value with gains or losses recognised in the income statement. The fair values of financial assets in this category are determined by reference to active market transactions or using a valuation technique where no active market exists.

Financial Assets at Fair Value through OCI (FVOCI)
The category contains equity investments. From 1 January 2021, all new non-listed equity investments, which are held for strategic purposes and not for trading, are classified as investments at FVOCI. Gains and losses on equity investments measured at FVOCI are never recycled to the income statement and they are not subject to impairment assessment. Dividends are recognised in the income statement unless they represent a recovery of part of the cost of an investment.

Impairment of Financial Assets
The Group has three types of financial assets that are subject to IFRS 9's expected credit loss (ECL) model:
– trade receivables (excluding trade receivables held to sell) and contract assets,
– cash and cash equivalents,
– debt investments carried at amortised cost.

For the measurement of the ECLs, a distinction is made between:
– financial instruments for which credit risk has not increased significantly since initial recognition ("Stage 1" – 12-month expected credit losses),
– financial instruments for which credit risk has increased significantly since initial recognition ("Stage 2" – lifetime expected credit losses).

"Stage 3" covers financial assets that have objective evidence of impairment as of the reporting date (credit impaired financial assets).

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Group expects to receive).

Lifetime ECLs are the ECLs that result from all possible default events over the expected life of a financial instrument.

12-month ECLs are the portion of ECLs that result from default events that are possible within the 12 months after the reporting date.

On each reporting date, the Group assesses whether financial assets carried at amortised cost are credit-impaired. A financial asset is credit-impaired when one or more events have occurred that have a detrimental impact on the estimated future cash flows of the financial asset.

Evidence that a financial asset is credit-impaired includes the following observable data:
– significant financial difficulty of the borrower or issuer,
– a breach of contract such as a default or being more than 90 days past due,
– it is probable that the borrower will enter into bankruptcy or other financial reorganisation.

A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows, such as in the case of bankruptcy.

Trade Receivables and Contract Assets
Trade receivables and contract assets are impaired by using the simplified approach, which does not distinguish between 12-month ECLs and lifetime ECLs, but all assets are generally impaired using lifetime ECLs. For trade receivables and contract assets, the Group distinguishes between trade receivables up to 90 days past due and trade receivables more than 90 days past due. For trade receivables up to 90 days past due, the Group calculates ECLs based on external and internal rating and associated probabilities of default. Available forward-looking information is taken into account if it has a material impact on the amount of impairment recognised. Trade receivables more than 90 days past due are assessed individually and credit-impaired if necessary. See note 27 for further information on how credit risk is managed.

Loss allowances for trade receivables measured at amortised cost are deducted from the gross carrying amount of the assets and recognised in sales and distribution costs in the income statement.

Cash and Cash Equivalents
While cash and cash equivalents are also subject to the impairment requirements of IFRS 9, the identified impairment loss (based on the general approach) was immaterial.

Debt Investments Carried at Amortised Cost
The Group's debt investments at amortised cost are considered to have low credit risk and the loss allowance recognised during the period was therefore limited to 12 months of expected losses. Debt investments are considered to be low credit risk when they have a low risk of default and the counterparty has a strong capacity to meet its contractual cash flow obligations in the near term.

On that basis, the identified impairment loss (ECL based on the general approach) was immaterial. If there is any objective evidence for an impairment, debt investments are impaired individually (credit-impaired). See note 27 for further information.

Classification and Measurement of Financial Liabilities
Financial liabilities are initially measured at fair value and, where applicable, adjusted for transaction costs unless the Group designated a financial liability at fair value through profit or loss (FVPL). Subsequently, financial liabilities are measured at amortised cost using the effective interest method except for derivatives, which are carried at fair value with gains or losses recognised in the income statement (other than derivative financial instruments that are designated and effective as hedging instruments). Financial liabilities recognised for the financial guarantee contracts are subsequently measured at the higher of:
- the amount of the loss allowance determined according to the expected credit losses model and;
- the amount initially recognised less the cumulative income recognised according to IFRS 15.

All interest-related charges and, if applicable, changes in an instrument's fair value that are recognised in the income statement are included within financial expenses or financial income.

The Group's financial liabilities include loans and borrowings, lease liabilities, trade payables and parts of other liabilities and derivative financial instruments.

Derivatives and Hedging Activities
Derivatives are initially recognised at fair value on the date a derivative is entered into and are subsequently remeasured at their fair value at the end of each reporting period.

The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Group designates certain derivatives as either:
- hedges of the fair value of recognised assets or liabilities or a firm commitment (fair value hedges),
- hedges of a particular risk associated with the cash flows of recognised assets and liabilities and highly probable forecast transactions (cash flow hedges), or
- hedges of a net investment in a foreign operation (net investment hedges).

In the periods presented, the Group does not have any fair value hedges outstanding and no derivatives are considered as net investment hedges.

20230711190904

At inception of the hedge relationship, the Group documents the hedge relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items. The Group documents its risk management objective and strategy for undertaking its hedge transactions. A hedging relationship qualifies for hedge accounting only if all of the following hedge effectiveness requirements are met:

- there is an economic relationship between the hedged item and the hedging instrument,
- the effect of credit risk does not dominate the value changes that result from that economic relationship,
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the entity actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of the hedged item.

Cash Flow Hedging

When a derivative is designated as a cash flow hedging instrument, the effective portion of changes in the fair value of the derivative is recognised in OCI and accumulated in the hedging reserve. The effective portion of changes in the fair value of the derivative that is recognised in OCI is limited to the cumulative change in fair value of the hedged item, determined on a present value basis, from inception of the hedge. Any ineffective portion of changes in the fair value of the derivative is recognised immediately in the income statement. The Group designates the full change in fair value of foreign exchange forwards as the hedging instrument in cash flow hedging relationships. As of the reporting date, Borealis has several foreign exchange forwards, but no outstanding foreign exchange options.

When the hedged forecast transaction subsequently results in the recognition of a non-financial item such as inventory, the amount accumulated in the hedging reserve and the cost of the hedging reserve is directly included in the initial cost of the non-financial item when it is recognised.

For all other hedged forecast transactions, the amount accumulated in the hedging reserve and the cost of the hedging reserve is reclassified to the income statement in the same period or periods during which the hedged expected future cash flows affect the income statement.

If the hedge no longer meets the criteria for hedge accounting or the hedging instrument is sold, expires, is terminated or is exercised, then hedge accounting is discontinued prospectively. When hedge accounting for cash flow hedges is discontinued, the amount that has been accumulated in the hedging reserve remains in equity until, for a hedge of a transaction resulting in the recognition of a non-financial item, it is included in the non-financial item's cost on its initial recognition or, for other cash flow hedges, it is reclassified to the income statement in the same period or periods as the hedged expected future cash flows affect the income statement.

If the hedged future cash flows are no longer expected to occur, then the amounts that have been accumulated in the hedging reserve are immediately reclassified to the income statement.

Net Investment Hedges

If the hedged future cash flows are no longer expected to occur, then the amounts that have been accumulated in the hedging reserve are immediately reclassified to the income statement.

Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in OCI and accumulated in the reserve for unrealised exchange gains/losses. The gain or loss relating to the ineffective portion is recognised immediately in the income statement. Gains and losses accumulated in equity are reclassified to the income statement when the foreign operation is partially disposed of or sold.

Derivatives That Do Not Qualify for Hedge Accounting

Certain derivative instruments do not qualify for hedge accounting. Changes in the fair value of any derivative instrument that does not qualify for hedge accounting are recognised immediately in the income statement.

Offsetting of Financial Instruments
Financial assets and financial liabilities can be offset and the net amount is reported in the consolidated balance sheet if there is a currently enforceable legal right to offset the recognised amounts and there is an intention to settle on a net basis or to realise the assets and settle the liabilities simultaneously.

Cash Flow Statement
The consolidated cash flow statement shows the Group's cash flow provided by/used in operating, investing and financing activities. The cash flow from operating activities is calculated using the direct method. The cash flow from investing activities comprises payments made on the purchase and disposal of operations and the purchase and disposal of property, plant and equipment, intangible assets as well as financial assets. The cash flow from financing activities comprises changes in the Group's share capital, as well as loans, repayments of principals of interest-bearing debt and the payment of dividends.

Segment Reporting
A segment is a distinguishable component of the Group that is engaged in business activities from which it may earn revenues and incur expenses, whose operating results are regularly reviewed by the Executive Board (chief operating decision maker) and are used to make decisions on resources to be allocated to the segment and assess its performance and for which separate financial information is available (reportable segment).

Moreover, a geographic segment is based on risks and rewards of a particular economic environment (geographic region). The Executive Board decided to show the net sales by geographic segment next to the reportable segment.

The Executive Board has identified three reportable segments:

Polyolefins – this part of the business manufactures and markets polyolefin products. Although the Mobility, Energy, Consumer Products, Infrastructure, Advanced Products and Business Development operating segments provide separate reports on their performance, they have been aggregated into one reporting segment as they have similar long-term growth rates and raw material economics, as well as demonstrate similarities in other aspects required by the Standard.

Base Chemicals – Borealis produces and markets a wide range of base chemicals, such as phenol, acetone, ethylene, propylene and similar. These activities are covered in organisational terms by the business unit Hydrocarbons & Energy.

Borealis NITRO – Borealis is also engaged in the production and marketing of fertilizers, technical nitrogen and melamine. These activities are carried out by two business units – Fertilizers and Melamine. Fertilizers and Melamine provide separate reports on their performance, but based on their similar economic characteristics, as well as the size of Melamine being below the required thresholds, they have been aggregated into one reporting segment.

All other segments – Corporate, Middle East and Asia and Research & Development are not reportable segments, as they are either not included separately in the reports provided to the Executive Board or only contain results of the associated companies. In 2022, the Company's share in fertilizer production sites in the Netherlands and Belgium ("Rosier") became a not reportable segment instead of being part of Borealis NITRO as previously. 2021 amounts for Rosier have been reclassified accordingly. The results of these operations are included in the Non-Allocated column (see note 1).

New Accounting Standards
New and Amended Standards Adopted by Borealis
In 2022, the following amended standards became effective and have been adopted by Borealis, where effective means effective for annual periods beginning on or after that date (as endorsed by the EU):

20230711119905

Standards		IASB effective date	EU effective date
Amended Standards			
IAS 37	Onerous Contracts – Cost of Fulfilling a Contract	1 January 2022	1 January 2022
IFRS 1, IFRS 9, IFRS 16 and IAS 41	Annual Improvements to IFRS Standards 2018–2020	1 January 2022	1 January 2022
IAS 16	Proceeds before Intended Use	1 January 2022	1 January 2022
IFRS 3	References to the Conceptual Framework	1 January 2022	1 January 2022

The adoption of the amended standards stated above is included in the consolidated financial statements. This did not have a material impact on the financial position or performance of the Group.

New and Amended Standards Not Yet Effective

A number of new standards and amendments to standards have been issued but are not yet effective (as adopted by the EU). Borealis will adopt the standards on the effective date. Effective means effective for annual periods beginning on or after that date (as endorsed by the EU). Borealis does not expect a material impact of these new and amended standards on the consolidated financial statements.

Standards		IASB effective date	EU effective date
New Standards			
IFRS 17	Insurance Contracts	1 January 2023	1 January 2023
Amended Standards			
IAS 1 and IFRS Practice Statement 2	Disclosure of Accounting Policies	1 January 2023	1 January 2023
IAS 8	Definition of Accounting Estimates	1 January 2023	1 January 2023
IAS 12	Deferred Tax related to Assets and Liabilities arising from a Single Transaction	1 January 2023	1 January 2023
IFRS 17	Initial Application of IFRS 17 and IFRS 9 – Comparative Information	1 January 2023	1 January 2023
IFRS 16	Lease Liability in a Sale and Leaseback	1 January 2024	
IAS 1	Classification of Liabilities as Current or Non-current	1 January 2024	

Amounts

All amounts are in EUR thousand unless otherwise stated. The amounts in parentheses relate to the preceding year.

1. Segment Reporting

EUR thousand	Polyolefins		Base Chemicals		
	2022	2021	2022	2021	
Net sales by segment					
Total segment sales	7,040,820	6,696,913	5,967,369	5,103,346	
Inter-segment sales	0	0	-4,121,826	-3,605,569	
	7,040,820	**6,696,913**	**1,845,543**	**1,497,777**	

Prices for Group inter-segment sales are mainly based on monthly market prices for ethylene and propylene contracts.

Segment result					
Operating profit	525,852	1,185,759	243,125	308,543	
Measurement of discontinued operation					
Net results of associated companies and joint ventures	-58,246	36,308	401	418	
Gain from disposal of equity accounted investments					
Financial results					
Taxes on income					
Non-controlling interests					
Net profit for the year attributable to equity holders of the parent					
Net sales by geographic segment (by delivery destination)					
EU countries	4,667,610	4,491,951	1,327,787	1,043,782	
thereof Austria	196,376	192,406	174	0	
Non-EU countries in Europe	929,462	913,128	479,464	397,167	
US	307,937	234,660	31,644	36,869	
Middle East and Asia	560,295	394,522	6,436	18,387	
Other regions	575,516	662,652	212	1,572	
	7,040,820	**6,696,913**	**1,845,543**	**1,497,777**	

EUR thousand	31.12.2022	31.12.2021	31.12.2022	31.12.2021	
Other information					
Segment assets	4,788,230	4,713,053	3,549,352	2,960,293	
thereof Austria	2,413,308	2,359,649	1,652,827	1,273,059	
Segment liabilities	0	0	0	0	
Investments in property, plant and equipment	149,720	89,377	158,394	119,445	
Depreciation, amortisation and impairment	172,838	173,817	131,303	114,182	

Over 90% of the above relate to segment EU countries.

1) Borealis NITRO: Borealis Fertilizers, Melamine and Technical Nitrogen Products business unit excluding Rosier. // 2) 2021 amounts for Rosier have been reclassified from Borealis NITRO to Non-Allocated.

20230711119906

	Borealis NITRO [1) 2)]		Non-Allocated [2)]		Consolidated	
	2022	2021	2022	2021	2022	2021
	2,351,335	1,264,315	445,582	397,378	15,805,106	13,461,952
	0	0	0	0	-4,121,826	-3,605,569
	2,351,335	**1,264,315**	**445,582**	**397,378**	**11,683,280**	**9,856,383**
	339,440	125,975	-27,251	-103,534	1,081,166	1,516,743
	266,344	-443,739			266,344	-443,739
	0	220	454,958	558,146	397,113	595,092
			604,171	0	604,171	0
			103,978	-9,377	103,978	-9,377
			-342,138	-262,648	-342,138	-262,648
			-2,532	9,502	-2,532	9,502
					2,108,102	**1,405,573**
	2,161,658	1,133,838	257,179	195,042	8,414,234	6,864,613
	381,362	200,981	71,934	55,663	649,846	449,050
	136,747	86,581	9,664	31,117	1,555,337	1,427,993
	25,950	8,256	8,490	5,917	374,021	285,702
	3,359	11,535	133,023	129,907	703,113	554,351
	23,621	24,105	37,226	35,395	636,575	723,724
	2,351,335	**1,264,315**	**445,582**	**397,378**	**11,683,280**	**9,856,383**

	31.12.2022	31.12.2021	31.12.2022	31.12.2021	31.12.2022	31.12.2021
	848,815	405,144	5,498,979	4,906,240	14,685,376	12,984,730
	590,376	208,696	4,890,720	4,348,205	9,547,231	8,189,609
	0	0	4,893,390	4,813,445	4,893,390	4,813,445
	126,396	104,441	232,147	346,699	666,657	659,962
	0	18,777	48,150	120,388	352,291	427,164

Reconciliation of reportable segments to the consolidated income statement EUR thousand	2022	2021
Total revenue for reportable segments	11,683,280	9,856,383
Elimination of discontinued operation	-2,350,471	-1,264,413
Net sales	**9,332,809**	**8,591,970**
Total profit for reportable segments	2,108,102	1,405,573
Non-controlling interests	2,532	-9,502
Elimination of discontinued operation	-497,502	235,332
Net profit for the year from continuing operations	**1,613,132**	**1,631,403**

2. Revenue from Contracts with Customers

EUR thousand	2022	2021
Revenue from contracts with customers	11,700,536	9,849,684
Revenue from other sources	-17,256	6,699
Net sales from continuing and discontinued operations	**11,683,280**	**9,856,383**

Revenue from other sources mainly includes gains/losses for realised cash flow hedges on net sales from foreign exchange forwards (see also note 19). The negative revenue from other sources in 2022 is due to losses for realised cash flow hedges on net sales from foreign exchange forwards amounting to EUR 21,482 thousand. Revenue from other sources relating to the discontinued operation amounted to EUR 2,505 thousand (EUR 2,788 thousand).

In the following table, revenue from contracts with customers is disaggregated by segment and geographic market. The table also includes a reconciliation of the disaggregated revenue with the Group's reportable segments (see note 1).

20230711119907

EUR thousand	2022				
	Polyolefins	Base Chemicals	Borealis NITRO [1]	Non-Allocated	Consolidated
EU countries	4,665,925	1,327,787	2,159,153	257,143	8,410,008
Non-EU countries in Europe	929,490	479,464	136,747	9,664	1,555,365
US	314,397	31,644	25,950	8,490	380,481
Middle East and Asia	568,267	6,436	3,359	133,023	711,085
Other regions	582,538	212	23,621	37,226	643,597
Revenue from contracts with customers	**7,060,617**	**1,845,543**	**2,348,830**	**445,546**	**11,700,536**
Revenue from other sources	-19,797	0	2,505	36	-17,256
Net sales (as reported in note 1)	**7,040,820**	**1,845,543**	**2,351,335**	**445,582**	**11,683,280**

EUR thousand	2021				
	Polyolefins	Base Chemicals	Borealis NITRO [1] [2]	Non-Allocated [2]	Consolidated
EU countries	4,490,539	1,043,782	1,131,052	194,588	6,859,961
Non-EU countries in Europe	913,126	397,167	86,581	31,117	1,427,991
US	234,101	36,869	8,256	5,917	285,143
Middle East and Asia	393,605	18,387	11,535	129,907	553,434
Other regions	662,083	1,572	24,105	35,395	723,155
Revenue from contracts with customers	**6,693,454**	**1,497,777**	**1,261,529**	**396,924**	**9,849,684**
Revenue from other sources	3,459	0	2,786	454	6,699
Net sales (as reported in note 1)	**6,696,913**	**1,497,777**	**1,264,315**	**397,378**	**9,856,383**

1) Borealis NITRO: Borealis Fertilizers, Melamine and Technical Nitrogen Products business unit excluding Rosier. // 2) 2021 amounts for Rosier have been reclassified from Borealis NITRO to Non-Allocated.

The following table provides information about receivables, contract assets and contract liabilities from contracts with customers.

EUR thousand	31.12.2022	31.12.2021
Receivables	788,440	1,113,786
Contract assets	8,139	15,534
Contract liabilities	50,182	54,997

Contract assets are included in other receivables and other assets, thereof EUR 0 thousand (EUR 7,829 thousand) current and EUR 8,139 thousand (EUR 7,705 thousand) non-current.

The Group applies the practical expedient in IFRS 15.121 and does not disclose information about remaining performance obligations that have original expected durations of one year or less.

For impairment recognised on receivables and contract assets, please see note 27 Credit Risk.

The contract liabilities mainly include advance consideration received from customers and expected volume discounts payable to customers in relation to sales made. The contract liabilities of the previous year have been realised during 2022.

3. Research and Development

At the end of the year, 554 employees (headcount) were engaged in research and development relating entirely to continuing operations (504 FTEs in 2021). The total cost of these activities including impairment costs, amounted to EUR 9,449 thousand compared to EUR 17,993 thousand in 2021 (see note 7). Internal development costs amounting to EUR 34,249 thousand (EUR 30,653 thousand) were capitalised as intangible assets.

4. Intangible Assets

EUR thousand	2022				
	Goodwill	Development costs	Capitalised software	Others	Total
Cost					
As of 1 January	133,648	488,333	120,639	468,140	**1,210,760**
Exchange adjustments	538	0	43	-310	**271**
Additions	0	34,930	5,449	191,532	**231,911**
Reclassification to assets of the disposal group held for sale	0	0	0	-565	**-565**
Disposals	0	0	-189	-209,610	**-209,799**
Transfers	0	-3,032	5,627	3,138	**5,733**
As of 31 December	**134,186**	**520,231**	**131,569**	**452,325**	**1,238,311**
Accumulated amortisation					
As of 1 January	1,400	297,501	86,788	166,428	**552,117**
Exchange adjustments	0	-1	39	-1,113	**-1,075**
Reclassification to assets of the disposal group held for sale	0	0	0	-526	**-526**
Disposals	0	0	-172	-141	**-313**
Amortisation	0	18,567	15,727	16,895	**51,189**
Impairment	0	2,969	0	0	**2,969**
As of 31 December	**1,400**	**319,036**	**102,382**	**181,543**	**604,361**
Carrying amount as of 1 January	132,248	190,832	33,851	301,712	**658,643**
Carrying amount as of 31 December	**132,786**	**201,195**	**29,187**	**270,782**	**633,950**

20230711190908

EUR thousand	2021				
	Goodwill	Development costs	Capitalised software	Others	Total
Cost					
As of 1 January	179,761	461,427	115,422	347,170	**1,103,780**
Exchange adjustments	-139	1	1	-667	**-804**
Additions	0	36,988	3,574	218,473	**259,035**
Reclassification to assets of the disposal group held for sale	-45,974	0	-6,728	-12,950	**-65,652**
Disposals	0	0	0	-94,197	**-94,197**
Transfers	0	-10,083	8,370	10,311	**8,598**
As of 31 December	**133,648**	**488,333**	**120,639**	**468,140**	**1,210,760**
Accumulated amortisation					
As of 1 January	47,375	266,284	75,182	160,515	**549,356**
Exchange adjustments	-1	0	2	-292	**-290**
Reclassification to assets of the disposal group held for sale	-45,974	0	-6,435	-12,365	**-64,775**
Disposals	0	0	0	-684	**-684**
Amortisation	0	18,760	18,039	19,133	**55,932**
Impairment	0	12,457	0	121	**12,578**
As of 31 December	**1,400**	**297,501**	**86,788**	**166,428**	**552,117**
Carrying amount as of 1 January	132,386	195,143	40,240	186,655	**554,424**
Carrying amount as of 31 December	**132,248**	**190,832**	**33,851**	**301,712**	**658,643**

Other intangible assets mainly include patents and licences as well as emission rights.

Additions arising from internal development amounted to EUR 34,249 thousand (EUR 30,653 thousand). Intangible assets received by way of government grants as allowances for emissions (EU Emissions Trading System) amounted to EUR 93,396 thousand for the year 2022. Additionally, pending allowances for the year 2021 amounting to EUR 85,680 thousand were received during the first six months of 2022. This was in addition to the previous year's free allocation of EUR 197,079 thousand which had already been received in the second half of 2021. The emissions of the year 2021 were settled in April 2022. Emission rights purchased from external parties amounted to EUR 0 thousand (EUR 74 thousand) and returned certificates which were borrowed by external parties amounted to EUR 2,170 thousand (EUR 13,624 thousand). An equivalent of EUR 208,165 thousand (EUR 91,343 thousand) was returned to the respective EU ETS regulatory authorities for the emissions in 2021. For details on line transfers see note 5.

5. Property, Plant and Equipment

EUR thousand	2022			
	Production plants	Machinery and equipment	Construction in progress	Total
Cost				
As of 1 January	6,028,838	125,105	936,278	**7,090,221**
Exchange adjustments	-160,284	-576	-5,381	**-166,241**
Additions	93,441	3,350	435,129	**531,920**
Reclassification to assets of the disposal group held for sale	-66,115	-2,285	-1,477	**-69,877**
Disposals	-62,322	-4,570	-58	**-66,950**
Transfers	78,332	2,678	-86,657	**-5,647**
As of 31 December	**5,911,890**	**123,702**	**1,277,834**	**7,313,426**
Accumulated depreciation				
As of 1 January	4,051,585	94,713	0	**4,146,298**
Exchange adjustments	-110,134	-570	0	**-110,704**
Reclassification to assets of the disposal group held for sale	-61,958	-2,167	0	**-64,125**
Disposals	-60,413	-4,181	0	**-64,594**
Depreciation	257,782	7,715	0	**265,497**
Impairment	834	0	0	**834**
Impairment reversal	-20,000	0	0	**-20,000**
As of 31 December	**4,057,696**	**95,510**	**0**	**4,153,206**
Carrying amount as of 1 January	1,977,253	30,392	936,278	**2,943,923**
Carrying amount as of 31 December	**1,854,194**	**28,192**	**1,277,834**	**3,160,220**

20230711119909

EUR thousand	2021			
	Production plants	Machinery and equipment	Construction in progress	Total
Cost				
As of 1 January (as reported)	7,509,471	142,183	693,735	**8,345,389**
Restatement	-13,539	-262	-4,651	**-18,452**
As of 1 January (restated)	7,495,932	141,921	689,084	**8,326,937**
Exchange adjustments	-39,993	-151	-1,445	**-41,589**
Additions	131,373	2,606	507,981	**641,960**
Reclassification to assets of the disposal group held for sale	-1,687,781	-15,126	-90,118	**-1,793,025**
Disposals	-30,244	-5,884	-77	**-36,205**
Transfers	159,551	1,739	-169,147	**-7,857**
As of 31 December	**6,028,838**	**125,105**	**936,278**	**7,090,221**
Accumulated depreciation				
As of 1 January (as reported)	4,979,832	107,501	0	**5,087,333**
Restatement	-1,700	3	0	**-1,697**
As of 1 January (restated)	4,978,132	107,504	0	**5,085,636**
Exchange adjustments	-27,989	-139	0	**-28,128**
Reclassification to assets of the disposal group held for sale	-1,181,611	-13,972	0	**-1,195,583**
Disposals	-29,251	-5,819	0	**-35,070**
Depreciation	273,726	7,139	0	**280,865**
Impairment	38,578	0	0	**38,578**
As of 31 December	**4,051,585**	**94,713**	**0**	**4,146,298**
Carrying amount as of 1 January (as reported)	2,529,639	34,682	693,735	**3,258,056**
Restatement	-11,839	-265	-4,651	**-16,755**
Carrying amount as of 1 January (restated)	2,517,800	34,417	689,084	**3,241,301**
Carrying amount as of 31 December	**1,977,253**	**30,392**	**936,278**	**2,943,923**

Production plants include the following carrying amounts: land amounting to EUR 34,811 thousand (EUR 35,125 thousand), buildings amounting to EUR 296,391 thousand (EUR 322,026 thousand), immovable machinery amounting to EUR 1,326,884 thousand (EUR 1,412,812 thousand) and immovable equipment amounting to EUR 196,108 thousand (EUR 207,290 thousand).

In 2022, borrowing costs amounting to EUR 13,978 thousand (EUR 9,308 thousand) have been capitalised, using an average interest rate of 1.6% (1.7%). Additions to property, plant and equipment that were not paid at the end of the reporting period amounted to EUR 1,174 thousand (EUR 34,706 thousand).

Additions comprise major projects advanced in 2022, which are the new, world-scale propane dehydrogenation (PDH) plant at the existing production site in Kallo, Belgium, the Semicon Project in Antwerp, Belgium, which supports growth in the Power Project segment by creating continuous production chains and improving quality control, as well as the wastewater treatment upgrade in Stenungsund, Sweden, which aims to reduce emissions of oil and other contaminants to water.

The line transfers show EUR 5,733 thousand (EUR 8,598 thousand) of transfers between property, plant and equipment and intangible assets and EUR 86 thousand (EUR 741 thousand) of transfers to right-of-use assets according to IFRS 16.

As of 31 December 2022, Borealis' contractual commitments amounted to EUR 165,294 thousand (EUR 149,998 thousand) for the acquisition of property, plant and equipment (see note 21). The main increase results from the planned investments in the improvement of production chains and quality control in the power project segment in Antwerp, Belgium, with capital commitments of EUR 29,700 thousand (EUR 0 thousand).

Assets Pledged
Assets pledged amounted to EUR 11,419 thousand (EUR 12,390 thousand) and relate to property, plant and equipment. The commitments covered by the above assets amounted to EUR 1,439 thousand (EUR 1,951 thousand) at the end of the year.

6. Leases

The recognised right-of-use assets relate to the following types of assets:

EUR thousand	31.12.2022	31.12.2021
Production plants	553,118	103,691
Machinery and equipment	46,018	56,862
Carrying amount	**599,136**	**160,553**

Additions to the right-of-use assets, including the effect of reassessed contracts, amounted to EUR 494,801 thousand (EUR 20,687 thousand) in 2022.

Leased production plants include land, building space, immovable equipment and logistics facilities, such as storage tanks, warehouses, ports and pipelines. Leased machinery and equipment include company cars, material handling equipment, such as forklifts, railcars and an ethane marine carrier. The majority of leases by number relates to company cars with a typical term of four years and to material handling equipment with a typical term of six years. In general, leases for company cars and material handling equipment do not contain extension options, but a new contract for a replacement asset is usually put in place after the lease has ended.

Lease liabilities are presented in the balance sheet as follows:

20230711199310

EUR thousand	31.12.2022	31.12.2021
Current lease liabilities	42,635	30,682
Non-current lease liabilities	563,239	134,084
Carrying amount	**605,874**	**164,766**

The lease liabilities are mainly driven by two new material contracts, which together represent 71% (0%) of the carrying amount as of the reporting date: leasing contracts for hydrocarbons logistics and storage infrastructure related to the new PDH plant in Kallo, Belgium. The minimum lease term for the contracts ends in 2052. All contracts contain extension options.

The following amounts relating to leases were included in the income statement:

EUR thousand	2022	2021
Included in production costs, sales and distribution costs, administration costs and R&D costs		
Depreciation charge of right-of-use assets	47,157	38,335
Production plants	31,358	20,977
Machinery and equipment	15,799	17,358
Expense relating to short-term leases	4,349	3,367
Expense relating to leases of low value assets that are not shown above as short-term leases	684	797
Expense relating to variable lease payments not included in lease liabilities	1,294	234
Included in financial expenses		
Interest expense	8,310	3,741

The total cash outflow for leases was EUR 69,684 thousand (EUR 46,667 thousand) in 2022.

Variable Lease Payments
Uncertainty arises from variable lease payments that depend on an index or a rate. Such variable lease payments are usually included in contracts for rented land, building space, pipelines or storage and aim to compensate the lessor for price inflation during the contract period. The rates relate to baskets of industry-specific price indices or to single consumer price indices of countries mainly in the euro zone. Borealis does not expect any material increases of the Group's lease liability resulting from changes in those indices.

Extension and Termination Options
Extension and termination options are included in a number of leases across the Group. These options are used to maximise operational flexibility in terms of managing contracts. The majority of extension and termination options held are exercisable only by the Group and not by the respective lessor.

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not to exercise a termination option. Extension options (or periods covered by termination options) are only included in the lease term if it is reasonably certain that the lease will be extended (or not terminated). Potential undiscounted future cash outflows of EUR 175,312 thousand (EUR 201,379 thousand) have not

been included in the lease liability because it is not reasonably certain that the leases will be extended (or not terminated). This mainly relates to the vessel and the Belgium land lease.

The assessment of reasonable certainty is only reviewed if a significant event or a significant change in circumstances occurs which affects this assessment and is within the control of the lessee. In 2022, Borealis AG entered into new leasing contracts for propane and propylene storage related to the new PDH plant in Kallo, Belgium, with a contract term until February 2052. It was necessary to make new accounting estimates and extend the end term for five contracts (Kallo land lease and several pipeline contracts) from September 2049 to February 2052. The financial effect of revising these lease terms to reflect the effect of exercising extension and termination options was an increase in recognised lease liabilities of EUR 3,410 thousand (EUR 0 thousand).

7. Depreciation, Amortisation and Impairment

Depreciation, amortisation and impairment are allocated in the income statement as follows:

EUR thousand	2022	2021
Production costs		
Depreciation and amortisation	261,125	257,645
Impairment	3,066	38,610
Impairment reversal	-20,000	0
Sales and distribution costs		
Depreciation and amortisation	35,609	26,390
Administration costs		
Depreciation and amortisation	23,183	24,601
Research & development costs		
Depreciation and amortisation	45,515	47,603
Impairment	3,721	12,546
Total	**352,219**	**407,395**

In the current year, research and development costs include an impairment of EUR 2,887 thousand (EUR 12,546 thousand) of intangible assets and an impairment of EUR 834 thousand (EUR 0 thousand) for property, plant and equipment for which the carrying amount exceeds the present value of future cash flows. Like last year, the impairment of the assets within the research and development costs relates to the non-allocated segment.

On an annual basis, the Group tests whether any impairment of goodwill is required. The recoverable amount of a cash-generating unit (CGU) is determined based on value in use calculations which require the use of assumptions. The calculations use cash flow projections based on financial budgets covering a five-year period. Key assumptions of the forecasted cash flows are volumes sold and underlying industry margins. These are estimated based on industry reports issued by highly regarded business intelligence providers and management's experience. Cash flows beyond the five-year period are extrapolated using the estimated growth rates stated below. These growth rates are consistent with forecasts included in industry reports specific to the industry in which each CGU operates.

The lack of profitability in recent years and the significant deviation in 2021 of the financial performance of the Rosier Group (hereafter Rosier) from the budget qualified as a triggering event for an impairment test. The main reasons

2023071199313

were the market conditions being increasingly competitive with the pressure of the vertically integrated competitors and disruption in the raw material supply during the year. The performance of the impairment test for Rosier resulted in a recoverable amount based on the value in use in 2021, which was EUR 38,610 thousand lower than the carrying amount of this cash-generating unit. Therefore, property, plant and equipment was impaired by EUR 38,578 thousand and intangible assets by EUR 32 thousand in 2021.
In 2022, the impairment was partly reversed by EUR 20,000 thousand after a decommissioning provision for decontamination of land in the Netherlands and the related asset were remeasured by this amount. In 2022, the assets of CGU Rosier were reclassified as held for sale and measured at fair value, since then resulting in impairment losses of EUR 2,984 thousand for the period (see note 8). The above-mentioned Rosier-related impairment expenses and reversals are included in production costs.

In 2022, the project related to the new PDH plant construction within the CGU Base Chemicals was interrupted due to the suspension and termination of the contracts with the subcontractor which was not meeting the compliance requirements of the Borealis Group. This resulted in a higher estimate for the total investment cost and delay in the expected production commencement. Following these developments, the recoverable amount of the CGU was recalculated as of 31 December 2022. None of the calculated scenarios resulted in the need for an impairment.

Post tax discount rates (weighted average cost of capital) reflect specific risks relating to the relevant segments and the countries in which they operate.

The long-term growth rate is the weighted average growth rate used to extrapolate cash flows beyond the budget period. The rates are consistent with forecasts included in industry reports.

The allocated goodwill for each CGU as well as parameters influencing the calculation of the value in use can be seen in the following table:

Impairment test parameters 2022

Segment	Polyolefins					Non-Allocated
Cash-generating unit	Polyethylene	Polypropylene	Recyclates	Brazil [1]	South Korea [2]	Rosier [3]
Allocated goodwill in EUR thousand	50,687	22,000	33,695	4,205	22,196	N/A
Post tax discount rate	7.4%	7.4%	7.2%	10.2%	7.5%	N/A
Growth rate	0.9%	1.3%	1.9%	2.7%	2.4%	N/A

1) The change in the allocated goodwill of CGU Brazil compared to 31 December 2021 results entirely from foreign currency revaluation, since this unit is based on BRL as a functional currency. // 2) The change in the allocated goodwill of CGU South Korea compared to 31 December 2021 results entirely from foreign currency revaluation, since this unit is based on KRW as a functional currency. // 3) CGU Rosier is presented as held for sale starting from 30 September 2022.

Impairment test parameters 2021

Segment	Polyolefins					Borealis NITRO
Cash-generating unit	Polyethylene	Polypropylene	Recyclates	Brazil	South Korea	Rosier
Allocated goodwill in EUR thousand	50,687	22,000	33,695	3,705	22,160	0
Post tax discount rate	6.4%	6.4%	6.3%	7.4%	6.6%	6.0%
Growth rate	1.2%	1.7%	2.0%	2.8%	3.6%	1.3%

In addition to the parameters above, sensitivities regarding discount rates are taken into consideration. Additionally, a stress case test was performed for the CGUs Polyethylene and Polypropylene with regards to adverse development of exchange rates and oil price.

For the other CGUs, none of the calculated cases showed any need for an impairment.

8. Discontinued Operation and Other Changes

Discontinued Operation

Borealis plans the sale of the nitrogen business unit including fertilizers, technical nitrogen and melamine products (Borealis NITRO). This led to the reclassification of the Borealis NITRO disposal group to assets and liabilities held for sale as of 31 March 2021 without having an impact on the income statement at that time. The Group analysed the component held for sale and determined that this represents a separate major line of business and is therefore reported as a discontinued operation. The Company's share in fertilizer production sites in the Netherlands and Belgium ("Rosier") was not considered as part of the potential sales process at that time and its assets and related liabilities do not belong to the Borealis NITRO disposal group held for sale.

The period to complete the sale was extended by events and circumstances beyond Borealis' control. The developments resulting from the war in Ukraine and related sanctions caused Borealis to decline a binding offer received from EuroChem Group AG in February 2022 and to consider other options. On 28 July 2022, Borealis accepted a new binding offer from AGROFERT, a.s., which was received on 2 June 2022, after the mandatory information and consultation procedures with employee representatives were finalised. On the same date, both companies entered into an agreement to sell and transfer all shares in the legal entities included in the scope of the transaction. The transaction itself remains subject to certain closing conditions and regulatory approvals. As of 31 December 2022, the Group remains committed to its plan to sell the Borealis NITRO disposal group.

The Borealis NITRO disposal group was remeasured at fair value less costs to sell as of 31 December 2022 resulting in the recognition of a write-up of EUR 266,344 thousand during 2022 which has been included under discontinued operation in the income statement. The remeasurement gain has been applied to increase the carrying amount of property, plant and equipment within the Borealis NITRO disposal group and did not exceed the cumulative impairment loss recognised in 2021 (EUR 443,739 thousand). The non-recurring fair value measurement for the Borealis NITRO disposal group of EUR 793,899 thousand (before costs to sell of EUR 9,255 thousand) has been categorised as a Level 3 fair value and was based on the binding offer from AGROFERT, a.s. for the acquisition of the Borealis NITRO disposal group received on 2 June 2022. The offer values the business on an enterprise value basis at EUR 810,000 thousand.

Furthermore, a deferred tax expense of EUR 78,899 thousand has been recognised in the loss from discontinued operation. This deferred tax expense relates to a remeasurement of the expected liquidation loss of a French entity owning the French companies in the disposal group. It also includes expected tax liabilities arising from the sale of Austrian companies that are part of the disposal group.

On 26 September 2022, Borealis and YILDIRIM Group's YILFERT Holding announced that they had signed a binding agreement for the acquisition of Borealis' shares in Rosier S.A. The Rosier disposal group was consequently reclassified to assets and liabilities held for sale. Impairment losses of EUR 2,984 thousand for write-down of the Rosier disposal group to the lower of its carrying amount and its fair value less costs to sell have been included in production costs. The impairment losses have been applied to reduce the carrying amount of property, plant and equipment within the Rosier disposal group.

Whilst the component held for sale represents a single cash-generating unit (CGU), it is neither a separate major line of business nor geographical area of operations for Borealis. The Group therefore concluded not to report Rosier as a discontinued operation.

As of 31 December 2022, the Rosier disposal group was stated at fair value less cost to sell. The non-recurring fair-value measurement for the Rosier disposal group of EUR 38,413 thousand (before costs to sell of EUR 0 thousand) has been categorised as Level 2 fair value and was based on the binding offer from Yilfert Holding, valuing the business on an enterprise value basis at EUR 35,000 thousand and considering an adjustment for the net debt. For further information on the transaction, please refer to note 32.

20230711119912

The results of the discontinued operation are shown in the table below:

EUR thousand	2022	2021
Total sales	2,374,822	1,294,895
Elimination of inter-segment revenue	-24,351	-30,482
Net sales	**2,350,471**	**1,264,413**
Other operating income	261,990	165,593
Total sales and other income	**2,612,461**	**1,430,006**
Total expenses	-2,258,818	-1,353,739
Elimination of inter-segment expenses	24,351	30,482
Expenses	**-2,234,467**	**-1,323,257**
Operating profit	**377,994**	**106,749**
Net results of associated companies and joint ventures	0	220
Financial result	2,808	-2,574
Measurement of discontinued operation	*266,344*	*-443,739*
Profit before taxation	**647,146**	**-339,344**
Taxes on income	-70,745	-35,453
Taxes on measurement of discontinued operation	-78,899	139,465
Profit (loss) from discontinued operation, net of tax	**497,502**	**-235,332**
Attributable to:		
Non-controlling interests	0	0
Equity holders of the parent	497,502	-235,332

The following assets and liabilities were reclassified as held for sale:

EUR thousand	31.12.2022			31.12.2021
	Total	thereof Nitro	thereof Rosier	Total [1]
Assets				
Non-current assets				
Intangible assets	196,766	196,719	47	1,056
Property, plant and equipment	642,805	639,588	3,217	243,752
Right-of-use assets	12,081	11,032	1,049	9,181
Investments in associated companies and joint ventures	4,645	4,645	0	6,023
Other investments	15,940	15,940	0	15,844
Other receivables and other assets	9,084	9,084	0	10,055
Deferred tax assets	2,444	1,592	852	736
Current assets				
Inventories	307,564	275,002	32,562	221,385
Trade receivables	146,613	138,217	8,396	221,199
Income tax receivables	4,236	4,236	0	0
Other receivables and other assets	164,839	163,319	1,520	81,258
Cash and cash equivalents	16,198	12,004	4,194	10,514
Assets of the disposal group held for sale	**1,523,215**	**1,471,378**	**51,837**	**821,003**

1) NITRO disposal group only

20230711199113

EUR thousand	31.12.2022			31.12.2021
	Total	thereof Nitro	thereof Rosier	Total [1]
Liabilities				
Non-current liabilities				
Lease liabilities	8,001	7,252	749	4,500
Deferred tax liabilities	12,632	12,632	0	3,027
Employee benefits	48,776	48,776	0	62,165
Provisions	21,619	20,984	635	20,822
Other liabilities	15,950	15,921	29	30,235
Current liabilities				
Lease liabilities	4,720	4,345	375	5,029
Trade payables	280,987	271,783	9,204	292,206
Income taxes	57,628	57,628	0	17,438
Provisions	18,330	18,330	0	7,765
Other liabilities	231,515	229,083	2,432	148,110
Liabilities directly related to the disposal group	**700,158**	**686,734**	**13,424**	**591,297**

1) NITRO disposal group only

Other Changes
Residual changes of subsidiaries in 2022 are summarised below.

Eifanes Beteiligungsverwaltungs GmbH located in Vienna, Austria was acquired on 9 March 2022. This 100% subsidiary was renamed Borealis Middle East Holding GmbH as of 31 March 2022 and is the holding company for Borealis' investments into the Borouge companies. For details on *Borouge companies, please refer to note 9.*

Borealis Polyolefins d.o.o., a company based in Zagreb, Croatia, was incorporated on 21 February 2022. Furthermore, Borealis Polyolefins S.R.L., with its registered office in Bucharest, Romania was incorporated on 18 March 2022. Moreover, Borealis Polyolefins s.r.o., a company based in Bratislava, Slovakia, was incorporated on 25 August 2022. These 100% subsidiaries are not consolidated due to immateriality.

Following the acquisition of 0.88% of the shares in DYM SOLUTION CO., LTD during the first six months of 2022, and another 0.16% in the second half of the year, Borealis has a 99.75% shareholding.

Borealis AG increased its shareholding in Rosier S.A. through capital increase by contribution in kind by 20.62% on 29 July 2022 thus owning 98.09% of the company as of that date. For further information on Rosier S.A., please refer to Discontinued Operation in this note and note 32.

For a full list of all subsidiaries, please refer to note 33.

9. Investments in Associated Companies and Joint Ventures

	Shares in associated companies and joint ventures	
EUR thousand	**2022**	**2021**
Cost		
As of 1 January	1,022,092	1,022,429
Investments and acquisitions	433,044	26,264
Reclassification to assets of the disposal group held for sale	0	-19,548
Disposals	-166,229	-7,053
As of 31 December	1,288,908	1,022,092
Adjustments		
As of 1 January	1,504,314	2,555,067
Exchange adjustments	165,067	298,043
Dividends received	-565,892	-1,965,643
Reclassification to assets of the disposal group held for sale	0	13,636
Change in equity reserves	7,342	1,286
Net results of associated companies and joint ventures	397,113	594,872
Disposals	0	7,053
As of 31 December	1,507,944	1,504,314
Carrying amount as of 31 December	**2,796,851**	**2,526,406**

On 28 April 2022, Abu Dhabi National Oil Company and Borealis founded Borouge PLC as a holding company for a 100% interest in Abu Dhabi Polymers Company Limited and for a 84.75% interest in Borouge Pte. Ltd. Borealis' previously owned shares in Abu Dhabi Polymers Company Limited and Borouge Pte. Ltd were transferred into Borouge PLC. On 3 June 2022, Borouge PLC successfully listed on ADX, the Abu Dhabi Securities Exchange. Based on the final offer price of AED 2.45 per share, the Initial Public Offering (IPO) has raised gross proceeds of EUR 1.9 billion for the offering of 10% of the Company's total issued share capital. This transaction led to a net gain of EUR 604,171 thousand which is stated in the line "Gain from disposal of equity accounted investments" in the Consolidated Income Statement and also includes FX recycling effects. Borealis' share of the proceeds of EUR 745,068 thousand are included in the line "Proceeds from disposal of shares in joint ventures" in the cash flow from investing activities.

Based on the IPO, the shareholding in Borouge PLC has changed to Borealis owning a 36% stake in Borouge PLC and Abu Dhabi National Oil Company owning 54% respectively. Borouge PLC continues to be accounted for as a joint venture. Borealis' share in Borouge Pte. Ltd. changed, following the IPO, from a 50% (direct) share in 2021 to a 45.76% share (15.25% direct share and 30.51% indirect share through Borouge PLC).

Since March 2022, Borealis has a 40% interest in Borouge 4 LLC, registered in Abu Dhabi. The company executes the ongoing Borouge 4 project by developing an ethane-based steam cracker, two polyolefin plants, a 1-Hexene unit, a cross-linked polyethylene plant (XPLE) and an in-depth study for carbon capture unit. It was previously part of the 40% direct interest in Abu Dhabi Polymers Company Limited but scoped out of the IPO in June 2022, as described above, and therefore transferred

20230711199 14

to this newly founded company. However, it is intended to recontribute Borouge 4 at a later point in time into Borouge PLC. Given the fact that no Board Reserved Matters, which affect all relevant activities, can be decided without an affirmative vote by Borealis, the Group has joint control over Borouge 4 LLC and accounts for it as a joint venture.

Borealis recalculated the recoverable amount for its investment in Bayport Polymers LLC (Baystar) as of 31 December 2022 after a significant downturn in the performance of this joint venture was observed in 2022. The results of Baystar were affected by the full depreciation charge after the start-up of the new cracker, and subsequent slower ramping up due to the operational constraints. None of the calculated scenarios showed any need for an impairment.

On 24 June 2021, Borealis subscribed to a new share issue, thus acquiring 10% in Renasci N.V. (Renasci), a company based in Ghent, Belgium. On 9 November 2022, as a result of the debt conversion into newly issued shares, the stake was increased to 27.42%. Renasci is principally engaged in the development of the proprietary processes and know-how about various technologies regarding waste treatment and recycling. This investment is one milestone in line with Borealis' strategy to grow its circular economy business. Through the shareholder agreement, Borealis is guaranteed two seats on the board of Renasci, and participates in key financial and operating decisions. The Group has therefore determined that it has significant influence over the entity and the investment is accounted for as an associated company. For further information on investment in Renasci, please refer to note 32.

The Group presents the investments in associated companies and joint ventures as follows:

EUR thousand	2022	2021
Non-material associated companies	48,407	96,250
Material joint ventures		
Abu Dhabi Polymers Company Limited	0	1,731,830
Borouge PLC	1,651,574	0
Bayport Polymers LLC (Baystar)	673,916	688,089
Non-material joint ventures	422,954	10,238
Carrying amount as of 31 December	**2,796,851**	**2,526,406**

Due to revised control assessment as part of the financial restructuring for the preparation of the initial public offering of Borouge PLC, all Borouge entities are shown under "Joint ventures" in 2022, whereas in 2021 these are presented under "Associated companies".

The investment in Kilpilahden Voimalaitos Oy is part of the Base Chemicals segment. The share in Baystar is included in the Polyolefins segment. All other investments in associated companies and joint ventures are part of the non-allocated segment.

Associated Companies
The Group has the following investments in associated companies:

Associated companies	Country	Ownership in % 2022	2021
AZOLOR S.A.S. [1) 2)]	France	34.00	34.00
Chemiepark Linz Betriebsfeuerwehr GmbH [1) 2)]	Austria	47.50	47.50
Franciade Agrifluides S.A.S. (FASA) [1) 2)]	France	49.98	49.98
Industrins Räddningstjänst i Stenungsund AB [1)]	Sweden	25.00	25.00
Kilpilahden Voimalaitos Oy [1)]	Finland	20.00	20.00
Neochim AD [2)]	Bulgaria	20.30	20.30
Renasci N.V.	Belgium	27.42	10.00
Société d'Intérêt Collectif Agricole Laignes Agrifluides (SICA Laignes Agrifluides) [1) 2)]	France	49.90	49.90
Société d'Intérêt Collectif Agricole par Actions Simplifiée de Gouaix (SICA de Gouaix) [1) 2)]	France	25.00	25.00

1) Excluded from consolidation at equity due to immateriality // 2) Reclassified as assets of the disposal group held for sale as of 31 March 2021

Summary of financial information for non-material associated companies, adjusted for ownership by the Group:

EUR thousand	2022	2021
Net profit for the year	-2,763	-1,038
Other comprehensive income	0	0
Total comprehensive income	**-2,763**	**-1,038**

Joint Ventures
The Group has the following investments in joint ventures:

Joint ventures	Country	Ownership in % 2022	2021
Abu Dhabi Polymers Company Limited [2)]	United Arab Emirates	–	40.00
Borouge Pte. Ltd. [3)]	Singapore	45.76	50.00
Borouge PLC	United Arab Emirates	36.00	–
Borouge 4 LLC	United Arab Emirates	40.00	–
Bayport Polymers LLC (Baystar)	US	50.00	50.00

1) Excluded from consolidation at equity due to immateriality // 2) Shares transferred into Borouge PLC before the ADX listing. // 3) Shares partly transferred into Borouge PLC before the ADX listing. // 4) recycleMe Plastics GmbH at initial consolidation

20230711199915

Joint ventures	Country	Ownership in % 2022	2021
BTF Industriepark Schwechat GmbH [1]	Austria	50.00	50.00
Recelerate GmbH [1] [4]	Germany	50.00	–
C2PAT GmbH [1]	Austria	25.00	25.00
C2PAT GmbH & Co KG [1]	Austria	25.00	25.00
PetroPort Holding AB	Sweden	50.00	50.00

1) Excluded from consolidation at equity due to immateriality // 2) Shares transferred into Borouge PLC before the ADX listing. // 3) Shares partly transferred into Borouge PLC before the ADX listing. // 4) recycleMe Plastics GmbH at initial consolidation

Borouge investments (representing Borealis share in Abu Dhabi Polymers Company Limited and Borouge PLC) are a leading provider of innovative, value-creating plastic solutions for energy, infrastructure, automotive, healthcare and agriculture industries as well as advanced packaging applications and are also responsible for marketing and sales of the products produced.

The following tables illustrate the full summarised financial information for Abu Dhabi Polymers Company Limited until 31 May 2022 and Borouge PLC starting from 1 June 2022:

	Abu Dhabi Polymers Company Limited	
EUR thousand	**2022**	**2021**
Current assets	0	1,825,626
Non-current assets	0	6,696,113
Current liabilities	0	-558,086
Non-current liabilities	0	-3,602,817
Equity	**0**	**4,360,836**
Borealis share	0%	40%
Share of net assets	0	1,744,334
Adjustments	0	-12,504
Carrying amount as of 31 December	**0**	**1,731,830**
Net sales	2,141,639	4,630,302
Net profit for the year	489,098	1,289,955
Other comprehensive income	0	905
Total comprehensive income	**489,098**	**1,290,860**
Dividends received by Borealis from Borouge	411,397	1,875,581

	Borouge PLC	
EUR thousand	**2022**	**2021**
Current assets	2,757,735	0
Non-current assets	6,842,022	0
Current liabilities	-964,413	0
Non-current liabilities	-4,069,809	0
Equity	**4,565,535**	**0**
Borealis share	36%	0%
Share of net assets	1,643,593	0
Adjustments	7,981	0
Carrying amount as of 31 December	**1,651,574**	**0**
Net sales	3,795,965	0
Net profit for the year	707,922	0
Other comprehensive income	19,618	0
Total comprehensive income	**727,541**	**0**
Dividends received by Borealis from Borouge	118,346	0
Market capitalisation as at 31.12.	19,413,842	0

Baystar is currently building a 625,000-tonne-per-year polyethylene unit at our production site in Pasadena, Texas, US with the target to deliver a broad range of products to meet the growing global demand for sustainable and high energy-efficient plastic products. Baystar has also started its operation of the new one million tonne-per-year ethane cracker at Port Arthur, Texas, US. This cracker is processing ethane, which is abundantly available and competitively priced in the US, and will supply our Baystar polyethylene units.

20230711199916

The following table illustrates the full summarised financial information for Baystar:

EUR thousand	2022	2021
Current assets	194,066	162,602
Non-current assets	4,002,090	3,378,978
Current liabilities	-165,521	-205,878
Non-current liabilities	-2,635,099	-1,913,186
Equity	**1,395,535**	**1,422,517**
Borealis share	50%	50%
Share of net assets	697,768	711,259
Adjustments	-23,852	-23,170
Carrying amount as of 31 December	**673,916**	**688,089**
Net sales	600,718	588,252
Net profit for the year	-116,492	72,616
Other comprehensive income	0	0
Total comprehensive income	**-116,492**	**72,616**
Dividends received by Borealis from Baystar	0	21,138

Summary of financial information for non-material joint ventures, adjusted for ownership by the Group:

EUR thousand	2022	2021
Net profit for the year	7,631	43,202
Other comprehensive income	280	924
Total comprehensive income	**7,910**	**44,126**

Please refer to note 30 for information related to transactions with the associated companies and joint ventures.

10. Other Investments, Other Receivables and Other Assets and Loans Granted

Other investments mainly include interests in infrastructure companies in Germany, interests in a technology platform for sustainable packaging in the UK and subsidiaries that are not consolidated on a materiality basis. The non-consolidated companies are mainly distribution and blending entities (see note 28).

The non-current other receivables and other assets mainly consist of non-current derivative financial instruments (see note 22), marketable securities and bonds (long-term deposits for statutory, regulatory and tax requirements), financial guarantee receivables, a prepayment to an associated company, contract assets and government grant receivables in Belgium. The loans granted include shareholder loans with Baystar amounting to EUR 653,994 thousand (EUR 985,240 thousand), with Kilpilahden Voimalaitos Oy amounting to EUR 40,022 thousand (EUR 17,778 thousand) and none with Renasci N.V. (EUR 12,000 thousand). For further details, please refer to note 30.

Other current receivables also include receivables related to insurance compensation amounting to EUR 4,000 thousand (EUR 55,411 thousand).

11. Taxation

EUR thousand	2022	2021
Taxes		
Income tax payable	-186,171	-362,551
Change in deferred tax	-3,281	-6,346
Adjustment to prior year's tax charge	-3,042	2,237
Taxes on income	**-192,494**	**-366,660**

20230711119917

Calculation of tax expenses at statutory rates for tax expense accounting at the effective group tax rate:

EUR thousand	2022		2021	
Tax expenses at statutory rates (weighted average tax rate of the Group)	**25%**	**452,151**	**25%**	**499,198**
Tax effect of result in associated companies	-7%	-117,530	-7%	-139,298
Tax effect of gain from disposal of equity accounted investments	-8%	-151,043	0%	0
Tax effect of permanent differences	0%	6,440	0%	-6,563
Adjustment of valuation allowance/reassessment of unrecognised tax assets	0%	2,944	1%	18,900
Prior year's adjustments and other effects	0%	-468	0%	-5,577
Taxes on income	**11%**	**192,494**	**18%**	**366,660**

The effective tax rate for 2022 as well as for 2021 was impacted by impairments of deferred tax assets on tax losses carried forward and tax losses in the year for which no deferred tax asset was recognised.

	Balance sheet		Income statement	
EUR thousand	**2022**	**2021**	**2022**	**2021**
Deferred tax assets				
Property, plant and equipment	4,182	4,485	-175	1,002
Intangible assets	318	1,010	-692	-344
Adjusted depreciation for tax purposes	**4,500**	**5,495**		
Revaluation of cash flow hedges	0	8,672	-2,168	3,759
Net gain on hedge of a net investment	12,348	9,243	0	0
Valuation of inventories for tax purposes	8,456	11,215	15,260	999
Fair values compared to tax values	**20,804**	**29,130**		
Interest-bearing liabilities	140,915	41,196	99,764	22,152
Employee benefits	51,142	82,078	2,485	-7,253
Other provisions	5,548	8,653	-3,199	-428
Financial assets	3,677	3,904	-290	50
Tax impairments according to Section 12 (3)(2) of the *Austrian Corporate Income Tax Act (KStG)*	882	1,211	-329	-300
Other assets and liabilities	4,491	6,465	2,272	-36,389
Other timing differences	**206,655**	**139,603**		
Losses available for offsetting against future taxable income	**313,548**	**144,673**	198,522	-5,818
Netting with deferred tax liabilities	**-521,713**	**-259,357**		
Deferred tax assets	**23,794**	**59,544**	**311,450**	**-22,570**

EUR thousand	Balance sheet 2022	Balance sheet 2021	Income statement 2022	Income statement 2021
Deferred tax liabilities				
Property, plant and equipment	-342,061	-251,456	-98,710	6,369
Intangible assets	-54,618	-56,271	1,653	3,459
Accelerated/adjusted depreciation for tax purposes	**-396,679**	**-307,727**		
Revaluation of cash flow hedges	-74,964	-77,859	2,185	710
Valuation of inventories for tax purposes	-14,224	-10,580	-3,644	-468
Fair values compared to tax values	**-89,188**	**-88,439**		
Interest-bearing liabilities	-12,348	-9,243	-3,105	-4,196
Employee benefits	-11,559	-5,798	-5,983	206
Other provisions	-71	-535	464	4,005
Financial assets	-187,984	-168	-187,816	-36
Other assets and liabilities	-38,618	-25,613	-19,775	6,175
Other timing differences	**-250,580**	**-41,357**		
Tax effect on outside basis difference	**-49,980**	**0**	0	0
Netting with deferred tax assets	**521,713**	**259,357**		
Deferred tax liabilities	**-264,714**	**-178,166**	**-314,731**	**16,224**
Net tax asset/liability	**-240,920**	**-118,622**	**-3,281**	**-6,346**

Increase in losses available for offsetting against future taxable income mainly result from the immediate depreciation for tax purposes of the newly built cracker at Bayport Polymers LLC (Baystar). Additionally, deferred tax assets of EUR 110,546 thousand (EUR 139,465 thousand) on expected liquidation loss of a French entity owning the French companies and deferred tax liabilities of EUR 49,980 thousand (EUR 0 thousand) arising from the sale of Austrian companies all being part of the disposal group were recognised in the Consolidated Income Statement in the line item Profit (loss) from discontinued operation, net of tax.

The deferred tax assets of EUR 23,794 thousand (EUR 59,544 thousand) include an amount of EUR 4,444 thousand (EUR 3,558 thousand), which will most likely be utilised within one year. The deferred tax liabilities of EUR 264,714 thousand (EUR 178,166 thousand) include an amount of EUR 99,618 thousand (EUR 83,309 thousand), which will most likely be utilised within one year.

In addition to capitalised tax assets, the Group has unrecognised tax losses amounting to EUR 496,458 thousand (EUR 739,242 thousand) and no unrecognised temporary differences, where current forecasts indicate insufficient future profits in the foreseeable future, thus resulting in unrecognised tax assets of EUR 137,295 thousand (EUR 188,570 thousand).

EUR thousand	2022	2021
Deductible temporary differences	0	0
Tax losses carried forward	137,295	188,570
Total unrecognised net tax assets	**137,295**	**188,570**

20230711119918

The recognised deferred tax assets are expected to be utilised against future profits based on internal projections in the relevant jurisdictions. Deferred tax expenses as a result of changes in estimates of deferred tax assets due to forecasts indicating insufficient future profits amount to EUR 257 thousand (EUR 6,905 thousand). Dividend payments to Borealis AG, to Borealis France S.A.S. and Borealis Middle East Holding GmbH by their subsidiaries have no tax effect for the Borealis Group. The temporary differences relating to subsidiaries amount to EUR 0 thousand (EUR 0 thousand), for which no deferred tax liability has been recognised in accordance with IAS 12.39 Income Taxes.

Tax Contingencies
Some Borealis Group companies have appealed against certain tax audit reassessments and it is uncertain whether those appeals will be successful. Management's opinion is that the Company is in compliance with all applicable regulations.

12. Inventories

EUR thousand	2022	2021
Finished products	1,008,200	916,936
Raw materials and consumables	471,316	350,544
Total	**1,479,516**	**1,267,480**

The costs for the consumption of inventories recognised during the period in the income statement amounted to EUR 8,715,664 thousand (EUR 6,354,811 thousand), including impairment costs of EUR 67,986 thousand (EUR 21,445 thousand).

13. Share Capital and Contributions by Shareholders

	Share capital		Contributions by shareholders	
EUR thousand	2022	2021	2022	2021
Balance as of 1 January	300	300	1,599,097	1,599,097
Capital increase or decrease	0	0	0	0
Balance as of 31 December	**300**	**300**	**1,599,097**	**1,599,097**

The share capital of Borealis AG (parent company) amounts to EUR 300,000.00 (EUR 300,000.00) and is divided into 300,000 (300,000) fully paid shares with a par value of EUR 1.00, none of which have special voting rights.

The contributions by shareholders amounted to EUR 1,599,097 thousand (EUR 1,599,097 thousand).

Borealis AG is owned:
- 39.00% by OMV Borealis Holding GmbH, Trabrennstrasse 6–8, 1020 Vienna, Austria,
- 32.67% by OMV Downstream GmbH, Trabrennstrasse 6–8, 1020 Vienna, Austria,
- 3.33% by OMV Aktiengesellschaft, Trabrennstrasse 6–8, 1020 Vienna, Austria,
- 21.67% by MPP Holdings GmbH, Trabrennstrasse 6–8, 1020 Vienna, Austria, and
- 3.33% by Abu Dhabi National Oil Company (ADNOC) P.J.S.C., P.O. Box 898, Abu Dhabi, United Arab Emirates.

The shares of IPIC Beta Holdings GmbH in Borealis AG (21.67%) were indirectly transferred due to a demerger (Abspaltung zur Aufnahme) of the shares in IPIC Beta Holdings GmbH from IPIC Holdings GmbH to MPP Holdings GmbH carried out on 22 January 2022. As a result of the subsequent merger of IPIC Beta Holdings GmbH into MPP Holdings GmbH on 11 February 2022, there was a direct transfer of shares in Borealis AG (21.67%) from IPIC Beta Holdings GmbH to MPP Holdings GmbH.

A 3.33% share in Borealis AG was transferred from Mubadala Petroleum and Petrochemicals Holding Company LLC, P.O. Box 45005, Al Mamoura A, Muroor Road, 15th Street, Abu Dhabi, United Arab Emirates, to Abu Dhabi National Oil Company (ADNOC) P.J.S.C. on 8 November 2022. Furthermore, Abu Dhabi National Oil Company (ADNOC) P.J.S.C. acquired MPP Holdings GmbH on 8 November 2022.

The ultimate controlling party is OMV Aktiengesellschaft, Vienna, Austria. Distribution of dividends to its shareholders does not have any tax effect for Borealis AG.

The Group's objectives are to safeguard the entity's ability to continue as a going concern and to provide an adequate return to its shareholders. The Group monitors capital on the basis of the gearing ratio. This gearing ratio is calculated as net interest-bearing debt divided by total equity. The Group's target is to keep the gearing ratio within a range of 35%–65% to meet the business needs of the Group. As of year end, the gearing ratio stands at -1% (3%), significantly below the target range due to the strong performance of the Group, proceeds from disposal of shares in joint ventures (Borouge IPO), Borouge dividend payments and a partial prepayment by Bayport Polymers LLC of receivables of Borealis AG, partially offset by dividend payments for the financial year 2021 and financial lease additions.

14. Personnel and Share Based Payments

EUR thousand	2022	2021
Personnel expenses		
Salaries and wages	475,818	453,448
Costs of defined contribution plans	28,859	27,572
Costs of defined benefit plans and other long-term employee benefits	26,828	32,166
Social security costs	110,594	101,475
Other personnel expenses	28,073	24,792
Total	**670,172**	**639,453**

Costs of defined benefit plans and other long-term employee benefits are recognised in the production costs at EUR 23,904 thousand (EUR 28,474 thousand), sales and distribution costs at EUR 2,177 thousand (EUR 2,605 thousand), administration costs at EUR 719 thousand (EUR 1,010 thousand) and research and development costs at EUR 28 thousand (EUR 77 thousand).

20230711199919

Number of employees (headcount) by country as of 31 December	2022 continuing operations	2022 Total	2021 continuing operations	2021 Total
Austria	1,432	2,274	1,348	2,200
Belgium	1,235	1,343	1,194	1,310
Finland	938	938	910	910
France	0	876	0	869
Sweden	979	979	948	948
Other Europe	607	799	577	788
Non-Europe	440	440	483	483
Total	**5,631**	**7,649**	**5,460**	**7,508**

The remuneration of former and current management is shown in the table below:

EUR thousand	2022	2021
Salaries management (Executive Board)	6,461	8,168
Pension and severance costs management (Executive Board)	580	594
Salaries other key management	1,951	1,481
Pension and severance costs other key management	131	106
Total	**9,123**	**10,349**

From the salaries of the Executive Board of EUR 6,461 thousand (EUR 8,168 thousand), EUR 265 thousand (EUR 3,799 thousand) were paid to former members of the Executive Board.

From the pension and severance costs of the Executive Board of EUR 580 thousand (EUR 594 thousand), EUR 0 thousand (EUR 154 thousand) were paid to former members of the Executive Board.

No loans were granted to current or former members of the Executive Board. The remuneration paid to members of the Supervisory Board amounted to EUR 856 thousand (EUR 856 thousand).

Long Term Incentive (LTI) Plans
LTI plans with similar conditions have been granted to the Executive Board and selected employees. At vesting date, shares of the parent will be transferred to the management and share equivalents to selected employees. The number of shares or share equivalents is determined depending on the achievement of defined performance criteria. The defined performance criteria may not be amended during the performance period of the LTI plans. However, in order to maintain the incentivising character of the programme, the Remuneration Committee will have discretion to adjust the threshold/target/maximum levels in case of material changes in external factors such as oil and gas prices. The adjustment is possible in both directions and will be determined by the Remuneration Committee. Disbursement is made in cash or shares. Executive Board members as active participants of the plans are required to build up an appropriate volume of shares of the parent and to hold those shares until retirement or departure from the Company. The shareholding requirement is defined as a percentage of the respective Target Long Term Incentive. Until fulfilment of the shareholding requirement, disbursement is in the form of shares, whilst thereafter the plan participants can decide

between cash or share settlement. As long as the shareholding requirements are not fulfilled, the shares granted net of taxes are transferred to a trustee deposit, managed by OMV. For cash-settled share-based payment transactions, the fair value of the liability is measured at each reporting date and at the settlement date. The fair value is recognised over the vesting period.

Borealis introduced a new LTI plan in 2021, which is harmonised with the OMV LTI plan and also implemented a transitional LTI plan for 2021 and 2022 in order to bridge the cash gaps that arise from migrating to the new three-year plan. Transitional LTI plan allowances for 2021 and 2022 are based on similar KPIs to the three-year plan for that specific year only. Total expenses relating to Borealis' transitional LTI plan amounted to EUR 3,270 thousand in 2022 (EUR 3,545 thousand). Total expenses relating to share-based payment transactions amounted to EUR 7,874 thousand (EUR 8,599 thousand).

15. Employee Benefits

Most Group companies operate post-employment and other long-term benefit plans. The forms and benefits vary in terms of conditions and practices in the countries concerned. The plans include both defined contribution plans and plans that provide defined benefits based on employees' years of service and the estimated salary on retirement. A summary is shown below.

EUR thousand	2022	2021
Pensions and other post-employment benefit plans		
Present value of funded defined benefit pension plans	270,801	321,545
Fair value of plan assets	-184,528	-180,312
Deficit of funded defined benefit pension	86,273	141,233
Present value of unfunded defined benefit pension plans	130,617	200,316
Total deficit of defined benefit pension plans	216,890	341,549
Severance and medical plans	35,080	47,075
Pensions and other post-employment benefit plans	**251,970**	**388,624**
Other long-term employee benefits	24,542	27,215
Net liability recognised in the balance sheet	**276,512**	**415,839**

The Group operates defined post-employment benefit plans in the EU, Norway, South Korea and the United Arab Emirates under broadly similar regulatory frameworks. These comprise pension plans, severance plans as well as post-retirement medical plans.

Defined Benefit Pension Plans

The pension plans are typically final salary pension plans which provide benefits to members in the form of a guaranteed level of pension payable for life. The level of benefits provided depends on members' length of service and their salary in the final years leading up to retirement. The pension payments are generally updated in line with the retail price or a similar index. The benefit payments related to funded plans are from insurance funds, however, there are also a number of unfunded plans where the Company meets the benefit payment obligation as it falls due. The movement in the benefit pension obligation and the plan assets over the year is as follows:

20230711119920

EUR thousand	2022	2021
Defined benefit obligation as of 1 January	**521,861**	**536,176**
Net current service cost	20,782	22,160
Interest cost on defined benefit obligation	6,644	4,818
Total amount recognised in the income statement	27,426	26,978
Gains (-)/losses (+) due to changes in demographic assumptions	-415	-1,111
Gains (-)/losses (+) due to changes in financial assumptions	-146,843	8,789
Experience gains (-)/losses (+)	33,969	-949
Exchange rate gains (-)/losses (+)	-3,294	-1,665
Total amount recognised in other comprehensive income (actuarial gains and losses)	-116,583	5,064
Actual benefits (and taxes) paid directly from the plan assets	-18,237	-12,595
Actual benefits paid directly by employer	-7,966	-5,097
Actual plan participants' contributions	1,437	1,256
Reclassification to liabilities directly related to the disposal group	0	-28,430
Exchange rate gains (-)/losses (+)	-6,520	-1,491
Defined benefit obligation as of 31 December	**401,418**	**521,861**
Fair value of plan assets as of 1 January	**180,312**	**179,904**
Interest income on plan assets less administrative expenses	1,558	1,136
Total amount recognised in the income statement	1,558	1,136
Return on plan assets excluding amounts included in interest income	1,573	3,666
Total amount recognised in other comprehensive income (actuarial gains and losses)	1,573	3,666
Actual benefits (and taxes) paid directly from the plan assets	-18,237	-12,595
Actual plan participants' contributions	1,437	1,256
Actual employer contributions	17,988	16,512
Reclassification to liabilities directly related to the disposal group	0	-9,626
Exchange rate gains (-)/losses (+)	-103	59
Fair value of plan assets as of 31 December	**184,528**	**180,312**

The majority of pension commitments are attributable to plans in Austria and Belgium and were transferred to external pension funds managed by APK Pensionskasse AG in Austria as well as Vivium and KBC Asset Management in Belgium. The investment of plan assets in Austria is governed by Section 25 of the Austrian Pension Fund Act and the Investment Fund Act. In addition to these regulations, the investment guidelines of APK Pensionskasse AG regulate the spread of asset allocation, the use of umbrella funds and the selection of fund managers. The investment plans in Belgium follow the investment strategy of the respective insurance company as well as local legal regulations.

The plan assets in 2022 and 2021 mainly consist of insurance contracts.

Severance and Medical Plans
Severance plans are operated in the Austrian Group companies and cover employees who started their service before 1 January 2003. Furthermore, the Group operates severance plans in Austria, Italy and the United Arab Emirates. Medical plans reimburse certain medical costs for retired employees, mainly in Belgium. The movement in the severance and medical obligation over the year is as follows:

EUR thousand	2022	2021
Defined benefit obligation as of 1 January	**47,075**	**81,486**
Net current service cost	1,139	1,487
Interest cost on defined benefit obligation	464	473
Past service cost	23	0
Total amount recognised in the income statement	1,626	1,960
Gains (-)/losses (+) due to changes in demographic assumptions	692	0
Gains (-)/losses (+) due to changes in financial assumptions	-7,083	1,539
Experience gains (-)/losses (+)	-4,347	-1,009
Total amount recognised in other comprehensive income (actuarial gains and losses)	-10,738	530
Actual benefits paid directly by employer	-2,932	-2,114
Reclassification to liabilities directly related to the disposal group	0	-34,838
Exchange rate gains (-)/losses (+)	49	51
Defined benefit obligation as of 31 December	**35,080**	**47,075**

20230711119921

Other Long-term Employee Benefits
Other long-term employee benefits provided by the Group companies include items such as jubilee payments and pre-pension benefits. The movement in the other long-term benefit obligation over the year is as follows:

EUR thousand	2022	2021
Defined benefit obligation as of 1 January	**27,215**	**32,955**
Net current service cost	1,726	1,636
Interest cost on defined benefit obligation	233	170
Gains (-)/losses (+) due to changes in demographic assumptions	24	228
Gains (-)/losses (+) due to changes in financial assumptions	-3,986	1,566
Experience gains (-)/losses (+)	1,338	1,381
Total amount recognised in the income statement	-665	4,981
Actual benefits paid directly by employer	-2,008	-2,508
Reclassification to liabilities directly related to the disposal group	0	-8,213
Defined benefit obligation as of 31 December	**24,542**	**27,215**

Discount rates, projected future salary, pension increases and expected rates of return on plan assets vary for the different defined benefit plans, as they are determined in light of local conditions. Assumptions regarding future mortality are based on published statistics and mortality tables. The principal assumptions used were as follows (expressed as weighted averages):

Percent	2022		2021	
	Pensions	Severance and medical plans	Pensions	Severance and medical plans
Discount rate	4.1%	3.7%	1.3%	1.0%
Projected future salary growth	3.6%	4.0%	2.9%	2.0%
Expected pension increase	0.8%	–	1.7%	–

The sensitivity of the defined benefit obligation for pensions and other post-employment benefit plans to changes in the principal assumptions is:

		Impact on defined benefit obligation			
		Pension		Severance and medical plans	
	Change in assumption	Increase in assumption	Decrease in assumption	Increase in assumption	Decrease in assumption
Discount rate	0.5%	Decrease by 6.1%	Increase by 6.8%	Decrease by 4.8%	Increase by 5.2%
Projected future salary growth	0.5%	Increase by 4.5%	Decrease by 4.2%	Increase by 3.5%	Decrease by 3.3%
Expected pension increase	0.5%	Increase by 6.9%	Decrease by 6.5%	–	–

The above sensitivity analyses are based on a change in an assumption while maintaining all other assumptions constant. In practice, this is unlikely to occur and changes in some of the assumptions may be correlated. When calculating the sensitivity of the defined benefit obligation to significant actuarial assumptions, the same method (present value of the defined benefit obligation calculated using the projected unit credit method at the end of the reporting period) has been applied when calculating the defined benefit obligation recognised in the balance sheet.

Expected contributions to post-employment benefit plans for the year 2023 are EUR 25,752 thousand (EUR 25,673 thousand). The weighted average duration of the defined benefit obligation is 11.4 years (14.1 years). The defined benefit plans expose the Group to actuarial risks, mainly the longevity risk, interest rate and market (investment) risk.

16. Provisions

EUR thousand	2022					
	Restructuring	Decommissioning	Legal	Environmental	Other	Total
As of 1 January	198	55,764	3,691	1,034	73,506	**134,193**
Additions	0	75	277	199	67,617	**68,168**
Reclassification to liabilities directly related to the disposal group	0	0	0	0	-2,394	**-2,394**
Utilised	-124	0	-356	-13	-49,883	**-50,376**
Reversed	0	-31,634	-79	0	-8,315	**-40,028**
Interest expense (+)/income (-)	0	278	0	0	0	**278**
Exchange adjustments	-4	-2	193	0	-229	**-42**
Balance as of 31 December	**70**	**24,481**	**3,726**	**1,220**	**80,302**	**109,799**
Other provisions current	68	0	1,430	0	46,716	**48,214**
Other provisions non-current	2	24,481	2,296	1,220	33,586	**61,585**
Balance as of 31 December	**70**	**24,481**	**3,726**	**1,220**	**80,302**	**109,799**

20230711119922

Provisions are generally based on past events and commitments arising thereon. The timing of cash outflows *cannot be determined with certainty for all provisions.*

Restructuring
Provisions for restructuring cover estimated costs for the ongoing restructuring programmes.

Decommissioning
Provisions for decommissioning cover mainly the expected clean-up and dismantling costs for plants situated on rented land in Germany and Belgium. It is expected that EUR 4,615 thousand will be used by 2027 and EUR 19,791 thousand by 2052.

Legal
Legal provisions represent litigation provisions in various business areas.

Environmental
Environmental provisions cover several environmental exposures in the Group.

Other
Other provisions cover numerous types of obligations, including short-term and long-term incentive plans. EUR 12,271 thousand (EUR 8,619 thousand) of these provisions relates to transitional and new LTI plans *implemented in 2021, which are share-based.* Note 14 provides additional information regarding share-based payments.

17. Financial Risk Management
The Group is exposed through its operations to the following *financial risks:*
– Foreign currency risk (note 23)
– Interest rate risk (note 24)
– Liquidity risk (note 21)
– Commodity price risk (note 25)
– Credit risk (note 27)

The objective of financial risk management is to support the core businesses of Borealis. Financial risk management is centralised in the Treasury and Funding department and operates within policies approved by the Executive Board. The Group provides written principles for overall risk management, as well as policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, commodity price risk or the use of derivative financial instruments. Borealis aims to minimise effects related to foreign exchange, interest rate, liquidity, credit, commodity price and refinancing risks.

The use of any financial instrument is based on actual or forecasted underlying commercial or financial cash flows or identified risks as defined in the policy. When certain conditions are met, hedge accounting is applied to remove the accounting mismatch between the hedging instrument and the hedged item.

Note 22 provides an overview of the financial instruments used by Borealis to manage risk. For further details on hedging instruments, see note 22. Derivative financial instruments, note 23. Foreign currency risk, note 24. Interest rate risk and note 25. Commodity price risk. The risk management process in general is described in the Group Management Report.

18. Financial Income/Expenses

EUR thousand	2022	2021
Interest income from		
Cash and loans granted	51,785	27,282
Derivatives	3,164	2,848
Interest expenses to		
Finance institutions	-32,038	-31,073
Derivatives	-3,962	-4,433
Capitalised interest	13,978	9,308
Net foreign exchange gains/losses	85,943	-1,132
Interest expenses for lease liabilities	-8,310	-3,741
Other financial income	10,180	5,475
Other financial expenses	-19,570	-11,337
Financial income/expenses	**101,170**	**-6,803**

20230711119923

19. Gains and Losses from Financial Instruments

EUR thousand	2022	2021
Recognised in the income statement		
Change in fair value of commodity derivatives	4,412	-4,858
Change in fair value of cross currency interest rate swaps	-5,017	-2,484
Change in fair value of foreign exchange swaps	2,982	1,615
Change in fair value of other investments and marketable securities and bonds	-3,819	1,668
Realised result on commodity derivatives	6,495	-14,899
Realised result on cross currency interest rate swaps	-1,256	-277
Realised result on foreign exchange swaps	-1,615	-1,373
Realised result on other investments and marketable securities and bonds	1,641	1,163
Financial assets and liabilities at fair value through profit or loss	**3,823**	**-19,445**
Amounts recognised in the income statement for realised cash flow hedges		
Commodity derivative contracts	412,302	215,362
Interest rate swaps	458	-1,308
Foreign exchange forwards	-27,646	6,130
Foreign exchange effects on loans designated as hedge of investments in foreign operations	-3,009	0
Hedging instruments	**382,105**	**220,184**
Interest income on cash and loans granted	54,978	27,282
Expenses for factoring of trade receivables	-4,095	-3,164
Impairment losses on trade receivables	-3,420	-4,046
Impairment losses on loans granted	-3,311	0
Impairment losses on deposits and other receivables	-943	0
Financial assets at amortised cost	**43,210**	**20,072**
Interest expenses and other expenses on financial liabilities	-37,879	-37,944
Interest expenses for lease liabilities	-8,310	-3,741
Financial liabilities at amortised cost	**-46,189**	**-41,685**
Net gain on financial guarantee receivables/liabilities	3,785	0
Financial guarantee	**3,785**	**0**

The amounts recognised in the income statement for commodity derivatives and foreign exchange forwards are booked as a correction to the net sales, to assets under construction or to production costs that are being hedged. The amounts that are recognised in the income statement for interest rate derivatives and foreign exchange swaps

are reported as part of financial income and expenses. Impairment losses on trade receivables are reported in sales and distribution costs, impairment losses on loans granted as well as impairment losses on deposits and other receivables are included in financial expenses.

EUR thousand	2022	2021
Recognised in other comprehensive income		
Commodity derivatives designated as cash flow hedge	357,590	474,843
Interest rate swaps outstanding designated as cash flow hedge	7,191	1,827
Foreign exchange forwards designated as cash flow hedge	-16,317	-14,532
Foreign exchange effects on long-term loans part of net investments in foreign operations	-7,645	-2,100
Foreign exchange effects on loans designated as hedge of investments in foreign operations	-12,208	-14,687
Amounts reclassified to the income statement		
Commodity derivatives	-412,302	-215,362
Interest rate swaps	-458	1,308
Foreign exchange forwards	27,646	-6,130
Foreign exchange effects on loans designated as hedge of investments in foreign operations	3,009	0
Total recognised in other comprehensive income	**-53,494**	**225,167**

Net foreign exchange gains/losses are allocated in the income statement as follows:

EUR thousand	2022	2021
Foreign exchange gains from operating acitivities included in other operating income	98,077	34,161
Foreign exchange losses from operating acitivities included in production costs	-98,819	-33,851
Net foreign exchange gains/losses included in financial income/expenses	85,943	-1,132
Total	**85,201**	**-822**

20230711119924

20. Loans and Borrowings and Lease Liabilities

The composition of interest-bearing loans and borrowings and lease liabilities (current and non-current debt) as of 31 December 2022 was as follows:

EUR thousand		2022						
Due		Term loans	Bond	Utilised uncommitted facilities	Export credits	**Total loans and borrowings**	Unutilised committed facilities	**Lease liabilities**
After	5 years	360,166				**360,166**		**436,299**
Within	5 years	121,328				**121,328**	1,000,000	**22,650**
	4 years	84,748				**84,748**		**30,599**
	3 years	330,492	298,460			**628,952**		**35,343**
	2 years	317,007				**317,007**		**38,348**
Total non-current debt		**1,213,741**	**298,460**	**0**	**0**	**1,512,201**	**1,000,000**	**563,239**
Total current debt		40,599	0	1,330	0	**41,929**	166,011 [1)]	**42,635**
Total debt		**1,254,340**	**298,460**	**1,330**	**0**	**1,554,130**	**1,166,011**	**605,874**

1) Borealis maintains EUR 166,011 thousand in export credit facilities (these were undrawn on 31 December 2022). These facilities are economically evergreen in nature, but include one year's notice for cancellation.

The composition of interest-bearing loans and borrowings (current and non-current debt) as of 31 December 2021 was as follows:

EUR thousand		2021						
Due		Term loans	Bond	Utilised uncommitted facilities	Export credits	**Total loans and borrowings**	Unutilised committed facilities	**Lease liabilities**
After	5 years	471,272				**471,272**		**66,228**
Within	5 years	83,564				**83,564**	1,000,000	**12,962**
	4 years	327,612	297,955			**625,567**		**15,052**
	3 years	307,911				**307,911**		**17,067**
	2 years	37,964				**37,964**		**22,775**
Total non-current debt		**1,228,323**	**297,955**	**0**	**0**	**1,526,278**	**1,000,000**	**134,084**
Total current debt		73,511	0	122	0	**73,633**	166,011 [1)]	**30,682**
Total debt		**1,301,834**	**297,955**	**122**	**0**	**1,599,911**	**1,166,011**	**164,766**

1) Borealis maintains EUR 166,011 thousand in export credit facilities (these were undrawn on 31 December 2021). These facilities are economically evergreen in nature, but include one year notice for cancellation.

The carrying amounts of loans and borrowings and lease liabilities developed as follows:

EUR thousand	2022					
	Term loans	Bond	Utilised uncommitted facilities	Export credits	**Total loans and borrowings**	**Lease liabilities**
As of 1 January	1,301,834	297,955	122	0	**1,599,911**	**164,766**
Proceeds from loans and borrowings	420	0	1,330	0	**1,750**	**0**
Repayment of loans and borrowings	-76,490	0	-122	0	**-76,612**	**0**
New lease liabilities	0	0	0	0	**0**	**494,762**
Principal elements of lease payments	0	0	0	0	**0**	**-47,125**
Reclassification to liabilities directly related to the disposal group	0	0	0	0	**0**	**-1,191**
Exchange adjustments non-cash	27,981	0	0	0	**27,981**	**2,099**
Other	595	505	0	0	**1,100**	**-7,437**
Balance as of 31 December	**1,254,340**	**298,460**	**1,330**	**0**	**1,554,130**	**605,874**

EUR thousand	2021					
	Term loans	Bond	Utilised uncommitted facilities	Export credits	**Total loans and borrowings**	**Lease liabilities**
As of 1 January	1,269,001	297,461	47,614	107,873	**1,721,949**	**194,798**
Proceeds from loans and borrowings	150,000	0	122	0	**150,122**	**0**
Repayment of loans and borrowings	-156,023	0	-47,614	-107,873	**-311,510**	**0**
New lease liabilities	0	0	0	0	**0**	**20,472**
Principal elements of lease payments	0	0	0	0	**0**	**-36,532**
Reclassification to liabilities directly related to the disposal group	0	0	0	0	**0**	**-12,957**
Exchange adjustments non-cash	38,222	0	0	0	**38,222**	**3,328**
Other	634	494	0	0	**1,128**	**-4,343**
Balance as of 31 December	**1,301,834**	**297,955**	**122**	**0**	**1,599,911**	**164,766**

The Group's financing mainly comprises committed credit lines (largely syndicated), term loans, bonds, private placements and export credits. The loans and borrowings are all measured at amortised cost.

Borealis continues to maintain a strong diversified liquidity position through its EUR 1 billion fully committed Syndicated Revolving Credit Facility (RCF), of which EUR 1 billion remained undrawn as of year end, and by terming out its debt through diverse funding channels. The RCF was refinanced in December 2019 with a five-year tenor with two one-year extension options at lenders' discretion. The second and final RCF extension option was utilised in December 2021 and the new maturity date is now 19 December 2026.

20230711119925

As of 31 December 2022, the Group had total committed credit facilities of EUR 1,166,011 thousand (EUR 1,166,011 thousand). Besides the above-mentioned undrawn EUR 1 billion RCF, Borealis had OeKB Export Credit Facilities in the amount of EUR 166,011 thousand. These were undrawn at year end.

In 2022, Borealis increased its debt position by EUR 395,327 thousand, mainly driven by an increase in long-term lease liabilities. The net debt position which decreased by EUR 292,399 thousand resulted in a gearing ratio of -1%. The net debt and resulting gearing ratio include interest-bearing debt reclassified as liabilities associated with assets held for sale and includes cash and cash equivalents that were reclassified as assets held for sale.

In November 2018, S&P Global Ratings issued a BBB+ rating with a stable outlook for Borealis. This constitutes the first public rating for the Company, which has been successfully active in a wide range of financing markets and instruments over the last ten years, and has built up a robust and well-diversified funding portfolio. While Borealis' long-term banking partners and investors have always appreciated the strong credit quality of the Company, the public rating provides a very good additional evaluation basis for all external stakeholders. On 25 January 2023, S&P Global Ratings affirmed Borealis' BBB+ rating with a stable outlook.

Under Borealis' funding strategy, a strongly diversified financing portfolio has been implemented in past years with the aim of maintaining a balanced maturity profile. In addition, Borealis is pursuing a long-term relationship approach with a larger group of international financing institutions that support the Company in funding and risk management transactions.

Based on this, combined with a resilient balance sheet and the strong public rating, Borealis has access to a wide variety of attractive funding instruments (such as bonds, the German Schuldschein, US Private Placement, foreign investment financing, bank loans and other). In order to meet the financing needs in 2023 and beyond, Borealis will continue to explore several suitable financial instruments fitting its strategy.

Some loan agreements have financial covenants based on maintaining certain gearing and solvency ratios. As of 31 December 2022, Borealis was in compliance with all financial covenants stipulated by the loan agreements.

Currency Mix EUR thousand	2022	%	2021	%
EUR	1,615,184	75%	1,188,835	67%
USD	505,362	23%	532,335	30%
JPY	35,466	2%	38,223	2%
GBP	359	0%	126	0%
Other	3,633	0%	5,158	0%
Interest bearing total	**2,160,004**	**100%**	**1,764,677**	**100%**

21. Liquidity Risk

Liquidity risk is the risk of the Group encountering difficulty in meeting the obligations associated with its financial liabilities. Liquidity is managed on a daily basis to ensure the Group's liquidity requirement and is covered at all times with the lowest possible level of working capital. For further details on loans and borrowings and lease liabilities, see note 6, note 20 and for derivatives, note 22.

The following are the contractual maturities of non-derivative financial liabilities, including forecasted interest payments, derivative financial liabilities and off balance sheet liabilities.

All carrying amounts exclude outstanding interest accruals at year end. Cash outflows are reported with a minus sign.

EUR thousand	2022						
Non-derivative financial liabilities	Carrying amount	**Contractual cash flows**	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
EUR floating rate loans	-50,396	**-55,690**	-1,240	-1,130	-24,706	-28,614	0
EUR fixed rate loans	-1,000,453	**-1,047,063**	-6,576	-9,436	-60,788	-758,410	-211,853
USD floating rate loans	-189,552	**-211,989**	-5,255	-6,313	-184,381	-16,040	0
USD fixed rate loans	-278,263	**-349,627**	-6,575	-42,744	-44,965	-74,244	-181,099
JPY floating rate loans	-35,466	**-36,022**	-78	-110	-35,834	0	0
Lease liabilities	-605,874	**-721,585**	-28,660	-22,457	-46,092	-109,080	-515,296
Trade payables	-862,826	**-862,826**	-862,826	0	0	0	0
Financial guarantee liabilities	-27,799	**-623,300**	-623,300	0	0	0	0
Total	**-3,050,629**	**-3,908,102**	**-1,534,510**	**-82,190**	**-396,766**	**-986,388**	**-908,248**

EUR thousand	2021						
Non-derivative financial liabilities	Carrying amount	**Contractual cash flows**	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
EUR floating rate loans	-68,962	**-70,540**	-13,536	-5,878	-326	-50,800	0
EUR fixed rate loans	-1,002,420	**-1,062,051**	-6,596	-10,157	-14,670	-713,876	-316,752
USD floating rate loans	-178,320	**-190,360**	-1,124	-1,492	-3,952	-183,792	0
USD fixed rate loans	-311,376	**-392,031**	-7,295	-55,483	-46,445	-88,073	-194,735
JPY floating rate loans	-38,223	**-38,863**	-82	-98	-171	-38,512	0
Other floating rate loans	-488	**-490**	-490	0	0	0	0
Lease liabilities	-164,766	**-200,943**	-20,552	-14,015	-25,385	-51,676	-89,315
Trade payables	-1,016,936	**-1,016,936**	-1,016,936	0	0	0	0
Utilised uncommitted facilities	-122	**-122**	-122	0	0	0	0
Total	**-2,781,613**	**-2,972,336**	**-1,066,733**	**-87,123**	**-90,949**	**-1,126,729**	**-600,802**

20230711119926

EUR thousand	2022					
Derivative financial liabilities/outflow	Carrying amount	**Contractual cash flows**	6 months or less	6–12 months	1–2 years	2–5 years
Cross currency interest rate swaps	-8,834	**-48,938**	-1,258	-1,514	-46,166	0
Foreign exchange contracts	-4,037	**-188,713**	-94,278	-94,435	0	0
Feedstock derivatives	-19,642	**-46,981**	-37,432	-2,845	-6,704	0
Electricity derivatives	-2,471	**-62,695**	-15,086	-22,405	-25,011	-193
Natural gas derivatives	-3,385	**-3,390**	-3,390	0	0	0
Total	**-38,369**	**-350,717**	**-151,444**	**-121,199**	**-77,881**	**-193**

EUR thousand	2021					
Derivative financial liabilities/outflow	Carrying amount	**Contractual cash flows**	6 months or less	6–12 months	1–2 years	2–5 years
Interest rate swaps	-791	**-1,096**	-653	-402	-200	159
Cross currency interest rate swaps	-3,817	**-44,067**	-316	-403	-1,033	-42,315
Foreign exchange contracts	-8,258	**-437,058**	-238,664	-198,394	0	0
Feedstock derivatives	-13,211	**-20,053**	-19,540	-513	0	0
Electricity derivatives	-563	**-26,304**	-16,577	-7,338	-2,389	0
Natural gas derivatives	-59,211	**-63,079**	-49,375	-13,704	0	0
Total	**-85,851**	**-591,657**	**-325,125**	**-220,754**	**-3,622**	**-42,156**

EUR thousand	2022					
Off balance sheet liabilities	**Contractual cash flows**	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
Short-term and low-value lease payments	**-1,747**	-962	-598	-156	-31	0
Capital commitments – property, plant and equipment	**-165,294**	-140,649	-15,388	-9,256	-1	0
Commitments in associated companies	**-10,000**	0	-10,000	0	0	0
Commitments in joint ventures	**-46,050**	0	0	0	-46,050	0

EUR thousand	2021					
Off balance sheet liabilities	**Contractual cash flows**	6 months or less	6–12 months	1–2 years	2–5 years	More than 5 years
Short-term and low-value lease payments	**-1,515**	-725	-630	-101	-59	0
Capital commitments – property, plant and equipment	**-149,998**	-111,532	-24,725	-8,484	-5,257	0
Commitments in associated companies	**-27,733**	0	-22,400	-5,333	0	0
Commitments in joint ventures	**-250,854**	0	0	0	-250,854	0

For details in respect of off balance sheet liabilities, please see note 5, note 30 and note 31.

22. Derivative Financial Instruments

The Group is exposed to certain risks relating to its ongoing business operations. The primary risks managed using derivative instruments are foreign currency risk, interest rate risk and commodity price risk.

The Group's risk management strategy and how it is applied to manage risk is explained in note 17 and in the Group Management Report in general and in this note, notes 23, 24 and 25 in detail for the risks mentioned in the preceding paragraph.

Hedge Accounting Policies of the Group

Hedges are generally placed in the legal entities where the underlying exposure exists. When certain conditions are met, Borealis applies IFRS 9 hedge accounting principles in order to recognise the offsetting effects on profit or loss of changes in the fair value of the hedging instrument and the hedged items. Borealis has the following hedge accounting relationships:

- Cash flow hedging – foreign exchange (see this note and note 23)
- Cash flow hedging – interest rate (see this note and note 24)
- Cash flow hedging – commodity (feedstock, electricity, natural gas – see this note and note 25)
- Net investment hedging in a foreign operation (see note 23)

Derivatives are only used for economic hedging purposes and not as speculative investments. However, where derivatives are not designated as hedging instruments, they are measured at fair value through profit or loss (FVPL) for accounting purposes.

The Group holds the following derivative financial instruments:

20230711119927

EUR thousand	2022	2021
Current assets		
Foreign exchange swaps – FVPL	2,994	1,908
Foreign exchange forwards – cash flow hedges	7,405	16
Feedstock derivatives – FVPL	0	1,567
Feedstock derivatives – cash flow hedges	25,137	11,853
Electricity derivatives – cash flow hedges	210,475	292,247
Natural gas derivatives – cash flow hedges	0	22
Total current derivative financial instrument assets (Other receivables and other assets)	**246,011**	**307,613**

EUR thousand	2022	2021
Non-current assets		
Interest rate swaps – cash flow hedges	5,941	0
Electricity derivatives – cash flow hedges	105,335	71,364
Total non-current derivative financial instrument assets (Other receivables and other assets)	**111,276**	**71,364**

EUR thousand	2022	2021
Current liabilities		
Interest rate swaps – cash flow hedges	0	68
Foreign exchange swaps – FVPL	12	293
Foreign exchange forwards – cash flow hedges	4,025	7,965
Feedstock derivatives – FVPL	1,158	7,194
Feedstock derivatives – cash flow hedges	18,484	6,017
Electricity derivatives – cash flow hedges	2,267	59
Natural gas derivatives – cash flow hedges	3,385	59,211
Total current derivative financial instrument liabilities (Other liabilities)	**29,331**	**80,807**

EUR thousand	2022	2021
Non-current liabilities		
Cross currency interest rate swaps – FVPL	8,834	3,817
Interest rate swaps – cash flow hedges	0	723
Electricity derivatives – cash flow hedges	205	504
Total non-current derivative financial instrument liabilities (Other liabilities)	**9,039**	**5,044**

Impact of Hedge Accounting on Equity

The Group's hedging reserve disclosed in the Consolidated Statement of Changes in Equity relates to the following hedging instruments:

Hedging Reserve EUR thousand	2022					
	Cash flow hedge – foreign currency	Cash flow hedge – interest rate	Cash flow hedge – feedstock	Cash flow hedge – electricity	Cash flow hedge – natural gas	Hedging reserve total
As of 1 January	-5,961	-593	5,682	272,286	-44,391	**227,023**
Change in fair value of hedging instrument recognised in OCI	-16,317	7,191	-60,804	356,324	62,070	**348,464**
Reclassifications from OCI to the income statement	27,646	-458	0	-406,036	-6,266	**-385,114**
Reclassifications to the cost of non-financial items	0	0	59,883	0	0	**59,883**
Deferred tax	-2,765	-1,565	364	18,695	-14,019	**710**
As of 31 December	**2,603**	**4,575**	**5,125**	**241,269**	**-2,606**	**250,966**

20230711119928

Hedging Reserve EUR thousand	2021					
	Cash flow hedge – foreign currency	Cash flow hedge – interest rate	Cash flow hedge – feedstock	Cash flow hedge – electricity	Cash flow hedge – natural gas	Hedging reserve total
As of 1 January	9,009	-2,945	-16,145	7,731	-3,381	**-5,731**
Change in fair value of hedging instrument recognised in OCI	-14,532	1,827	-38,580	478,171	35,252	**462,138**
Reclassifications from OCI to the income statement	-6,130	1,308	0	-125,431	-89,931	**-220,184**
Reclassifications to the cost of non-financial items	702	0	67,683	0	0	**68,385**
Deferred tax	4,990	-783	-7,276	-88,185	13,669	**-77,585**
As of 31 December	**-5,961**	**-593**	**5,682**	**272,286**	**-44,391**	**227,023**

Reserve for unrealised exchange gains/losses EUR thousand	2022	2021
As of 1 January	232,321	-40,435
Foreign currency revaluation of USD loans, designated as net investment hedge	-12,208	-14,687
Reclassifications to the income statement during the period	3,009	0
Foreign currency revaluation of financial statements of foreign operations	133,664	283,973
Reclassifications to the income statement during the period	-42,744	357
Foreign currency revaluation of long-term loans to foreign operations	-7,645	-2,100
Share of other comprehensive income of joint venturees accounted for using the equity method	-2,769	1,036
Foreign currency revaluation of financial statements of foreign operations – Non-controlling interests	-803	-20
Deferred tax	3,102	4,197
As of 31 December	**305,927**	**232,321**

As of 31 December 2022 and 31 December 2021, the Group had the following cash flow and net investment hedging relationships. The table shows the profile of the timing (maturity) of the nominal amount of the hedging instruments.

		2022								
	Unit	**Total**	3 months or less	3–6 months	6–12 months	1–2 years	2–3 years	3–4 years	4–5 years	More than 5 years
Foreign exchange forwards	EUR thousand	**423,357**	75,613	113,770	233,974	0	0	0	0	0
USD loans, designated as net investment hedge	USD thousand	**160,000**	0	0	40,000	49,000	30,000	21,000	20,000	0
Interest rate swaps	EUR thousand	**103,131**	0	0	0	103,131	0	0	0	0
Feedstock derivatives	tonnes	**1,102,121**	462,560	324,561	315,000	0	0	0	0	0
Electricity derivatives	GWh	**3,956**	542	520	998	1,563	333	0	0	0
Natural gas derivatives	GWh	**86**	86	0	0	0	0	0	0	0

		2021								
	Unit	**Total**	3 months or less	3–6 months	6–12 months	1–2 years	2–3 years	3–4 years	4–5 years	More than 5 years
Foreign exchange forwards	EUR thousand	**343,918**	53,192	92,424	198,302	0	0	0	0	0
USD loans, designated as net investment hedge	USD thousand	**216,000**	0	0	56,000	40,000	49,000	30,000	21,000	20,000
Interest rate swaps	EUR thousand	**108,660**	0	0	11,538	0	97,122	0	0	0
Feedstock derivatives	tonnes	**273,757**	194,032	29,085	50,640	0	0	0	0	0
Electricity derivatives	GWh	**5,544**	926	797	1,506	1,516	799	0	0	0
Natural gas derivatives	GWh	**1,280**	735	271	274	0	0	0	0	0

20230711119929

As of 31 December 2022 and 31 December 2021, no fair value hedges existed.

Offsetting

Financial assets and financial liabilities are offset only when the Group has a current and legally enforceable right to offset the recognised amounts and when there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. In the normal course of business, the Group enters into derivative transactions under International Swaps and Derivatives Association (ISDA) master netting agreements.

The following table presents the recognised financial instruments (derivatives) that are offset, or subject to enforceable master netting arrangements, but are not offset. The "Net amount" column shows the impact on the Group's balance sheet if all offsetting rights were exercised.

EUR thousand	2022				
	Gross amounts	Related amounts offset in the balance sheet	Amounts presented in the balance sheet	Related amounts not offset in the balance sheet	Net amount
Financial assets					
Derivative financial instruments	463,633	-106,346	357,287	-2,246	355,041
Financial liabilities					
Derivative financial instruments	144,716	-106,346	38,370	-2,246	36,124

EUR thousand	2021				
	Gross amounts	Related amounts offset in the balance sheet	Amounts presented in the balance sheet	Related amounts not offset in the balance sheet	Net amount
Financial assets					
Derivative financial instruments	415,542	-36,565	378,977	-800	378,177
Financial liabilities					
Derivative financial instruments	122,416	-36,565	85,851	-800	85,051

There is no further netting potential for non-derivative financial instruments.

23. Foreign Currency Risk

Foreign exchange risk is the risk that the fair value or future cash flows of an exposure will fluctuate because of changes in foreign exchange rates.

Borealis incurs foreign currency risk on sales, purchases and borrowings that are denominated in currencies other than EUR. The most significant currencies in terms of hedged amounts are USD and SEK.

The foreign exchange risk related to short-term commercial cash flows is hedged and limits for long-term foreign exchange exposures are established. Based on regular cash flow forecasts, Borealis hedges its foreign exchange exposure coming from forecasted sales and purchases and from committed investment projects.

Borealis hedges forecasted positions denominated in foreign currencies. At any time, Borealis may also hedge its long-term commercial exposures up to a predefined level and duration. Borealis normally hedges the currency positions using foreign exchange forward contracts. Borealis classifies its foreign exchange forward contracts, which hedge a forecasted currency position, as cash flow hedges and states them at fair value.

Changes in the fair value of foreign exchange forward contracts that hedge monetary assets and liabilities in foreign currencies and the forward legs of foreign exchange swaps used in liquidity management, for which no hedge accounting is applied, are recognised in the income statement. Both changes in the fair value of the forward contracts and the foreign exchange gains and losses relating to the monetary items are recognised as financial expenses.

There is an economic relationship between the hedged items and the hedging instruments as the critical terms of the foreign exchange forward contracts match the terms of the expected highly probable forecast transactions (i.e. nominal amount, exchange rate and expected payment date). Hence, the Group has established a hedge ratio of 1:1. To test the hedge effectiveness, the Group uses the Dollar Offset method and compares the changes in the fair value of the hedging instruments against the changes in fair value of the hedged items attributable to the hedged risks.

Hedge ineffectiveness may arise from:

- differences in the timing of the cash flows of the hedged items and the hedging instruments,
- different indexes (and accordingly different curves) linked to the hedged risk of the hedged items and hedging instruments,
- the counterparties' credit risk differently impacting the fair value movements of the hedging instruments and hedged items,
- changes to the forecasted amount of cash flows of hedged items,
- change in fair value of the cross currency basis spread element of the foreign exchange forward contracts ("ccbs").

Borealis does not recognise any ineffectiveness in the income statement due to immateriality.

Net Investment Hedges in Foreign Operations

A foreign currency exposure arises from the Group's long-term net investment in its subsidiaries, associated companies and joint ventures in foreign currencies. Foreign exchange translation differences relating to these net investments are recognised in other comprehensive income. Borealis has hedged part of its investment in a joint venture, which has USD as its functional currency, by designating certain external loans in USD as hedges of the Group's investments in its foreign operations. The hedged risk in the net investment hedge is the risk of a weakening USD against the EUR that will result in a reduction in the carrying amount of the Group's net investment in the joint venture in USD. The EUR/USD impact on the measurement of the loan is recognised in other comprehensive income.

To assess hedge effectiveness, the Group determines the economic relationship between the hedging instrument and the hedged item by comparing changes in the carrying amount of the debt that is attributable to a change in the spot rate with changes in the investment in the foreign operation due to movements in the spot rate (the Dollar Offset method). The Group's policy is to hedge the net investment only to the extent of the debt principal.

20230711193930

There is an economic relationship between the hedged item and the hedging instrument as the net investment creates a translation risk that will match the foreign exchange risk on the USD borrowing. The Group has established a hedge ratio of 1:1 as the underlying risk of the hedging instrument is identical to the hedged risk component. Hedge ineffectiveness will arise when the amount of the investment in the foreign joint venture becomes lower than the amount of the borrowing.

Effects of Hedge Accounting on the Financial Position and Performance

The effects of the foreign currency-related hedging instruments on the Group's financial position and performance are as follows:

Foreign exchange forwards **EUR thousand**	**2022**	**2021**
Carrying amount (asset – current)	7,405	16
Carrying amount (liability – current)	4,025	7,965
Line item in the balance sheet where the hedging instrument is included	*Other receivables and other assets/* Other liabilities	*Other receivables and other assets/* Other liabilities
Total nominal amount	kEUR 423,357	kEUR 343,918
Hedge ratio	1:1	1:1
Hedged rate for the year	EUR/USD 1.01–1.10 EUR/SEK 10.67–11.11	EUR/USD 1.15–1.20 EUR/SEK 10.01–10.30
Change in fair value of the hedging instrument used for measuring ineffectiveness for the period	-16,317	-14,532
Change in value of the hedged item used for measuring ineffectiveness for the period	16,317	14,532
Hedging reserve (net of deferred taxes)	2,603	-5,961
Total hedging gain (+) or loss (-) recognised in OCI	-16,317	-14,532
Hedge ineffectiveness recognised in the income statement	0	0
Amount reclassified from hedging reserve to the income statement	27,646	-6,130
Line item in the income statement affected by the reclassification	Net sales and production costs	Net sales and production costs
Amount reclassified from hedging reserve to the cost of non-financial items	0	702

Net investment hedges in foreign operations EUR thousand	2022	2021
Carrying amount (liability)	150,009	190,712
Line item in the balance sheet where the hedging instrument is included	Loans and borrowings	Loans and borrowings
Total nominal amount	kUSD 160,000	kUSD 216,000
Hedge ratio	1:1	1:1
Change in fair value of the hedging instrument used for measuring ineffectiveness for the period	-12,208	-14,687
Change in value of the hedged item used for measuring ineffectiveness for the period	12,208	14,687
Reserve for unrealised exchange gains/losses (net of deferred taxes)	-22,970	-15,445
Balances remaining in the reserve for unrealised exchange gains/losses from hedging relationships for which hedge accounting is no longer applied	-15,358	-6,290
Total hedging gain (+) or loss (-) recognised in OCI	-12,208	-14,687
Hedge ineffectiveness recognised in the income statement	0	0
Amount reclassified from Reserve for unrealised exchange gains/losses to the income statement	3,009	0

Sensitivity Analysis

The Group's exposure to the risk of changes in foreign exchange rates primarily relates to the Group's operating activities, mainly invoicing in EUR and mainly purchasing raw materials in USD and the Group's net investments in associated companies and joint ventures mainly denominated in USD. The sensitivity analysis has been prepared on the basis that the financial instruments in foreign currencies and all other parameters, apart from changes in foreign exchange rates themselves (foreign exchange rate against EUR), are constant, and on the basis of hedge designations in place as of 31 December 2022. The Group assumes that the prevailing polyolefin market pricing mechanisms reduce the foreign exchange risk in practice. As of 31 December 2022, the Group showed a net payable (prior year: net payable) position in USD and a net payable (prior year: net payable) position in SEK.

Effect in EUR thousand	Profit before taxation		Other comprehensive income	
	Strengthening +1%	Weakening -1%	Strengthening +1%	Weakening -1%
31 December 2022				
USD	-1,236	1,012	-3,519	2,879
SEK	-14	12	1,486	-1,215
USD – including net investment	-1,236	1,012	28,493	-23,312
SEK – including net investment	-14	12	7,228	-5,914
31 December 2021				
USD	16,335	-13,365	-3,863	3,161
SEK	-69	56	1,612	-1,319
USD – including net investment	16,335	-13,365	25,828	-21,132
SEK – including net investment	-69	56	7,244	-5,927

20230711119931

The key foreign exchange rates used for the Group were as follows:

	2022		2021	
	Closing rate	Average rate	Closing rate	Average rate
USD	1.0666	1.0530	1.1326	1.1827
SEK	11.1218	10.6296	10.2503	10.1465

24. Interest Rate Risk

Interest rate risk is the risk of the fair value or future cash flows of a financial instrument fluctuating because of changes in market interest rates.

Borealis adopts a policy of managing its interest rate risk through the modified duration of its loan portfolio. The average modified duration is allowed to deviate within a predefined range. Overall, Borealis' risk management strategy according to its financial procedures is to protect itself against adverse interest rate movements and to obtain predictable interest costs. As of 31 December 2022, Borealis had two outstanding interest rate swaps. Borealis classifies these interest rate swaps as cash flow hedges and states them at fair value. The purpose of these hedges is to fix the cash outflows related to the floating rate loans.

The Group enters into interest rate swaps that have matching critical terms with the hedged item, such as reference rate, reset dates, payment dates, maturities and nominal amount.

The hedge ratios are based on interest rate swaps with a nominal amount in EUR and USD and a receive leg of a rate index. This results in 1:1 hedge ratios (100%). Since loans and hedging instruments are fully aligned and cannot be changed unless terminated, the hedge ratios will not change and hence, do not result in any imbalances that would create hedge ineffectiveness.

Hedge effectiveness will be assessed by comparing changes in the fair values of the hedging instruments to changes in the fair values of the respective hypothetical derivatives. The terms of the hypothetical derivative are as such that its fair value changes offset exactly the changes in the fair value of the hedged item. The terms are identical to the hedging instrument but, assume no counterparty risk. Hence, the hedge is expected to be highly effective.

A significant change in the credit risk of either Borealis or the counterparty is identified as a potential source of ineffectiveness. The Group treasury monitors the Company and the bank's credit risk for significant adverse changes.

Hedge ineffectiveness may arise from:
- differences in the timing of the cash flows of the hedged items and the hedging instruments,
- the counterparties' credit risk impacting the fair value movements of the hedging instruments and hedged items differently.

Borealis has one cross currency interest rate swap that is measured at fair value through profit or loss (FVPL).

Of loans and borrowings, approximately 82% (82%) have a fixed interest rate and 18% (18%) are based on a floating interest rate before applying interest rate swaps. After applying interest rate swaps, approximately 89% (89%) have a fixed interest rate and 11% (11%) are based on a floating interest rate. The floating interest rates are set by adding a spread to the reference rates (mainly EURIBOR and LIBOR).

Effects of Hedge Accounting on the Financial Position and Performance
The effects of the interest rate related to hedging instruments on the Group's financial position and performance are as follows:

Interest rate swaps **EUR thousand**	**2022**	**2021**
Carrying amount (asset – non-current)	5,941	0
Carrying amount (liability – current)	0	68
Carrying amount (liability – non-current)	0	723
Line item in the balance sheet where the hedging instrument is included	Other receivables and other assets/ Other liabilities	Other receivables and other assets/ Other liabilities
Total nominal amount	kEUR 103,131	kEUR 108,660
Hedge ratio	1:1	1:1
Weighted average hedged rate for the year	2.36%	2.17%
Change in fair value of the hedging instrument used for measuring ineffectiveness for the period	7,191	1,827
Change in value of the hedged item used for measuring ineffectiveness for the period	-7,191	-1,827
Hedging reserve (net of deferred taxes)	4,575	-593
Total hedging gain (+) or loss (-) recognised in OCI	7,191	1,827
Hedge ineffectiveness recognised in the income statement	0	0
Amount reclassified from hedging reserve to the income statement	-458	1,308
Line item in the income statement affected by the reclassification	Financial expenses	Financial expenses

20230711119932

Interest Rate Benchmark Reform

The table below provides an overview of IBOR related exposure by currency and nature of financial instruments:

	Benchmark	*Carrying amount* (notional amount for derivatives)	
		2022	2021
Non-derivative financial assets			
Loans granted	USD LIBOR	kEUR 657,072	kEUR 985,240
Non-derivative financial liabilities			
Term loans (loans and borrowings)	USD LIBOR	kEUR 189,856	kEUR 178,320
Term loans (loans and borrowings)	JPY LIBOR [1)]	kEUR 35,547	kEUR 38,223
Derivatives			
Interest rate swap – cash flow hedge	USD LIBOR	kUSD 50,000	kUSD 50,000
Interest rate swap – cash flow hedge	USD LIBOR	kUSD 60,000	kUSD 60,000
Cross currency interest rate swap – FVPL	JPY LIBOR to USD LIBOR [1)]	kJPY 5,000,000	kJPY 5,000,000
Off balance sheet items			
Commitments in joint ventures	USD LIBOR	kEUR 46,050	kEUR 250,854
Unutilised committed facilities	Multicurrency	kEUR 1,000,000	KEUR 1,000,000

1) transitioned to TONAR

The Group continuously evaluates contractual terms in respect of the LIBOR transition exposures. Where necessary, agreements will be amended to provide for alternative benchmark rates, which will be in accordance with the LMA standard at the time, to apply in relation to the affected currencies. Where applicable, the Group will transition USD LIBOR agreements during the first half of 2023.

As of the end of December 2022, for the EUR 1,000,000 thousand multicurrency Revolving Credit Facility (RCF), a drawdown waiver is in place for currencies where IBOR rates were discontinued as a screen rate from 31 December 2021 (CHF, GBP, JPY). The RCF drawdown waiver will cease to have effect if the facility is amended to provide for alternative benchmark rates, which will be in accordance with the LMA standard at any given time.

In addition, the JPY 5,000,000 thousand Samurai loan tranche has been successfully transitioned to TONAR.

Borealis considers that it is, in principle, exposed to uncertainties resulting from the interest rate benchmark reform in respect of its hedges of (three month) USD LIBOR interest risks related to the existence of two outstanding USD interest rate swaps, with a nominal amount of USD 110 million in total. Their hedging period spans beyond 2022 when uncertainties about the existence of the USD LIBOR rates arise. Borealis expects that the hedging instrument and the hedged risk of the hedged item will not change as a result of the reform. However, any hedge ineffectiveness would be accounted for in the income statement.

Sensitivity Analysis
In managing interest rate risks, Borealis aims to reduce the impact of short-term fluctuations on its earnings. Over the long term, permanent changes in interest rates will have an impact on consolidated earnings. The sensitivity analysis has been prepared on the basis of the amount of net debt, floating interest rates of the debt and the derivatives as of 31 December 2022.

Effect in EUR thousand	Profit before taxation		Other comprehensive income	
	Strengthening +1%	Weakening -1%	Strengthening +1%	Weakening -1%
31 December 2022				
Interest rate	-1,907	1,919	757	-761
31 December 2021				
Interest rate	-1,904	1,916	484	-488

25. Commodity Price Risk

Commodity price risk is the risk of future cash flows or the fair value of inventories fluctuating because of changes in commodity prices. Borealis states its inventories at the lower of cost and net realisable value, taking into account future price developments. Commodity price risk is managed by the feedstock and energy traders and monitored by Trade Support and Risk Management. The commodity price risk exposure is calculated by a trading software program. Trade Support and Risk Management take a snapshot of all data in the trading system on a daily basis and retrieve the daily position from the system. The position is analysed and compared with the trading limits. Traders use financial derivatives (i.e. financial swaps) in order to stay within the limits.

Feedstock Derivatives
Borealis hedges some of its forecasted feedstock purchases and finished product sales through feedstock swaps. Cash flow hedge accounting is applied to those derivatives, except for the derivatives that are used to limit the price risk on the inventory held for immediate consumption. Some of the derivatives have been designated as cash flow hedges for future sales and purchases. Derivatives not designated as cash flow hedges are measured at fair value through profit or loss (FVPL).

Electricity Derivatives
Borealis hedges its forecasted electricity purchases using electricity swaps. Cash flow hedge accounting has been applied for these derivatives.

Natural Gas Derivatives
Borealis hedges part of its forecasted natural gas purchases and exposure in commercial contracts to changes in natural gas prices using natural gas swaps. Cash flow hedge accounting has been applied for these derivatives.

There is an economic relationship between the hedged items and the hedging instruments as the terms of the commodity forward contracts match the terms of the expected highly probable forecast transactions (i.e. nominal quantity and expected payment date). The Group has established a hedge ratio of 1:1 for the hedging relationships as the underlying risk of the commodity forward contracts are identical to the hedged risk components. To test the hedge effectiveness, the Group compares the changes in the fair value of the hedging instruments against the changes in fair value of the hedged items attributable to the hedged risks.

20230711119933

The hedge ineffectiveness can arise from:
- differences in the timing of the cash flows of the hedged items and the hedging instruments, and
- changes to the forecasted amount of cash flows of hedged items and hedging instruments.

Effects of Hedge Accounting on the Financial Position and Performance
The effects of the commodity-related hedging instruments on the Group's financial position and performance are as follows:

Feedstock derivatives **EUR thousand**	**2022**	**2021**
Carrying amount (asset – current)	25,137	11,853
Carrying amount (liability – current)	18,484	6,017
Line item in the balance sheet where the hedging instrument is included	Other receivables and other assets/ Other liabilities	Other receivables and other assets/ Other liabilities
Total *nominal amount*	1,102,121 tonnes	273,757 tonnes
Hedge ratio	1:1	1:1
Change in fair value of the hedging instrument used for measuring ineffectiveness for the period	-60,804	-38,580
Change in value of the hedged item used for measuring ineffectiveness for the period	60,804	38,580
Hedging reserve (net of deferred taxes)	5,125	5,682
Balances remaining in the hedging reserve for hedging instruments that have expired but forecast transaction still has to occur	0	1,742
Total hedging gain (+) or loss (-) recognised in OCI	-60,804	-38,580
Hedge ineffectiveness recognised in the income statement	0	0
Amount reclassified from hedging reserve to the cost of non-financial items	59,883	67,683

Electricity derivatives EUR thousand	2022	2021
Carrying amount (asset – current)	210,475	292,247
Carrying amount (asset – non-current)	105,335	71,364
Carrying amount (liability – current)	2,267	59
Carrying amount (liability – non-current)	205	504
Line item in the balance sheet where the hedging instrument is included	Other receivables and other assets/ Other liabilities	Other receivables and other assets/ Other liabilities
Total nominal amount	3,956 GWh	5,544 GWh
Hedge ratio	1:1	1:1
Change in fair value of the hedging instrument used for measuring ineffectiveness for the period	356,324	478,171
Change in value of the hedged item used for measuring ineffectiveness for the period	-356,324	-478,171
Hedging reserve (net of deferred taxes)	241,269	272,286
Total hedging gain (+) or loss (-) recognised in OCI	356,324	478,171
Hedge ineffectiveness recognised in the income statement	0	0
Amount reclassified from hedging reserve to the income statement	-406,036	-125,431
Line item in the income statement affected by the reclassification	Production costs	Production costs

Natural gas derivatives EUR thousand	2022	2021
Carrying amount (asset – current)	0	22
Carrying amount (liability – current)	3,385	59,211
Line item in the balance sheet where the hedging instrument is included	Other receivables and other assets/ Other liabilities	Other receivables and other assets/ Other liabilities
Total nominal amount	86 GWh	1,280 GWh
Hedge ratio	1:1	1:1
Change in fair value of the hedging instrument used for measuring ineffectiveness for the period	62,070	35,252
Change in value of the hedged item used for measuring ineffectiveness for the period	-62,070	-35,252
Hedging reserve (net of deferred taxes)	-2,606	-44,391
Total hedging gain (+) or loss (-) recognised in OCI	62,070	35,252
Hedge ineffectiveness recognised in the income statement	0	0
Amount reclassified from hedging reserve to the income statement	-6,266	-89,931
Line item in the income statement affected by the reclassification	Production costs	Production costs

20230711119934

Sensitivity Analysis
The sensitivity analysis has been prepared for all derivative financial instruments on the basis that the amount of the feedstock held and all other parameters besides commodity prices (in particular sales prices) are constant and on the basis of the hedge designations in place on 31 December 2022. The Group assumes that the prevailing market pricing mechanisms reduce the commodity price risk in practice.

Effect in EUR thousand	Profit before taxation		Other comprehensive income	
	Strengthening +1%	Weakening -1%	Strengthening +1%	Weakening -1%
31 December 2022				
Feedstock – Naphtha	-480	480	-2,734	2,734
Feedstock – Other	65	-65	1,281	-1,281
Electricity	0	0	5,717	-5,717
Natural gas	0	0	530	-530
31 December 2021				
Feedstock – Naphtha	-120	120	-240	240
Feedstock – Other	0	0	122	-122
Electricity	0	0	5,710	-5,710
Natural gas	0	0	326	-326

26. Factoring

Borealis has a factoring programme under which the Company sells certain trade receivables to external parties. The Group does not retain any major interest in the trade receivables and thus derecognises the receivables sold accordingly. Borealis continues to administer the relationship with debtors and has to transfer all receivables collected and previously sold to the purchaser under this programme. Several reserves are deducted from the nominal value of the sold receivables and will be released upon transfer of the respective collected receivables to the purchaser.

The total nominal value sold to the purchaser under the factoring programme in the current year amounted to EUR 3,683,635 thousand (EUR 3,609,439 thousand). As of 31 December 2022, receivables worth EUR 382,258 thousand (EUR 378,734 thousand) were sold to the purchaser under the factoring programme. The reserves deducted from the nominal value of the sold receivables amounted to EUR 33,861 thousand (EUR 31,012 thousand) as of 31 December 2022 and are included in other current receivables. During the year, expenses amounting to EUR 4,095 thousand (EUR 3,164 thousand) were recognised in the income statement for the factoring programme.

27. Credit Risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations. The Group is exposed to credit risk from its operating activities (primarily trade receivables) and from its financing activities, including deposits with banks and financial institutions and other financial instruments.

The Group has three types of financial assets that are subject to the expected credit loss model:
- trade receivables (excluding trade receivables at FVPL) and contract assets,
- cash and cash equivalents,
- debt investments carried at amortised cost.

On each reporting date, the Group assesses whether financial assets carried at amortised cost are credit-impaired. For trade receivables, the Group applies the IFRS simplified approach to measure expected credit losses, which uses a lifetime expected loss allowance.

Trade Receivables Credit Risk

A credit control procedure is in place. Credit risk is monitored on an ongoing basis. Credit risk for a specific counterparty is the sum of all outstanding trade receivables and is compared to the individual credit limit allocated to that counterparty. Credit limit evaluations are performed on a daily basis and all customers are reviewed annually at least. Approval and escalation limits are used to authorise the available credit limits to customers. For some trade receivables, the Group may obtain security in the form of guarantees (bank and parental guarantees), letters of credit or credit insurance, which can be called upon if the counterparty is in default under the terms of the agreement. As of the reporting date, Borealis has no large concentrations of credit risks for trade receivables from external parties representing more than 10% of the total outstanding trade receivables. For details on trade receivables from related parties, see note 30. No credit risk is retained in trade receivables sold under the factoring programme (note 26).

The maximum exposure to credit risk for trade receivables as of the reporting date by geographic region was:

EUR thousand	2022	2021
EU countries	357,809	543,733
Non-EU in Europe	128,510	251,015
US	51,580	63,234
Middle East and Asia	164,762	141,259
Other regions	85,779	114,545
Total	**788,440**	**1,113,786**

The maximum exposure to credit risk for trade receivables as of the reporting date by type of segment and group of customers was:

EUR thousand	2022	2021
Polyolefins	580,023	695,428
Base Chemicals	17,034	305,066
Borealis NITRO	0	30,629
Non-Allocated	191,383	82,663
Total	**788,440**	**1,113,786**

20230711193935

All customers are classified in risk categories based on external and internal ratings with associated probabilities of default in order to measure the lifetime expected losses.

The table below shows the maximum exposure (gross carrying amount) for each risk class based on which loss allowance was determined for trade receivables (excluding trade receivables at FVPL).

EUR thousand	31.12.2022				
	Equivalent to external rating	Probability of default	Gross carrying amount	Loss allowance	Credit-impaired
Risk category 1	AAA, AA+, AA, AA-, A+, A, A-	0.13%	51,143	-16	No
Risk category 2	BBB+, BBB, BBB-	0.44%	135,893	-33	No
Risk category 3	BB+, BB, BB-	1.18%	241,872	-158	No
Risk category 4	B+, B, B-	8.52%	150,299	-702	No
Risk category 5	CCC/CC	29.54%	86,270	-1,800	No
Risk category 6	SD/D	100.00%	9,721	-9,721	Yes
Total			**675,198**	**-12,431**	

EUR thousand	31.12.2021				
	Equivalent to external rating	Probability of default	Gross carrying amount	Loss allowance	Credit-impaired
Risk category 1	AAA, AA+, AA, AA-, A+, A, A-	0.07%	187,165	-1	No
Risk category 2	BBB+, BBB, BBB-	0.24%	32,987	-4	No
Risk category 3	BB+, BB, BB-	1.21%	211,533	-834	No
Risk category 4	B+, B, B-	10.37%	311,933	-1,806	No
Risk category 5	CCC/CC	10.37%	140,695	-1,111	No
Risk category 6	SD/D	100.00%	9,938	-9,938	Yes
Total			**894,251**	**-13,694**	

The identified impairment loss for contract assets was immaterial.

The movement in the loss allowance in respect of trade receivables during the year was as follows:

EUR thousand	2022		2021	
	Lifetime ECL – not credit-impaired	Lifetime ECL – credit-impaired	Lifetime ECL – not credit-impaired	Lifetime ECL – credit-impaired
Balance as of 1 January	3,756	9,938	1,480	14,126
Impairment loss recognised	0	4,557	2,441	2,162
Written off	0	0	0	-2,045
Reversal of impairment	-1,047	-90	0	-557
Reclassification to assets directly related to the disposal group	0	-4,597	-165	-3,783
Other movements	0	0	0	0
Exchange adjustments	0	-86	0	35
Balance as of 31 December	**2,709**	**9,721**	**3,756**	**9,938**

In 2022, the Group did not renegotiate the terms of trade receivables. Generally, trade receivables written off during 2022 are not subject to enforcement activity.

The total guarantees received (bank guarantees and parental guarantees) in respect of the trade receivables amounted to EUR 233,765 thousand (EUR 234,195 thousand).
The Group does not require collateral in respect of trade receivables. The Group does not have trade receivables for which no loss allowance is recognised because of collateral or guarantees received.

Other Credit Risk

The Group is also exposed to credit risk relating to other financial assets. The maximum exposure to credit risk as of the reporting date is the carrying amount of each class of financial assets disclosed in note 28.

The table below shows the maximum exposure to credit risk (gross carrying amount) for financial assets that are measured at amortised cost and subject to a 12-month expected credit loss.

20230713139936

	Credit risk (Gross carrying amount)		Loss allowance recognised	
EUR thousand	**2022**	**2021**	**2022**	**2021**
Cash and cash equivalents	2,226,207	1,540,973	0	0
Debt investments carried at amortised cost				
Loans granted	697,327	1,015,018	-3,310	0
Deposits and other receivables	158,362	171,133	-943	0

Borealis' cash balances are deposited with relationship banks or are invested in liquid securities with counterparties that fulfil a certain predefined credit rating threshold. Counterparty credit risks for long-term financial treasury transactions are managed by mandatory credit limits and external credit rating requirements or have undergone a special approval process. A real time treasury system is used to monitor exposures and risk limits. Borealis' management does not expect any counterparty to fail to meet any of its current obligations.

While cash and cash equivalents are also subject to the impairment requirements of IFRS 9, the identified impairment loss was immaterial. All of the entities' other debt investments at amortised cost are considered in general to have low credit risk and the loss allowance recognised during the period is therefore limited to 12-month expected losses. In 2021, a fully impaired balance of restricted cash in the amount of EUR 2,099 thousand classified as other financial assets and a fully impaired loan to an external party in the amount of EUR 651 thousand were reclassified to assets directly related to the disposal group. Additionally, a fully impaired loan in the amount of EUR 2,500 thousand was written off.

For the financial guarantee liability, no loss allowance was recognised in the reporting period as the fair value less the cumulative amount of income recognised in accordance with the principles of IFRS 15 was higher than the amount of the loss allowance determined in accordance with the impairment requirements of IFRS 9. For further details on financial guarantee contracts, please refer to note 30.

28. Fair Values

The following table shows the carrying amounts and fair values of financial assets and financial liabilities, including their levels in the fair value hierarchy. It does not include fair value information for financial assets and financial liabilities not measured at fair value, if the carrying amount is a reasonable approximation of fair value.

EUR thousand	31.12.2022			31.12.2021		
Assets	**Carrying amount**	**Fair value**	**Fair value hierachy level**	**Carrying amount**	**Fair value**	**Fair value hierachy level**
Other investments						
Other investments	18,459	18,459	3	18,355	18,355	3
thereof at fair value through profit or loss	**15,391**			**15,287**		
thereof at fair value through other comprehensive income	**3,068**			**3,068**		
Trade receivables						
Trade receivables	788,440			1,113,786		
thereof at amortised cost	**662,767**			**880,557**		
thereof at fair value through profit or loss	**125,673**			**233,229**		
Cash and cash equivalents						
Cash	221,260			161,342		
Other current deposits	2,004,947			1,379,631		
at amortised cost	**2,226,207**			**1,540,973**		
Loans granted						
Loans granted	694,016	691,607	2	1,015,018	1,017,414	2
at amortised cost	**694,016**			**1,015,018**		
Other receivables and other assets (current and non-current)						
Marketable securities and bonds	26,431	26,431	1	29,521	29,521	1
at fair value through profit or loss	**26,431**			**29,521**		
Derivative financial instruments for which hedge accounting is applied	354,293	354,293	2	375,501	375,501	2
Hedging instruments	**354,293**			**375,501**		
Derivative financial instruments for which hedge accounting is not applied	2,994	2,994	2	3,476	3,476	2
at fair value through profit or loss	**2,994**			**3,476**		
Deposits and other receivables	157,419			171,133		
at amortised cost	**157,419**			**171,133**		
Other non financial assets	197,469	n/a	n/a	209,471	n/a	n/a
Total other receivables and other assets (current and non-current)	**738,606**			**789,102**		

20230711119937

EUR thousand	31.12.2022			31.12.2021		
Liabilities	**Carrying amount**	**Fair value**	**Fair value hierachy level**	**Carrying amount**	**Fair value**	**Fair value hierachy level**
Loans and borrowings (current and non-current)						
Bond	298,460	289,884	1	297,955	316,932	1
Floating rate loans and borrowings	275,414	274,738	2	285,992	286,645	2
Fixed rate loans and borrowings	980,256	872,649	2	1,015,964	1,050,893	2
at amortised cost	**1,554,130**			**1,599,911**		
Trade payables						
Trade payables	862,826			1,016,936		
at amortised cost	**862,826**			**1,016,936**		
Other liabilities (current and non-current)						
Derivative financial instruments for which hedge accounting is applied	28,364	28,364	2	74,547	74,547	2
Hedging instruments	**28,364**			**74,547**		
Derivative financial instruments for which hedge accounting is not applied	10,004	10,004	2	11,304	11,304	2
at fair value through profit or loss	**10,004**			**11,304**		
Interest accruals on loans and borrowings	7,021			5,945		
Other financial liabilities	97,414			78,947		
at amortised cost	**104,435**			**84,892**		
Financial guarantee liabilities	27,799	27,799	2	0		
Other non-financial liabilities	252,832	n/a	n/a	441,837	n/a	n/a
Total other liabilities (current and non-current)	**423,434**			**612,580**		

The Group measures fair values using the following fair value hierarchy that reflects the significance of the inputs used in making the measurements:

Level 1: Quoted market price (unadjusted) in an active market for an identical instrument.

Level 2: Valuation techniques based on observable inputs, either directly or indirectly. This category includes instruments valued using quoted market prices in active markets for similar instruments, quoted prices for identical or similar instruments in less active markets or other valuation techniques where all significant inputs are directly or indirectly observable from market data.

Level 3: Valuation techniques using significant unobservable inputs. This category includes all instruments where the valuation technique includes inputs not based on observable data and the unobservable inputs have a significant effect on the instruments' valuation. This category includes instruments that are valued based on quoted prices for similar instruments where significant unobservable adjustments or assumptions are required to reflect differences between the instruments.

In 2022 and 2021, no transfers between the different levels of the fair value hierarchy took place.

Other Investments
For details on other investments, see note 10. The equity value of the other investments is assumed to equal other investments' fair value. If the equity decreases (increases), the fair value decreases (increases) accordingly.

The following table presents the changes in other investments (level 3 items):

EUR thousand	2022	2021
Balance as of 1 January	18,355	31,443
Investments and acquisitions	56	3,068
Reclassification to assets of the disposal group held for sale	0	-18,052
Fair value changes recognised in income statement (financial income/expenses)	115	1,914
Exchange adjustments	-67	-18
Balance as of the reporting date	**18,459**	**18,355**

Trade and Other Receivables and Other Assets
The fair value of trade and other receivables and assets is estimated to equal the nominal values less impairments (= carrying amount).

The carrying amount of deposits and other receivables is not materially different from their fair value.

Loans granted
The fair value of loans granted is calculated based on the present value of future principal and interest cash flows discounted at the market rate of interest adjusted for the respective counterparty credit risk as of the reporting date.

Derivatives
The fair value of foreign exchange derivatives is estimated by discounting the difference between the contractual forward price and the current forward price for the residual maturity of the derivative using market rates as of the reporting date.

The fair value of interest rate swaps is estimated by discounting estimated future cash flows based on the terms and maturity of each derivative and using market rates for a hypothetical instrument as of the reporting date. The credit quality of counterparties did not lead to a significant change in the fair values.

The fair value of commodity derivatives is estimated by discounting the difference between current forward price and contractual forward price.

Other Non-financial Assets and Liabilities
Other non-financial assets and liabilities are shown solely for reconciliation purposes.

Non-derivative Financial Liabilities
Fair value for non-current and current loans and borrowings is calculated based on the present value of future principal and interest cash flows discounted at the market rate of interest adjusted for Borealis' credit risk as of the reporting date. All fair values are excluding the outstanding interest accruals as of the reporting date.

The fair value of trade and other payables is estimated to equal the carrying amount.

Contingent Consideration
For the acquisition of the remaining 50% of Novealis, a contingent consideration up to EUR 10,150 thousand was agreed based on an earnings target for 2022. According to Borealis' assessment, the earnings target was not met. Thus, the contingent consideration has been valued at a fair value of EUR 0 thousand (EUR 0 thousand).

29. Other Operating Income
In 2022, other operating income consisted mainly of intangible assets received by way of government grants as allowances for emissions (EU Emissions Trading System) of EUR 150,530 thousand (EUR 38,009 thousand). Furthermore, gains from foreign currency translation effects related to working capital amount to EUR 98,077 thousand

20230711119938

(EUR 34,161 thousand). Moreover, insurance compensation of EUR 4,000 thousand (EUR 33,946 thousand) is recognised here. The remainder of other operating income is mainly related to various small grants and subsidies.

30. Transactions with Related Parties

	Transaction values		Balance outstanding	
EUR thousand	**2022**	**2021**	**31.12.2022**	**31.12.2021**
Sales of goods and services to				
Associated companies	51,450	450,647	21,801	142,997
Joint ventures	646,400	6,435	161,834	8,416
Companies with significant influence	13,181	21,565	0	4,124
Other related parties	119,013	78,440	15,532	14,724
Purchases of goods and services from				
Associated companies	133,964	588,584	150	108,052
Joint ventures	411,273	5,814	88,745	40
Companies with significant influence	45,033	74,153	0	5,757
Other related parties	2,111,463	1,776,173	182,788	245,707
Others				
Loans granted and related interest – Associated companies	1,009	1,131	40,022	29,778
Loans granted and related interest – Joint ventures	19,188	26,538	656,973	987,143
Financial guarantee receivables - Joint ventures	0	0	28,712	0
Financial guarantee liabilities - Joint ventures	0	0	27,799	0
Lease liability and related interest – Parent company	23	0	8,556	0
Lease liabilities and related interest – Other related parties	265	277	12,348	14,355
Income taxes liability and related expense – Parent company	221,981	347,094	111,127	282,363

The amounts shown in the table include transaction values and the balance outstanding from discontinued operation.

Due to the ownership change in Borealis on 8 November 2022, the transactions with Mubadala group entities are shown under "Companies with significant influence" until the end of October 2022, whereas, starting with November 2022, the transactions and outstanding balances with Abu Dhabi National Oil Company (ADNOC) P.J.S.C. and its group entities are shown under "Companies with significant influence".

For further details on control reassessment and new presentation for Borouge entities, see note 9.

The sales to associated companies and joint ventures mainly include sales of finished goods and services. Transactions with joint ventures further include the granting of licences for the use of Group technologies. Contract assets with Borouge PLC amounting to EUR 8,139 thousand (EUR 8,250 thousand with Abu Dhabi Polymers Company Limited) and with Bayport Polymers LLC (Baystar) amounting EUR 0 thousand (EUR 7,284 thousand) are included in the balance outstanding. For details on contract assets, please see note 2. Also included in the balance outstanding from associated companies are prepayments to Kilpilahden Voimalaitos Oy (KPP) of EUR 11,465 thousand (EUR 12,345 thousand) and to Renasci N.V. (Renasci) of EUR 9,834 thousand (EUR 9,877 thousand). Purchases from joint ventures mainly include purchases of finished goods produced in Borouge and sold in Europe. Purchases from other related parties mainly relate to purchases of feedstock and utilities from OMV group companies. Receivables from and payables to related parties are included in trade receivables/payables. Lease liabilities and related interest from the parent company represent rental of office facilities in Vienna from OMV Aktiengesellschaft. Lease liabilities and related interest from other related parties relate to rented land and infrastructure from OMV in Germany. Loans granted, including interest receivables, to joint ventures amounting to EUR 656,973 thousand (EUR 987,143 thousand) were outstanding from Baystar. For further details on loans granted, see note 10.

All transactions with related parties were conducted on an arm's length basis.

Borealis has a commitment to grant a loan to Baystar with a total value of EUR 1,312,582 thousand (EUR 1,236,093 thousand). The commitment is available until the cracker and Borstar® unit are in service or 10 June 2023, whatever occurs first. As of year end 2022, Baystar had EUR 657,119 thousand (EUR 985,240 thousand) outstanding, and EUR 601,685 thousand was repaid on 19 April 2022. The repayment was financed from the two tranches of senior notes issued in USD in the amount of EUR 323,984 thousand and EUR 277,701 thousand, which mature in 2027 and 2032 respectively. Borealis provided a parental guarantee of USD 650,000 thousand for the full amount of the senior notes which is recognised as a financial liability of EUR 26,371 thousand. Additionally, Borealis provided a parental guarantee for a lease of railcars with maximum exposure of USD 16,619 thousand and recognised a financial liability of EUR 1,428 thousand.

On the reporting date, the Group further has financing commitments to KPP amounting to EUR 10,000 thousand (EUR 15,773 thousand) and none to Renasci (EUR 12,000 thousand). Their entitlements are dependent on the fulfilment of specific events, as defined in the underlying contracts.

As of 1 January 2021, selected Austrian entities of the Borealis Group belong to the OMV tax group and reimburse income tax payments directly to OMV Aktiengesellschaft with income tax liability to the parent company shown under Other current liabilities.

For further information in respect of dividends received from associated companies and joint ventures, please refer to note 9. For further information regarding commitments to joint ventures and associated companies, see note 21. For information regarding dividends paid, please refer to the statement of changes in equity. For details regarding the remuneration of key management personnel, please see note 14.

20230711119939

31. Commitments and Contingent Liabilities

Legal Claim Contingencies

While the Group has certain lawsuits pending, it is the Executive Board's opinion that these proceedings will not materially affect the Group's financial position.

Financial Guarantees

The Group is subject to numerous national and local tax laws and regulations concerning its sales and environmental activities. These laws and regulations may require the Group to issue guarantees to respective authorities for the Group's payment obligations. These guarantees have been provided to the extent the authorities have requested them.

The Group has committed several rental guarantees mainly for its own rental agreements. The Group will be responsible if the tenant or Borealis itself fails to pay rent or causes any damages to property. No material losses are expected to arise from such contingent liabilities.

In addition to the contractual commitments for property, plant and equipment (see note 5) and contractual obligations for additional capital contributions (see note 9 and note 30), no further significant risks and uncertainties have been identified compared to year end 2021.

32. Subsequent Events

The sale of Borealis' shares in Rosier S.A. to YILDIRIM Group's YILFERT BENELUX B.V. was completed on 2 January 2023. Following the completion of the sale, Borealis no longer holds any shares in Rosier S.A.

On 11 January 2023, Borealis further increased its stake in Renasci N.V. (Renasci) from 27.42% to 50.01%, signalling on-going confidence in the potential of Renasci's patented SCP concept to drive the circular transformation. The stake increase was reached through a capital increase of EUR 5 million and the acquisition of 35,719 shares for EUR 10,5 million. Following this transaction, Renasci will become a fully consolidated subsidiary in 2023 (2022: at-equity accounted).

Borouge 4 LLC as the borrower and Borealis AG as lender entered into a shareholder loan agreement (SHL) on 3 February 2023 in the amount of USD 1,068 million to part finance the Borouge 4 capex requirements of Borouge 4 LLC. The SHL is structured as a facility with a five-year tenor. Borealis retains the right to accelerate the prepayment of the outstanding amounts at the point of reintegration. Drawdowns under the SHL facility in the amount of USD 60 million were made by Borouge 4 LLC on 7 February 2023.

33. Subsidiaries Included in the Consolidated Accounts

Company name	Country	City	Percentage of shares owned	
			2022	2021
Borealis AG				
■ Borealis Agrolinz Melamine GmbH	Austria	Linz	100.00	100.00
■ Borealis Agrolinz Melamine Deutschland GmbH	Germany	Wittenberg	100.00	100.00
■ Borealis Argentina SRL [1)]	Argentina	Buenos Aires	100.00	100.00
■ BOREALIS ASIA LIMITED [1)]	Hong Kong	Hong Kong	100.00	100.00
■ Borealis Brasil S.A.	Brazil	Itatiba	80.00	80.00
■ BOREALIS CHEMICALS ZA (PTY) LTD [1)]	South Africa	Germiston	100.00	100.00
■ Borealis Chile SpA [1)]	Chile	Santiago	100.00	100.00
■ Borealis Chimie S.A.R.L [1)]	Morocco	Casablanca	100.00	100.00
■ Borealis Circular Solutions Holding GmbH	Austria	Vienna	100.00	100.00
■ Borealis Colombia S.A.S. [1)]	Colombia	Bogota	100.00	100.00
■ Borealis Denmark ApS [1)]	Denmark	Copenhagen	100.00	100.00
■ Borealis Digital Studio B.V. [1)]	Belgium	Zaventem	100.00	100.00
■ Borealis Financial Services N.V.	Belgium	Mechelen	100.00	100.00
■ Borealis France S.A.S.	France	Courbevoie	100.00	100.00
■■ Borealis Chimie S.A.S.	France	Courbevoie	100.00	100.00
■■■ AGRIPRODUITS S.A.S. [1)]	France	Courbevoie	100.00	100.00
■■■ STOCKAM G.I.E. [1)]	France	Grand-Quevilly	100.00	100.00
■■ Borealis L.A.T France S.A.S.	France	Courbevoie	100.00	100.00
■■ Borealis Produits et Engrais Chimiques du Rhin S.A.S.	France	Ottmarsheim	100.00	100.00
■■ Borealis Services S.A.S. [1)]	France	Paris	100.00	100.00
■ Borealis Insurance A/S (captive insurance company)	Denmark	Copenhagen	100.00	100.00
■ BOREALIS ITALIA S.p.A.	Italy	Monza	100.00	100.00
■ Borealis L.A.T GmbH	Austria	Linz	100.00	100.00
■■ Borealis L.A.T Belgium B.V. [1)]	Belgium	Beringen	100.00	100.00
■■ Borealis L.A.T Bulgaria EOOD [1)]	Bulgaria	Sofia	100.00	100.00
■■ Borealis L.A.T Czech Republic s.r.o. [1)]	Czech Republic	Budweis	100.00	100.00
■■ Borealis L.A.T doo, Beograd	Serbia	Belgrade	100.00	100.00
■■ Borealis L.A.T Greece Single Member P.C. [1)]	Greece	Athens	100.00	100.00
■■ Borealis L.A.T Hrvatska d.o.o. [1)]	Croatia	Klisa	100.00	100.00
■■ Borealis L.A.T Hungary Kft. [1)]	Hungary	Budapest	100.00	100.00
■■ Borealis L.A.T Polska sp. z o.o. [1)]	Poland	Warsaw	100.00	100.00
■■ Borealis L.A.T Romania s.r.l. [1)]	Romania	Bucharest	100.00	100.00

1) Excluded from the consolidation due to immateriality (individual and in total) // ■ subsidiary of Borealis AG // ■■ second-tier subsidiary of Borealis AG // ■■■ third-tier subsidiary of Borealis AG

20230711119440

Company name	Country	City	Percentage of shares owned	
			2022	2021
■■ Borealis L.A.T Slovakia s.r.o. [1]	Slovakia	Chotin	100.00	100.00
■ Borealis L.A.T Italia s.r.l. [1]	Italy	Milan	100.00	100.00
■ Borealis México, S.A. de C.V. [1]	Mexico	Mexico City	100.00	100.00
■ Borealis Middle East Holding GmbH	Austria	Vienna	100.00	0.00
■ Borealis Plasticos, S.A. de C.V. [1]	Mexico	Mexico City	100.00	100.00
■ Borealis Plastik ve Kimyasal Maddeler Ticaret Limited Sirketi [1]	Turkey	Istanbul	100.00	100.00
■ Borealis Plastomers B.V.	The Netherlands	Geleen	100.00	100.00
■ Borealis Poliolefinas da América do Sul Ltda. [1]	Brazil	Itatiba	100.00	100.00
■ Borealis Polyolefins d.o.o. [1]	Croatia	Zagreb	100.00	0.00
■ Borealis Polyolefins S.R.L. [1]	Romania	Bucharest	100.00	0.00
■ Borealis Polyolefins s.r.o. [1]	Slovakia	Bratislava	100.00	0.00
■ Borealis Polska Sp. z o.o. [1]	Poland	Warsaw	100.00	100.00
■ Borealis Polymere GmbH	Germany	Burghausen	100.00	100.00
■ Borealis Polymers N.V.	Belgium	Beringen	100.00	100.00
■■ Borealis Antwerpen N.V.	Belgium	Zwijndrecht	100.00	100.00
■■ Borealis Kallo N.V.	Belgium	Kallo	100.00	100.00
■ Borealis Polymers Oy	Finland	Porvoo	100.00	100.00
■ Borealis Polyolefine GmbH	Austria	Schwechat	100.00	100.00
■ Borealis Química España S.A.	Spain	Barcelona	100.00	100.00
■ Borealis RUS LLC [1]	Russia	Moscow	100.00	100.00
■ Borealis s.r.o. [1]	Czech Republic	Prague	100.00	100.00
■ Borealis Sverige AB	Sweden	Stenungsund	100.00	100.00
■■ Borealis AB	Sweden	Stenungsund	100.00	100.00
■■■ Borealis Group Services AS	Norway	Bamble	100.00	100.00
■■■ Etenförsörjning i Stenungsund AB	Sweden	Stenungsund	80.00	80.00
■■■ KB Munkeröd 1:72 [1]	Sweden	Stenungsund	100.00	100.00
■ Borealis Technology Oy	Finland	Porvoo	100.00	100.00
■ *BOREALIS UK LTD*	*UK*	*Manchester*	*100.00*	*100.00*
■ Borealis USA Inc.	US	Port Murray	100.00	100.00
■■ Borealis BoNo Holdings LLC	US	Port Murray	100.00	100.00
■■ Borealis Compounds Inc.	US	Port Murray	100.00	100.00

1) Excluded from the consolidation due to immateriality (individual and in total) // ■ subsidiary of Borealis AG // ■■ second-tier subsidiary of Borealis AG // ■■■ third-tier subsidiary of Borealis AG

	Company name	Country	City	Percentage of shares owned	
				2022	2021
■■	Star Bridge Holdings LLC	US	Port Murray	100.00	100.00
■■■	Novealis Holdings LLC	US	Port Murray	100.00	100.00
■	DYM SOLUTION CO., LTD	South Korea	Cheonan	99.75	98.71
■	Ecoplast Kunststoffrecycling GmbH	Austria	Wildon	100.00	100.00
■	Feboran EOOD	Bulgaria	Sofia	100.00	100.00
■	mtm compact GmbH	Germany	Niedergebra	100.00	100.00
■	mtm plastics GmbH	Germany	Niedergebra	100.00	100.00
■	Rosier S.A.	Belgium	Moustier	98.09	77.47
■■	Rosier France S.A.S.	France	Arras	98.09	77.47
■■	Rosier Nederland B.V.	The Netherlands	Sas Van Gent	98.09	77.47

■ subsidiary of Borealis AG // ■■ second-tier subsidiary of Borealis AG // ■■■ third-tier subsidiary of Borealis AG

For further details relating to discontinued operation and other changes in the legal structure during the financial year 2022, please see note 8.

20230711199941

34. Auditor's Fees

The following fee information relates to the auditors of the Group (including their related networking firms):

EUR thousand	2022	2021
Audit of Borealis AG's subsidiaries	1,273	1,123
Audit of consolidated and standalone financial statements of Borealis AG	415	351
Other assurance services	578	368
Tax consulting services	106	702
Other services	595	0
Total	**2,967**	**2,544**

The following fees for 2022 relate to the Group auditor, PwC Wirtschaftsprüfung GmbH, Vienna, Austria: audit of Borealis AG's subsidiaries amounting to EUR 239,078 (EUR 227,200), audit of consolidated and standalone financial statements of Borealis AG amounting to EUR 415,203 (EUR 351,100) and other assurance services amounting to EUR 440,596 (EUR 249,174).

35. Executive Board and Supervisory Board

Executive Board
Thomas Gangl (Chairman), Mark Tonkens, Wolfram Krenn, Philippe Roodhooft, Lucrèce De Ridder

Supervisory Board
Alfred Stern (Chairman), Musabbeh Al Kaabi (Vice Chairman until 9 February 2022), Saeed Al Mazrouei (Vice Chairman from 10 February 2022 to 8 November 2022), Khaled Salmeen (Vice Chairman since 10 November 2022), Reinhard Florey, Martijn Arjen van Koten, Alvin Teh (Member from 10 February 2022 to 8 November 2022), Khaled Al Zaabi (Member since 10 November 2022)

Vienna, 22 February 2023
Executive Board:

Thomas Gangl m.p.
Chief Executive Officer

Mark Tonkens m.p.
Chief Financial Officer

Wolfram Krenn m.p.
Executive Vice President
Base Chemicals & Operations

Philippe Roodhooft m.p.
Executive Vice President
Joint Ventures & Growth Projects

Lucrèce De Ridder m.p.
Executive Vice President
Polyolefins, Circular Economy Solutions
and Innovation & Technology

Statement of the Executive Board according to Section 124(1)(3) of the Vienna Stock Exchange Act

20230711119942

We confirm to the best of our knowledge that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group as required by the applicable accounting standards and that the Group Management Report gives a true and fair view of the development and performance of the business and the position of the Group, together with a description of the principal risks and uncertainties the Company faces.

Vienna, 22 February 2023
Executive Board:

Thomas Gangl m.p.
Chief Executive Officer

Mark Tonkens m.p.
Chief Financial Officer

Wolfram Krenn m.p.
Executive Vice President
Base Chemicals & Operations

Philippe Roodhooft m.p.
Executive Vice President
Joint Ventures & Growth Projects

Lucrèce De Ridder m.p.
Executive Vice President
Polyolefins, Circular Economy Solutions
and Innovation & Technology

Report of the Supervisory Board of Borealis AG

In the year under review, the Supervisory Board received a comprehensive overview of the activities of the Executive Board of Borealis AG and performed its duties and exercised its powers under the law and the Articles of Association in seven plenary sessions.

The Executive Board informed the Supervisory Board regularly, in a timely fashion and comprehensively, both in writing and verbally, on all the relevant issues of business development as well as on the state and strategy of the Company and the important group companies, including risk conditions and risk management.

The Executive Board of Borealis AG submitted the financial statements as of 31 December 2022, including the management report, and the consolidated financial statements as of 31 December 2022, including the Group management report, and the consolidated non-financial report to the Supervisory Board and explained it thoroughly.

The financial statements of Borealis AG have been prepared in accordance with the applicable provisions of the Austrian Commercial Code ("Unternehmensgesetzbuch"), and PwC Wirtschaftsprüfung GmbH issued the unqualified audit opinion ("uneingeschränkter Bestätigungsvermerk") on the financial statements.

Further, the consolidated financial statements of Borealis AG have been prepared in accordance with the International Financial Reporting Standards (IFRS), and PwC Wirtschaftsprüfung GmbH issued the unqualified audit opinion ("uneingeschränkter Bestätigungsvermerk") on the consolidated financial statements.

The (consolidated) financial statements documents, the consolidated non-financial report and the audit reports were submitted to the Audit Committee and the Supervisory Board in due time. After a thorough examination and discussion by the Audit Committee and by the Supervisory Board with the auditors, the Supervisory Board reached the final agreement that no material objections would be raised, and the drawn up financial statements, the management report, the proposal for the appropriation of the retained earnings, the proposal for the appointment of the auditor for the financial year 2023, the consolidated financial statements, the Group management report and the consolidated non-financial report were approved/acknowledged.

Vienna, 28 February 2023

Alfred Stern m.p.
Chairman of the Supervisory Board

Table of Figures

Number	Name	Page
1	Chemical production flow	28
2	Industries served by Borealis' polyolefins applications	30
3	Results from the Materiality Assessment 2019	41
4	Borealis' Strategic Sustainability Framework	43
5	Stakeholder engagement	45
6	EU policy initiatives affecting Borealis' business	50
7	ESG Governance Structure – Group functions responsible for the management of sustainability aspects	59
8	ESG Governance Structure – Committees & Councils responsible for management of sustainability aspects	60
9	Regulation classes and their hierarchy	64
10	The Borealis Management System	65
11	ESG risk and opportunity assessment categories	67
12	Courses completed by employees in 2022	75
13	E-learning schedule	75
14	People and Culture Strategy	77
15	Average hours of training by gender & by employee category in 2022	80
16	Percentage of total employees by gender and by employee category who received a regular performance and career development review	80
17	Ratios of standard entry level wage by gender compared to local minimum wage in 2022	81
18	Ratio of salary and remuneration of women to men in 2022	82
19	Benefits provided to employees in 2022	83
20	Parental leave in 2022	84
21	Total number of employees by employment contract (permanent or temporary) by gender & by region/ and total number of employees by employment type (full-time or part-time) by gender & by region in 2022	84
22	Percentage of employees by employee category & by gender & by age in 2022	86
23	Percentage of new hires/turnover by gender & by region & by age in 2022	87
24	Total number of non-employees per region in 2022	88
25	Proportion of senior management hired from the local community in 2022	88
26	Share of taxonomy-aligned investments	101
27	CAPEX plan	101
28	Share of eligible and non-eligible economic activities of the Borealis Group 2022	102
29	Share of aligned and non-aligned economic activities of the Borealis Group 2022	102
30	Workers covered by an occupational health and safety management system	104
31	Part of the body harmed between 2020 and 2022	107
32	Health & Safety performance indicators 2018–2022	108
33	Borealis' Loss of Primary Containment Pyramid	112

20230711119944

Number	Name	Page
34	Process Safety performance indicators 2018–2022	113
35	Borealis' integrated approach is embodied in the Circular Cascade Model	120
36	Overview of Borealis' Circular Economy landscape	124
37	Borealis HC&E and PO GHG according to Greenhouse Gas Protocol for 2019–2021	128
38	Total energy consumption per source in 2022	129
39	Total energy consumption per product group in 2022	130
40	Total fuel consumption per source in 2022	130
41	Polyolefins production energy intensity 2018–2022	131
42	Hydrocarbons production energy intensity 2018–2022	131
43	Fertilizers, Melamine and TEN production energy intensity 2018–2022	131
44	Borealis Fertilizers, Melamine and TEN greenhouse gas emissions according to Greenhouse Gas Protocol for 2019–2021	132
45	Reduction of GHG emissions	133
46	GHG emission intensity	133
47	Flaring performance 2018–2022	138
48	Borealis' water withdrawal by source in 2022	139
49	Borealis' water withdrawal from locations with water stress by source in 2022	140
50	Borealis' water discharge by waterbody in 2022	140
51	Waste treatment in 2022	141
52	Non-hazardous waste treatment in 2022	141
53	Hazardous waste treatment in 2022	141
54	Waste treatment comparison between 2021 and 2022 for all total waste, all treatments and the ratio of hazardous and non-hazardous waste	142
55	Key environmental performance indicators 2018–2022	144
56	Feedstock sourced for production of olefins and polyolefins (kt) 2018–2022	146
57	Feedstock sourced for production of fertilizers, melamine and TEN (GWh) 2018–2022	146
58	Proportion of spending on local suppliers in 2022	150
59	Negative environmental impacts in the supply chain	151
60	Negative social impacts in the supply chain	151
61	Packaging consumption based on 1,000 kg of fertilizers sold (kg) 2020–2022	152
62	Packaging consumption based on 1,000 kg of polyolefins sold (kg) 2020–2022	152
63	Total transported volumes per business segment in 2021–2022	155
64	Logistics Incidents	157
65	Borealis' CO_2 emissions by mode of transport in 2022, according to the Global Logistics Emission Council framework (t)	158

ESG Risks and Opportunities

The table below summarises the significant risks and opportunities of Borealis' activities on sustainability matters (according to the NaDiVeG), including climate change (according to TCFD), and the mitigation measures in place.

Material Topic (NaDiVeG)	**Sub-topic**	**Risk Description**
Health & Safety		
Employee-related matters, social matters	**Occupational Health & Safety**	**Outside-in** **COVID Pandemic** If extensive measures are not taken against global pandemics such as COVID-19, employees and workers may be exposed to significant short and long-term physical and mental health risks, leading to labour unavailability due to increased sick leave. This may impact Borealis' manufacturing capacity and timely supply to its customers, as well as resulting in other business disruptions, ultimately impacting Borealis' profit and cash flows.
Employee-related matters, social matters	**Occupational Health & Safety**	**Inside-out** **Impact on people's health and safety** Chemical operations involve highly flammable, toxic and hazardous substances that could pose a significant risk to employees if not handled correctly. Ensuring occupational health and safety is therefore the number one priority for Borealis. **Outside-in** **Legal requirements and restrictions** There is a tendency towards stricter exposure limits for hazardous chemicals in the workplace, which will require additional investments.
Employee-related matters, social matters	**Chemicals Safety**	**Inside-out** **Health and environmental impact** If they are not handled properly and according to their intended use, chemical substances can lead to unintentional health impacts. Unintentional release of chemical substances can cause environmental pollution, leading to regulatory and compliance breaches, as well as to loss of reputation and image. **Outside-in** **Increased costs and product bans** Possible future regulations could increase complexity and the costs of ensuring regulatory compliance. Emerging and more stringent EU regulation might also lead to bans and/or restrictions on chemicals, making investments and R&D necessary to replace certain substances with alternatives.

20230711119945

Opportunity Description	Examples of Measures
– **Increased resilience and flexible working environment** The pandemic has demonstrated Borealis' agility and flexibility in adapting to the situation. Digital technologies have enabled faster and easier processing of approvals, contract management and invoicing, and enabled more flexible working. – **Reduction of CO_2 emissions** The switch to home working and no business travel reduced costs and related CO_2 emissions. – **Business opportunities** Borealis was extremely flexible in adjusting its production processes to reflect changes such as increased demand for medical supplies and started to produce a new product, filtration media fabrics for reusable FFP2 face masks.	– COVID crisis team coordinating mitigation actions – Group-wide "Discover Resilience Together" initiative focused on mental, physical and social wellbeing – Preventive measures to ensure continuity of supply, both in-bound and out-bound; and measures to balance and avoid staff vacancies, such as a rotating back-up system and strict separation of shifts, hygiene measures, a process for handling actual or suspected cases, offering vaccinations and/or test kits, and behaviour
– **Strong safety culture and good place to work** Borealis can increase employee engagement if its employees feel safe at work, while healthier employees are likely to perform better and have higher satisfaction. A strong safety culture can reinforce Borealis' reputation as a responsible company and, combined with continuous awareness-raising campaigns, can also improve employees' safety behaviour in their private lives.	– Incident prevention through risk management tools; awareness campaigns; safety training; regular audits – HSE management system designed for prevention – Chemical exposure monitoring, physical examinations, periodic screenings and evaluations – Health initiatives addressing e.g. back pain, blood pressure and weight management; providing on-site flu vaccinations; stress prevention activities; help to quit smoking – Regular workplace health surveys
– **Competitive advantage** If Borealis anticipates legislative changes and reacts in time, this can provide a competitive advantage, such as being the first to market with alternative solutions.	– Signatory of the chemical industry's Global Charter for Responsible Care®; – Product Stewardship Council evaluates all substances the Group uses, defines risk mitigation measures and ensures products going into regulated applications such as food contact or medical applications are fully in line with applicable legislation and standards – All new and changed raw materials and products assessed in terms of classification and labelling, and Safety Data Sheets and workplace safety cards prepared for all classified materials – Going beyond legal compliance, for example, replacing ADCA in cable solutions and halogen-free cable compounds

Material Topic (NaDiVeG)	**Sub-topic**	**Risk Description**
Emergency Governance		
Employee-related matters, social matters	**Process Safety**	⊂ **Inside-out** **Environmental pollution and impact on human health** Sudden and uncontrolled release of explosive material, e.g. due to vessel or tube ruptures, could lead to major explosions. Failure of process equipment could result in the uncontrolled release of harmful toxins into the community. Process safety incidents have a direct link to employee health and safety as well as lost working time and damage to assets, both of which could affect the Group's ability to supply its customers, and its profitability and performance. **Asset integrity** Borealis' operations are heavily focused on improving their reliability, as production interruptions are the main cause of unplanned activities such as flaring, which in turn impact the Group's environmental performance and GHG emissions. ⊃ **Outside-in** **Legal requirements and inspections by authorities** There is a tendency towards stricter inspections by authorities and increasing legal requirements.
Responsible Sourcing		
Environmental matters, respect for human rights, social matters	**Logistics/ Transportation**	⊂ **Inside-out** **Safety of people and transported goods** The Group faces a number of transportation safety risks, in particular potential accidents and spills, as well as smoking, speeding, alcohol use and a severe incident on the road. ⊃ **Outside-in** **Increasing transportation costs** Costs for Borealis may increase in the future due to stronger regulation of vessel and road transportation and higher CO_2 prices for fuels. Marine shipping typically relies on HFO (biofuel) for transport. *TCFD risk type classification: transitional – market*
Environmental matters, respect for human rights, social matters	**Compliance with Borealis Ethics Policy**	⊂ **Inside-out** / ⊃ **Outside-in** **Non-Compliance with Human Rights Principles** Poor labour practice in the supply chain, such as forced labour, human trafficking, wages below standards or child labour, as well as non-compliance with Borealis' Ethics Code of Conduct can lead to severe and long-lasting impact on workers' physical and mental health as well as damage to Borealis' reputation, potential legal liability, demoralisation of the Group's employees, business loss and disruption of business and/or production continuity.

20230711119946

Opportunity Description	Examples of Measures
– Competitive advantage If Borealis maintains safe and continuous plant operation, this can provide a competitive advantage, such as being a reliable business partner and neighbour.	Stringent measures to prevent and mitigate process safety incidents, such as – regular inspections to ensure the integrity of installations – process safety trainings – awareness campaigns – critical inspection plans – regular testing of the functionality of safety devices and instrument protection loops – regular deep dives in the Process Safety Committee – audits and performance measurement via clear safety indicators
– Reduction of GHG Emissions Marine shipping typically relies on HFO (a biofuel) for transport. By creating options for alternative fuels (ethane, propane and biofuels), the Group can reduce its carbon footprint. In road transport, HVO can be introduced as an alternative to diesel or gasoline. *TCFD opportunity type classification: resilience*	**Actions include, for example** – Logistic partners are either SQAS qualified, certified by maritime or other qualification bodies, or are being qualified via the EcoVadis assessment, – HC&E fleet's safety performance and energy efficiency tracked and environmentally friendly solutions promoted – Regular vetting inspections on sea-going tankers and inland barges – Actions taken to move transport from road to intermodal or internal waterways – Requirement for all logistics partners to report accidents – Extra-high precautionary safety measures in place and followed up with supply chain contractors to mitigate the risks of spills – Drivers transporting dangerous goods require special licence and training, and operate under restrictions
– Resilience, trust and reputation An applied strong ethics culture can enhance the Group's reputation, avoid financial and reputational damage, increase Borealis' profitability and increase engagement of employees. A strong commitment to compliance and ethics and non-acceptance of misconduct leads to a consistent and trustworthy relationship with business partners.	– Ethics Policy requires all Borealis business partners, including suppliers and contractors, to strictly observe human rights-related requirements – Ethics Policy mandates thorough compliance due diligence and ongoing monitoring of all business partners, and includes sustainability *performance and KPIs in contract-awarding criteria* – Human Rights Country Entry Check conducted before launching operations in a country, as well as regular human rights assessments in countries of operation, including labour rights aspects – Human rights aspects (including labour rights) included in the pre-qualification phase and supplier/contractor audits

Material Topic (NaDiVeG)	**Sub-topic**	**Risk Description**
Responsible Sourcing		
Environmental matters, respect for human rights, social matters	**Supply chain**	**⮌ Inside-out / ⮊ Outside-in** **GHG Emissions** The carbon footprint arising from the services and materials Borealis purchases substantially increase the Group's total carbon footprint, which may put its ability to achieve its climate change targets at risk, potentially leading to a financial impact and not being acknowledged as a sustainable business partner. Suppliers with a significant carbon footprint who fail to improve will lose their attractiveness to Borealis as preferred suppliers. *TCFD risk type classification: transitional – reputation* **⮊ Outside-in** **Disruption of supply chain** Climate change leads to physical impacts on Borealis' supply chain. Low water levels in inland waterways can impact supply chains, especially for riverine transportation. *TCFD risk type classification: physical*
Economic Impacts and Business Principles		
Corruption prevention, environmental concerns	**Compliance with Borealis Ethics Policy**	**⮊ Outside-in** **Corruption** As a large organisation which does global business and which is partially state-owned, Borealis is exposed to increased risk of corruption. Corruption-related convictions can lead to significant fines and serious reputational damage for Borealis. **Environment** Non-compliance with environmental, emissions and water laws and regulations may result from unexpected changes or different interpretations of the legislation.
Circular Economy		
Environmental matters	**Compliance with Borealis Ethics Policy**	**⮌ Inside-out** **Environmental pollution and socio-economic impact** Plastic waste, if not collected, sorted and disposed of properly, can end up in the environment, causing environmental pollution, harming animals and ultimately ending up as microplastics in drinking water and food. Environmental pollution impacts economic development and tourism, and puts jobs at risks in certain industries, such as the fishery industry. The costs to society from plastic pollution, including environmental clean-up and ecosystem degradation, are estimated to exceed USD 100 billion per year, according to research published by Minderoo. **⮊ Outside-in** **Uncertainties regarding new legislation** New laws and regulations currently under development make long-term investments difficult and risky. Innovation and new technology development need substantial time, which is typically longer than in other industries. Planned CAPEX projects could be delayed, limiting Borealis' volume scale-up and impacting its ability to achieve its circular economy targets in the set time.

20230711119947

Opportunity Description	Examples of Measures
– Reducing Scope 3 emissions Together for Sustainability provides opportunities to collaborate with other chemical companies and take the first steps to standardise supply chain carbon footprint data. More standardised data can provide a better picture of the actual emissions, in order to target reductions effectively. Borealis is also starting different collaboration projects with suppliers to reduce its Scope 3 carbon footprint. *TCFD opportunity type classification: resource efficiency*	– Sustainable procurement targets – Increasing supplier engagement through CDP and Together for Sustainability, via OMV – Increasing transparency through reporting, including Scope 3 – Supplier audits and evaluations, as part of Together for Sustainability and EcoVadis – Sustainability performance included as part of Borealis' contract-awarding criteria – Digital solutions for data collection and measurement
– Increase robustness of supply chain Borealis can create a more robust supply chain by working with professional and more local suppliers, who manage their own risks proactively. Applying a risk management process in collaboration with strategic suppliers can give a long-term competitive advantage.	
– Resilience and reputation Continuous engagement in preventing breaches of Borealis' Ethics policy increases the Group's resilience to corruption and strengthens its legal compliance, leading to increased confidence on the part of external stakeholders and an enhanced reputation as an ethical company	– Corruption risk mitigated through a compliance-management system, certification to ISO 37001 (Anti-Bribery Management System), continuous awareness-raising campaigns and training for the entire workforce, and additional training for employees who are specifically exposed to corruption and/or compliance risks – Environmental compliance risks mitigated through engagement with regulators to ensure laws are correctly interpreted and upheld, process safety measures and maintenance, continuous training of staff and implementation of best available technologies
– EU Green Deal drives transformation The EU Green Deal may have a positive impact on Borealis, as the Group provides solutions for a transition to a circular economy, in sectors such as electrification of the transport industry, the medical industry, the packaging industry, wind and solar farms, or the use of phosphorus from waste streams in the production of fertilizers. **– Business Opportunities** Borealis is taking the opportunity to lead the transformation to a circular economy and has established an integrated approach to circularity, offering a broad range of circular product solutions. As the market grows and legislative standards change in favour of renewable materials, Borealis aims to increase its profits and market shares in such product groups. *TCFD opportunity type classification: Markets, resource efficiency*	– Range of low-emission and bio-based product portfolios: Bornewables™, Borvida™, and Borcycle™ M. – Collaboration with industry partners and public funding opportunities, to jointly develop and scale up innovation, technologies, products and digitalisation, and accelerate action and solutions including feedstock sourcing programmes for plastic waste, bio-based feedstock and renewable oil – Project STOP programme to support cities in Indonesia to develop and implement low-cost, circular waste collection and sorting systems, thereby reducing waste leakage and increasing resource efficiency

Material Topic (NaDiVeG)	**Sub-topic**	**Risk Description**
Circular Economy		
Environmental matters	**Compliance with Borealis Ethics Policy**	**Outside-in** **Limited availability of renewable feedstock** There is not currently enough renewable feedstock available at an affordable price. This may impact Borealis' ability to achieve its recycling targets. *TCFD risk type classification: transitional – policy & legal* **Product bans or restrictions** There is a risk that Borealis is unable to respond in time with alternative solutions, resulting in it losing market share and an adverse impact on Borealis' reputation and image.
Human Capital Development		
Employee-related matters, social matters	**Employer attractiveness**	**Outside-in** **Difficulty of attracting, retaining and replacing qualified personnel** The chemicals industry is facing shortfalls of experienced technical professionals over the next several years, due to attrition and retirement. This might lead to key functions not being filled or with short handover periods, leading to the risk of plants not being able to operate reliably or business declining. **Inside-out** **Job security** Crises such as COVID-19 or the Ukraine war are creating insecurity and uncertainty. As a large employer in a steady industry, Borealis has the position and means to ensure job security for its employees.
Employee-related matters, social matters	**Diversity, Equity & Inclusion (DE&I)**	**Outside-in** **Integrating societal values into corporate values and actions** Employees, and in particular the younger generation, have clear expectations that companies will focus on DE&I and they take this into account in deciding who to work for.
Environmental Management		
Environmental matters	**Water quality**	**Outside-in** **Increasing regulatory requirements** Changes to regulations, such as the scope of BREF LVIC being extended to water emissions, could lead to increased financial and administrative burdens on Borealis. **Inside-out** **Negative environmental impact** Soil and groundwater pollution could affect the environment, biodiversity and the local community.
Environmental matters	**Water availability**	**Outside-in** **Water usage permission reduction** Insufficient water availability due to climate change could lead to a reduction in the legal permit levels for water extraction, impacting Borealis' operations. Low water levels in rivers could lead to restrictions on transporting products by rivers. **Inside-out** **Conflicts between water users** Temporary water scarcity could lead to conflicting water use and distribution.

20230711994S

Opportunity Description	Examples of Measures
See below under material topic Environmental Management	See below under material topic Environmental Management
– **Driving transformation** *Borealis' focus on the circular economy means it has entered a new era,* with the ability to attract a new group of candidates who are motivated to be part of this transformation journey.	– Promoting Borealis' transformation and focus on people, with the new *People & Culture strategy* – Recruitment campaign, including for example a series of videos accompanying employees on a typical day at work – Employee referral bonus motivates existing employees to refer people they know – Flexible and home working arrangements – Focus on wellbeing, personal needs and health, offering medical services, such as massages and vaccinations – Training and development programmes, to focus on individual career steps and future job satisfaction
– **Employer attractiveness** Awareness of DE&I and implementing associated activities strengthen Borealis' culture and respectful relationships among colleagues, have a direct impact on engagement, retention and wellbeing, make Borealis an employer of choice and support co-operation throughout the Group.	– DE&I KPI included in the Group Scorecard – Actions to increase awareness and provide role models through the "It's in our DNA!" video series – DE&I ambassador network to actively advocate the right mindset on this topic
– **Water efficiency** Increasing water recycling will lead to greater resource efficiency and less dependency on external water sources. It will also help the Group to overcome the burden of ever-more stringent water emission levels, as emission limits are only applied at the point of discharge, which does not occur when the water is recycled.	– Systematic annual risk and opportunity assessments for every plant, followed by action plans – Continuous improvement to the quality of discharged water, through filtration, neutralisation, osmosis, gravimetric and biological wastewater treatment – Water management plans being developed and implemented – Roadmap for 2025 and 2030 being built, with concrete targets
– **Resource efficiency and resilience** Increasing Borealis' water efficiency will lead to greater resource efficiency and make the Group more resilient in any future water crisis.	– Use of recycled water and increasing reuse of water where feasible, such as using recycled water or rainwater in some cooling towers – Discharge of used water into the same water body it was drawn from – Water management framework being implemented – Wastewater flows and contaminants monitored – Alternative shipping options being evaluated – Storage capacities and locations being evaluated

Material Topic (NaDiVeG)	**Sub-topic**	**Risk Description**
Environmental Management		
Environmental matters	**Operational waste**	**Outside-in** **Circularity challenges to be solved** Revisions of the EU Waste Framework Directive and the Packaging Waste Directive will significantly drive the transformation towards a circular economy. This provides great opportunities but comes with uncertainties and costs. Reusable transport systems for chemicals, especially dangerous chemicals, are mostly unavailable. Returning reusable systems either requires significant cleaning (increasing water use) or additional transport. **Inside-out** **Environmental pollution** Operational waste, if not treated and disposed of properly, could end up in the environment, causing pollution and a health and safety impact on the local community.
Environmental matters	**Air quality**	**Outside-in** **Increasing regulatory requirements** With the publication of WGC BREF, PO plants will face stringent requirements for waste gas handling and emissions to air, requiring investments and a significant increase in OPEX. Other increasing regulatory requirements include the new BREF LVIC for fertilizer production. **Inside-out** **Additional air emissions caused by unplanned events** If plants do not operate according to engineered process levels, unplanned emissions to air can occur, resulting in noise, odour and other disturbances to the local community, and an impact on air quality. *TCFD risk type classification: transitional – policy & legal*
Environmental matters	**Spills** (Pellet loss)	**Outside-in** **Regulatory restrictions** The presence of plastic waste and microplastic in the environment has increased the negative public image of plastics and the industry. Upcoming EU restrictions on microplastics under REACH will apply to industrial pellets, with mandatory supply chain and reporting obligations for Borealis, leading to increased costs and administrative burden. **Inside-out** **Health, safety and environmental impact** The presence of microplastics in the environment, food and the human body is a major concern. Unintentional loss of plastic pellets is also a safety issue and can result in environmental pollution, with microplastics ultimately ending up in soil, ground water, rivers and seas, where they can harm biodiversity, marine species and potentially even human health.
Climate Change		
Environmental matters	**Operations**	**Outside-in** Climate change leads to physical impacts on Borealis' operating sites. Flooding can lead to plant damage and droughts and the consequent unavailability of cooling water can reduce plant output. Borealis sites located by the sea might be affected by an increase in sea level **Inside-out** Emissions caused by Borealis' operations and activities in its value chain contribute to climate change. Important contributors are emissions from feedstock and end-of-life emissions of Borealis' products.

20230711119949

Opportunity Description	Examples of Measures
– **Resource efficiency and new business models** Closing the loop will keep precious resources in use and lead to new business models and applications. Overall, it will reduce resource intensity and in many areas it will also reduce the environmental impact.	– 4R rules followed: reduce, reuse, recycle and recover – Waste production monitored and controlled, based on legal requirements and ISO 14001 – Waste management plans for each site – Integrated manufacturing processes – Co-products that cannot be reused and recycled where possible – Waste used as material in Borealis' recycling plants – Non-recyclable waste made available as a secondary fuel for steel or cement production
– **Improved plant reliability** Improving the reliability of Borealis' operations, and thus their operability and profitability, helps improve environmental and operational performance. *TCFD opportunity type classification – resource efficiency*	– Quality management procedures, to prevent and remediate any unplanned emissions – Proactive risk management – Cross-learning of best practices – Speed of leak detection and repair being increased – Reliability being improved, to reduce production interruptions and further reduce emissions – Compliance with the Emission Directive for Fertilizers and the revision of BREF LVIC – Ensuring compliance with WGC BREF
– **Taking a leadership role** Borealis has taken a leadership role in the industry on mitigating the risk of pellet spills, promoting Operation Clean Sweep® along the value chain and contributing to further strengthening the programme. This has been positively acknowledged by the industry, NGOs and authorities, contributing to Borealis' positive image and reputation. – **Increasing occupational safety and resource efficiency** Reducing pellet spills ultimately increases occupational safety, as well as reducing operational waste.	– Implemented OCS, a programme to prevent pellets and powder leaking – Developed and implemented an OCS self-assessment – Piloted OCS third-party certification scheme – Continuous improvements to operational excellence through awareness-raising, training, reinforcing work practices and behaviours, and investing in retention measures, such as sieves, pellet separators, skimmer ponds and filtration units, based on best available
– **Securing market position** Future business will be based on carbon-neutral production and sustainable products. Being a leader in driving the transition towards climate neutrality will secure Borealis' position in the market	– Transformation to circularity will significantly reduce GHG emissions in Borealis' value chain – Ambitious medium-term target to keep Scope 1 and 2 emissions below 2 million tonnes in 2030, as key step towards climate-neutral operations in 2050 – Changing to renewable power will significantly reduce Borealis' Scope 2 emissions

Material Topic (NaDiVeG)	**Sub-topic**	**Risk Description**
Climate Change & Energy Management		
Environmental concerns	**Carbon Reduction and Pricing**	➲ **Outside-in** **Risk of not achieving reduction targets** If Borealis is not able to transition towards low-carbon production quickly enough to achieve the aims of the Paris agreement, in alignment with the latest climate science, this could result in loss of business, permits and reputational damage. **Increased costs for CO_2 certificates** Large parts of Borealis' business are included in the EU Emission Trading Scheme (ETS). CO_2 certificates are traded in the marketplace and their price is subject to supply and demand. Under the assumption that to meet EU climate targets the costs of CO_2 emissions will increase, Borealis' expenditure for buying certificates will increase in the future. **Reputational risk and product bans** The chemicals industry is one of the largest and most diversified industries in Europe and is a significant emitter of GHGs. This could affect Borealis' image and potentially lead to a shift of consumer preferences to alternative materials. Borealis also expects more stringent legislation and obligations, reflected in higher taxes or even banning products that have a climate impact during their lifetime. ➲ **Inside-out** **Climate impact** Borealis' operations result in direct CO_2e emissions that contribute to climate change. Borealis also consumes externally generated energy that has a climate impact when produced. *TCFD risk type classification: transitional – reputation, policy & legal, reputation*
Environmental concerns	**Energy Efficiency & Energy Transition**	➲ **Outside-in** **Pressure on use of fossil-based feedstock** The transition to a low-carbon economy requires the installation of renewable energy sources. Costs for renewable energy are decreasing but demand for renewables is increasing. With supply not following the same trajectory as demand, this may lead to higher operating costs. Significant technology step-ups, such as electrification of crackers, will increase the electricity demand and may further tighten the demand-supply balance for renewable electricity. Failing to improve energy efficiency could result in higher costs, as a result of uncertainties concerning allowance demand and abatement costs, as well as energy consumption. *TCFD risk type classification: transitional – market*

20230711119950

Opportunity Description	Examples of Measures
– **Market opportunities** Implementing alternative technologies (such as electrification), bio-feedstock and increasing the circularity of plastics will reduce Borealis' direct carbon emissions. This could give Borealis market advantages and increase its market share, due to reduced costs for CO_2 certificates under EU ETS. Driving energy efficiency improvements will lower Borealis' energy consumption and contribute to its climate targets *TCFD opportunity type classification: markets*	– Climate Strategy 2030 in place, with clear targets for Scope 1 and 2 emissions, renewable energy sourcing and energy efficiency – Actions such as carbon capture and use/storage initiatives, including the Antwerp@C and Schwechat CCU development projects and "Carbon2ProductAustria" (C2PAT) – Farmers helped to optimise their fertilizer use, given that the biggest GHG impact in the fertilizer business is during the use phase
– **Cost and emission reductions** Borealis is a significant user of energy, so implementing energy efficiency improvements should lead to substantial annual cost reductions. Shifting to renewable energy will also significantly reduce the impact of Borealis' operations on the climate. *TCFD opportunity type classification: resource efficiency*	– Ambitious energy roadmap in place, with energy efficiency improvements and increasing renewable energy supplies, to reach 100% renewable electricity sourcing by 2030 – Initiatives under way to electrify steam cracker furnaces (2030 to 2040), such as the Cracker of the Future consortium – Tools to run plants as optimally as possible, such as introducing an Energy Trend Board, which helps operators continuously focus on energy consumption

Overview of Material Topics

This overview provides the link between the material topics, the respective chapters in this report, and the sustainability aspects according to the "Nachhaltigkeits- und Diversitätsverbesserungsgesetz" (NaDiVeG), the Austrian law on non-financial reporting based on the respective European Non-Financial Reporting Directive.

Sustainability Focus Area	**Material topic**	**Chapter of reference**	**Non-financial matters** according to NaDiVeG	**UNGC**
Core focus areas for acceleration	Climate Change	Energy & Climate, Environmental Management	Environmental matters	7, 8
	Circular Economy	Circular Economy	Environmental matters	9
	Plastic Waste & Management	Circular Economy, Environmental Management	Environmental matters	7, 8
	Product Sustainability	Product Safety, Sustainability Management, Procurement	Environmental matters, social matters	-
Areas that are important to monitor	Responsible Sourcing	Logistics, Procurement of Feedstock, Electricity & Utilities, Procurement of Raw Materials, Packaging and Technical Supplies	Environmental matters, respect for human rights, social matters	1, 2
	Innovation Management	Innovation	Social matters, environmental matters	9
	Product Safety	Product Safety	Environmental matters, social matters,	-
	Digital Transformation	Digital Transformation	Social matters	-
Local issues	Air Quality	Environmental Management	Environmental matters	7, 8
	Water Management	Environmental Management	Environmental matters	7, 8
	Health & Safety	Process Safety, Occupational Health and Safety, Product Safety	Employee-related matters	-
	Energy Management	Energy & Climate, Environmental Management	Environmental matters	7, 8
	Ethics	Ethics & Compliance	Anti-corruption and bribery, respect for human rights	1, 2, 4, 5, 10
Licence to operate	Diversity & Equal Opportunities	Our People	Employee-related matters	6
	Human Capital Development	Our People	Employee-related matters	3, 4, 5, 6
	Ethics & Compliance	Ethics & Compliance	Ethics and Compliance matters	-
	Stakeholder Engagement	Sustainability Management, Stakeholder Management	Social matters	-
	Emergency Governance	Process Safety, Corporate Governance	Employee-related matters, social matters	-

20230711199511

EU Taxonomy KPIs

Environmental goal – climate change mitigation

In EUR mn.	2022					
	Turnover		CAPEX		OPEX	
Environmentally sustainable (taxonomy-aligned) activities	–	0.0%	205	16.1%	–	0.0%
Taxonomy-eligible, but not taxonomy-aligned activities	7,761	85.4%	950	74.4%	204	89.4%
Taxonomy-non-eligible activities	1,324	14.6%	121	9.5%	24	10.6%
Total	**9,085**	**100.0%**	**1,276**	**100.0%**	**228**	**100.0%**

In EUR mn.	2021					
	Turnover		CAPEX		OPEX	
Taxonomy-eligible activities	7,201	83.8%	626	89.6%	203	90.6%
Taxonomy-non-eligible activities	1,391	16.2%	72	10.4%	21	9.4%
Total	**8,592**	**100.0%**	**698**	**100.0%**	**224**	**100.0%**

Proportion of turnover from products or services associated with economic activities that qualify as environmentally sustainable under Articles 3 and 9 of the Taxonomy Regulation – disclosure covering year 2022

				Substantial contribution criteria						
Economic activities (1)	Code(s) (2)	Absolute turnover (3)	Proportion of turnover (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water and marine resources (7)	Circular economy (8)	Pollution (9)	Biodiversity and ecosystems (10)	
		In EUR mn.	In %	In %	In %	In %	In %	In %	In %	
A. Taxonomy-eligible activities										
A.1 Environmentally sustainable activities (Taxonomy-aligned)										
		–	–	–	–	–	–	–	–	
Turnover of environmentally sustainable activities (Taxonomy-aligned) (A.1)		–	–	–	–	–	–	–	–	
A.2 Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)										
Manufacture of organic base chemicals	3.14.	1,172.3	12.9							
Manufacture of plastics in primary form	3.17.	6,584.9	72.5							
Material recovery from non-hazardous waste	5.9.	3.8	–							
Turnover of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**7,761.0**	**85.4**							
Total (A.1 + A.2)		**7,761.0**	**85.4**							
B. Taxonomy-non-eligible activities										
Turnover of Taxonomy-non-eligible activities (B)		1,324.0	14.6							
Total (A + B)		**9,085.0**	**100.0**							

20230711119952

	DNSH criteria (Does not significantly harm)										
	Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Taxonomy-aligned proportion of turnover 2022 (18)	Taxonomy-aligned proportion of turnover 2021 (19)	Category (enabling activity) (20)	Category (transitional activity) (21)
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	In %	In %	E	T
								–			
								–			

Proportion of CAPEX from products or services associated with economic activities that qualify as environmentally sustainable under Articles 3 and 9 of the Taxonomy Regulation – disclosure covering year 2022

				Substantial contribution criteria						
Economic activities (1)	Code(s) (2)	Absolute turnover (3)	Proportion of turnover (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water and marine resources (7)	Circular economy (8)	Pollution (9)	Biodiversity and ecosystems (10)	
		in EUR mn.	in %	in %	in %	in %	in %	in %	in %	
A. Taxonomy-eligible activities										
A.1 Environmentally sustainable activities (Taxonomy-aligned)										
Manufacture of organic basic chemicals	3.14.	200.7	15.7	100	–	–	–	–	–	
Electricity generation using solar photovoltaic technology	4.1.	4.3	0.3	100	–	–	–	–	–	
CAPEX of environmentally sustainable activities (Taxonomy-aligned) (A.1)		**205.0**	**16.1**	**100**	–	–	–	–	–	
A.2 Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)										
Manufacture of organic base chemicals	3.14.	750.0	58.8							
Manufacture of plastics in primary form	3.17.	194.9	15.3							
Renewal of waste water collection and treatment	5.4	0.7	0.1							
Transport by motorbikes, passenger cars, light commercial vehicles	6.5	4.1	0.3							
CAPEX of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**949.6**	**74.4**							
Total (A.1 + A.2)		**1,154.6**	**90.5**							
B. Taxonomy-non-eligible activities										
CAPEX of Taxonomy-non-eligible activities (B)		121.2	9.5							
Total (A + B)		**1,275.8**	**100.0**							

20230711119953

	DNSH criteria (Does not significantly harm)										
	Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Taxonomy-aligned proportion of CAPEX 2022 (18)	Taxonomy-aligned proportion of CAPEX 2021 (19)	Category (enabling activity) (20)	Category (transitional activity) (21)
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	In %	In %	E	T
		Y	Y	Y	Y	Y	Y	15.7			T
		Y	Y	Y	Y	Y	Y	0.3			
								16.1			**15.7**

Proportion of OPEX from products or services associated with economic activities that qualify as environmentally sustainable under Articles 3 and 9 of the Taxonomy Regulation – disclosure covering year 2022

				Substantial contribution criteria						
Economic activities (1)	Code(s) (2)	Absolute turnover (3)	Proportion of turnover (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water and marine resources (7)	Circular economy (8)	Pollution (9)	Biodiversity and ecosystems (10)	
		in EUR mn.	in %	in %	in %	in %	in %	in %	in %	
A. Taxonomy-eligible activities										
A.1 Environmentally sustainable activities (Taxonomy-aligned)										
		–	–	–	–	–	–	–	–	
OPEX of environmentally sustainable activities (Taxonomy-aligned) (A.1)		–	–	–	–	–	–	–	–	
A.2 Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)										
Manufacture of organic base chemicals	3.14.	41.3	18.1							
Manufacture of plastics in primary form	3.17.	162.7	71.3							
OPEX of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		**204.0**	**89.4**							
Total (A.1 + A.2)		**204.0**	**89.4**							
B. Taxonomy-non-eligible activities										
OPEX of Taxonomy-non-eligible activities (B)		24.2	10.6							
Total (A + B)		**228.2**	**100.0**							

20230711119954

	DNSH criteria (Does not significantly harm)										
	Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Taxonomy-aligned proportion of OPEX 2022 (18)	Taxonomy-aligned proportion of OPEX 2021 (19)	Category (enabling activity) (20)	Category (transitional activity) (21)
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	in %	in %	E	T
								–			
								–			

The economic activities adduced in Delegated Regulation (EU) 2022/1214 are not relevant for Borealis. Therefore, Borealis holds that the disclosure forms mentioned in Annex XII of the Delegated Regulation (EU) 2021/2178 are not applicable to Borealis, and hence are not disclosed.

GRI Content Index

Statement of use	Borealis has reported in accordance with the GRI Standards for the period 1 January 2022 to 31 December 2022
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	Oil and Gas Sector Standard

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
GRI 2: General Disclosures 2021	**2-1**	Organizational details	26–34			
	2-2	Entities included in the organization's sustainability reporting	38–39			
	2-3	Reporting period, frequency and contact point	38–39			
	2-4	Restatements of information	39			Restatements of data are indicated with footnotes in this report.
	2-5	External assurance	38–39, 161–162			
	2-6	Activities, value chain and other business relationships	28–34			Further information about significant changes can be found in the financial part of the report.
	2-7	Employees	84–85			Non-guaranteed hours employees are not applicable for Borealis. Significant fluctuations is a deviation of our number of employees during two consecutive reporting periods of more than 50 employees within a single organisational unit (equals 10% of our definition on significant location of operation). Compared to last year, there are no significant fluctuations.
	2-8	Workers who are not employees	88			
	2-9	Governance structure and composition	14–15, 56–63			In 2022, neither the Supervisory Board nor the Executive Board nor the Audit Committee members held shares in Borealis or the majority of the shares in a holding company, thereby preventing any related conflicts of interest. There are no under-represented social groups in the areas of Borealis' operations. There are no stakeholder representatives on the Supervisory Board.
	2-10	Nomination and selection of the highest governance body	56–57			The Supervisory Board is nominated by our owner. Thus, Borealis has no influence in integrating views of shareholders.
	2-11	Chair of the highest governance body	–			The Chairman is not also a senior executive.
	2-12	Role of the highest governance body in overseeing the management of impacts	58, 65–66			
	2-13	Delegation of responsibility for managing impacts	65–67			
	2-14	Role of the highest governance body in sustainability reporting	38			
	2-15	Conflicts of interest	71			Further information can be found in the Code of Conduct.

20230711119955

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
GRI 2: General Disclosures 2021	**2-16**	Communication of critical concerns	–	Information unavailable and partly confidential. Information is not currently collected and documented systematically across the organisation. Critical concerns are brought to the Executive Board through a wide variety of people and channels. Reporting of risks and ethics hotline/grievances is confidential. It may be possible to report next year which issues are affected. Borealis does not track (yet) the total number of critical concerns collected/reported.		
	2-17	Collective knowledge of the highest governance body	58			
	2-18	Evaluation of the performance of the highest governance body	–	Information unavailable as the first time of evaluations was in 2022, so no documented actions yet.		
	2-19	Remuneration policies	61, 81–82			
	2-20	Process to determine remuneration	81–82			The Remuneration Committee (a subcommittee of the Supervisory Board) consists of three Supervisory Board members, two being nominated by OMV and one nominated by ADNOC. During discussions and meetings held, the input of our shareholders is taken into account. Furthermore, external (market) views – e.g. via the involvement of remuneration consultants – are also taken into account, in particular regarding Executive Board remuneration.
	2-21	Annual total compensation ratio	–	Information unavailable. The ratio of the annual total compensation is not reported as the accuracy of data cannot be ensured due to the unavailability of data in our current system. The ratio of the percentage increase cannot be reported as there was a change of CEO in 2021. Work is already underway to be able to report the data in 2024.		
	2-22	Statement on sustainable development strategy	10–13, 16–25			
	2-23	Policy commitments	69–70, 74–75			
	2-24	Embedding policy commitments	69–70, 74–75			
	2-25	Processes to remediate negative impacts	70–74			There are no processes in place other than those mentioned in the chapter Ethics & Compliance. Our ethics policy further ensures users' human rights and protection against reprisals. As the new Ethics Hotline was only introduced in 2021 and is well accepted by our stakeholders, no further improvements are planned in the near future. Further information can be found in the Code of Conduct.

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
GRI 2: General Disclosures 2021	**2-26**	Mechanisms for seeking advice and raising concerns	72–73			
	2-27	Compliance with laws and regulations	73–74			No significant instance of non-compliance with laws and regulations during the reporting period. There is an ongoing public investigation of Kallo. However, no investigation against Borealis in 2022.
	2-28	Membership associations	49			
	2-29	Approach to stakeholder engagement	40–41, 45–47			
	2-30	Collective bargaining agreements	76–77			
Material topics						
GRI 3: Material Topics 2021	**3-1**	Process to determine material topics	41–42			
	3-2	List of material topics	42, 292			No changes to material topics. Material topics were compared with topics of the Oil & Gas Sector Standard. Corresponding reporting gaps were identified and addressed.
Ethics & Compliance						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	69–75			
GRI 205: Anti Corruption 2016	**205-1**	Operations assessed for risks related to corruption	74		11.20.2	In 2021 and 2022, all operations of Borealis were assessed by the law firm Dentons UK. Only partial assessments were made in 2022 for Fertilizers, Melamine and TEN. No significant risks were identified.
	205-2	Communication and training about anti-corruption policies and procedures	75	Information incomplete. Breakdown by region is not possible at the moment.	11.20.3	
	205-3	Confirmed incidents of corruption and actions taken	74		11.20.4	No confirmed or suspected incidents of corruption in the reporting period.
GRI 206: Anti Competitive Behavior 2016	**206-1**	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	74		11.19.2	
GRI 410: Security Practices 2016	**410-1**	Security personnel trained in human rights policies or procedures	75	Information incomplete. Special training for security personnel is due to be developed in 2023. So far this was the responsibility of the third party provider.	11.18.2	

20230711119956

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
Ethics & Compliance						
Ethics & Compliance						
GRI 406: Non Discrimination 2016	**406-1**	Incidents of discrimination and corrective actions taken	–		11.11.7	No incidents of discrimination during the reporting period.
GRI 407: Freedom of Association and Collective Bargaining 2016	**407-1**	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	–	Information incomplete as the corresponding processes for collecting the data have not yet been set up.	11.13.2	No significant risks in Borealis operations detected in 2022. The new setup and structure as explained in chapter Ethics & Compliance under "Outlook" will allow for much more solid supply chain social monitoring and assessments in the future. Further information can be found in chapter Procurement of Raw Materials, Packaging, Technical Suppliers & Services.
GRI 408: Child Labor 2016	**408-1**	Operations and suppliers at significant risk for incidents of child labor	–			No significant risks in Borealis operations assessed in the reporting period. Further information can be found in chapter Procurement of Raw Materials, Packaging, Technical Suppliers & Services.
GRI 409: Forced or Compulsory Labor 2016	**409-1**	Operations and suppliers at significant risk for incidents of forced or compulsory labor	73		11.12.2	*No risks were identified* as result of our regular assessment processes. Following the incident in Kallo we have completed a thorough assessment.
GRI 411: Rights of Indigenous Peoples 2016	**411-1**	Incidents of violations involving rights of indigenous peoples	–	Not applicable for Borealis as Borealis does not have any indigenous people in the area of influence that could be affected.	11.17.2	
GRI 413: Local Communities 2016	**413-1**	*Operations with local community* engagement, impact assessments, and development programs	–	*Information unavailable* as currently there are no harmonised assessments implemented across all locations and information is not collected centrally.	11.15.2	
	413-2	Operations with significant actual and potential negative impacts on local communities	–	Information unavailable as currently there are no harmonised assessments implemented across all locations and information is not collected centrally.	11.15.3	
Corporate Governance						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	56–68			
GRI 201: Economic Performance 2016	**201-1**	Direct economic value generated and distributed	182–188		11.14.2	This is part of the financial information.
	201-2	Financial implications and other risks and opportunities due to climate change	280		11.2.2	ESG risks can be found in our risk table.

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
Product Sustainability						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	114–118, 145–148			
GRI 301: Materials 2016	**301-1**	Materials used by weight or volume	146, 152	Information incomplete. Breakdown by renewable and non-renewable materials used is not reported due to confidentiality constraints.		
	301-2	Recycled input materials used	–	Information is not reported due to confidentiality constraints.		
	301-3	Reclaimed products and their packaging materials	–	Not applicable for Borealis as no products or packaging are reclaimed.		
Energy Management						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	125–134			
GRI 302: Energy 2016	**302-1**	Energy consumption within the organization	129–130, 144		11.1.2	
	302-2	Energy consumption outside the organization	–	Not applicable for Borealis as energy consumption for preparation of the products is not within the sphere of influence of Borealis.	11.1.3	
	302-3	Energy intensity	131		11.1.4	The energy intensity per business unit is reported. All types of energy are included in the intensity ratios. Energy efficiency intensity is the number of MWh of primary energy divided by total production tonnes. Basis for the energy intensity indicator: production volume of all production plants, energy consumption of the whole organisation, including infrastructure, R&D, offices. It includes compensation for production and energy consumption that happens outside Borealis, but is necessary to include to have one consistent value chain through the Group and the KPI. This avoids distortion when Borealis has more output from fully integrated sites, for example, a site where Borealis does not own the cracker.
	302-4	Reduction of energy consumption	127, 130			
	302-5	Reductions in energy requirements of products and services	–	Not applicable for Borealis as sold products do not consume any energy during use phase.		

20230711119957

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
Water Management						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	135, 138–141			
GRI 303: Water and Effluents 2018	**303-1**	Interactions with water as a shared resource	138–141	Information incomplete. We are currently in the process of developing water-related goals and targets as part of our water management plans.	11.6.2	
	303-2	Management of water discharge-related impacts	138–141		11.6.3	There are no such standards within the chemical industry.
	303-3	Water withdrawal	139–140, 144	Information incomplete. A breakdown by produced water and third-party water is not reported as this is not applicable. No data breakdown into freshwater and other water possible as freshwater quality varies during the year.	11.6.4	All water withdrawal is measured in accordance with local legal requirements. Borealis only regards drinking water supplied by municipalities as freshwater. The water taken from lakes, rivers as well as the ground water varies quite significantly over the course of a year in respect of dissolved solvents which is why it is regarded as "other water". The WWF Water Risk Filter is used to identify water stress levels of the water bodies our sites are connected to. With each yearly update of the risk filter, the assessment is reviewed and updated.
	303-4	Water discharge	140	Information incomplete. Work is already underway to be able to report the quantitative data in 2023.	11.6.5	
	303-5	Water consumption	139–140	Information incomplete. Work is already underway to be able to report the quantitative data in 2023.	11.6.6	
Climate Change						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	125–134			
GRI 305: Emissions 2016	**305-1**	*Direct (Scope 1)* GHG emissions	128–129, 132, 144		11.1.5	Borealis reports the majority of Scope 1 emissions according to the EU ETS methodology. The consolidation is based on operational control. The GWP rates are CO_2 = 1 CO_2eq, N_2O = 298 CO_2eq. Additionally, Borealis reports Scope 1, 2 and 3 emissions according to the GHG Protocol. All relevant Kyoto gases have been included in the calculation. Biogenic emissions are excluded as they are negligible. Emission factors from IPCCC AR5, AIB, IEA, ecoinvent and different emission factors for Scope 3 calculations have been used.
	305-2	Energy indirect (Scope 2) GHG emissions	128–129, 132		11.1.6	
	305-3	Other indirect (Scope 3) GHG emissions	128, 132		11.1.7	

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
Climate Change						
GRI 305: Emissions 2016	**305-4**	GHG emissions intensity	133		11.1.8	
	305-5	Reductions of GHG emissions	133		11.2.3	
Air Quality						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	135, 137–138			
GRI 305: Emissions 2016	**305-6**	Emissions of ozone-depleting substances (ODS)	–			Zero emissions in the reporting period. Borealis does not have any ODS.
	305-7	Nitrogen oxides (NO_X), sulfur oxides (SO_X), and other significant air emissions	137–138, 144	Information incomplete. So far in most locations there are no requirements to continuously measure particulates. Therefore, Borealis carries out spot measurements for monitoring purposes. Reporting on spot measurements is not possible. Information about dust measurements will only be available by the end of 2026 due to legal obligation.	11.3.2	POPS (Persistent organic pollutants) and HAPS (Hazardous air pollutants) are not relevant for Borealis. Emissions to air are a mix of measurements or calculations based on fuel consumption and emission factors.
Plastic Waste & Management						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	135, 141–143			
GRI 306: Waste 2020	**306-1**	Waste generation and significant waste-related impacts	141–143		11.5.2	Further information about downstream waste impacts and activities can be found in the chapter Circular Economy. Impacts concerning microplastics are adressed in the chapters Environmental Management, Product Safety and Logistics. Negative impacts are additionally dealt with in the chapter Borealis Social Fund (Project STOP).
	306-2	Management of significant waste-related impacts	141–143		11.5.3	
	306-3	Waste generated	144		11.5.4	
	306-4	Waste diverted from disposal	–	Information unavailable. Changing the waste reporting and implementing this into our group reporting system proved more difficult than anticipated. Work is already underway to be able to report the data in 2023.	11.5.5	

20230711119958

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
Plastic Waste & Management						
GRI 306: Waste 2020	**306-5**	Waste directed to disposal	141–142	Information incomplete. Changing the waste reporting and implementing this into our group reporting system proved more difficult than anticipated. Work is already underway to be able to report all the data in 2023.	11.5.6	
GRI 306: Effluents and Waste 2016	**306-3**	Significant spills	–		11.8.2	There were no significant spills (pellet loss) during the reporting period.
Emergency Governance						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	110–113			
GRI G4: Oil & Gas Sector Supplement	**OG13**	Number of process safety events, by business activity	112–113			
Sustainable Sourcing						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	149–159			
GRI 308: Supplier Environmental Assessment 2016	**308-1**	New suppliers that were screened using environmental criteria	150–151	Information incomplete. Borealis is not yet actively using ARIBA SLP today but this is planned for a future date.		
	308-2	Negative environmental impacts in the supply chain and actions taken	151	Information incomplete. Corresponding processes for collecting the information have not yet been developed. Fertilizers, Melamine and TEN does not report this data as TfS is currently not followed or measured.		
GRI 414: Supplier Social Assessment 2016	**414-1**	New suppliers that were screened using social criteria	150–151	Information incomplete. Borealis is not yet actively using ARIBA SLP today but this is planned for a future date.	11.10.8	
	414-2	Negative social impacts in the supply chain and actions taken	151	Information incomplete. Corresponding processes for collecting the information have not yet been developed. Fertilizers, Melamine and TEN does not report this data as TfS is currently not followed or measured.	11.10.9	
GRI 204: Procurement Practices 2016	**204-1**	Proportion of spending on local suppliers	150	Information incomplete. Only technical supplies are reported as there are no significant suppliers locally. We procure mainly only globally. Local sourcing is not applicable for Fertilizers, Melamine and TEN.	11.14.6	

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
Human Capital Development						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	76–89			
GRI 401: Employment 2016	**401-1**	New employee hires and employee turnover	87		11.10.2	Definition of new hires: employees hired for more than three months, excluding: externals, long-term absences, trainees, apprentices, summer workers, temporary employees (less than three months). Employee turnover: employees who left the company.
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	83		11.10.3	
	401-3	Parental leave	84	Information incomplete. Return to work and retention rates are not reported as the accuracy of data cannot be ensured due to the unavailability of data in our current system.	11.10.4	
GRI 402: Labor Management Relations 2016	**402-1**	Minimum notice periods regarding operational changes	78	Information incomplete. Notice period cannot be reported as this depends on national laws.	11.10.5	Laying off employees takes place according to contract and legal requirements.
GRI 404: Training and Education 2016	**404-1**	Average hours of training per year per employee	80		11.10.6	
	404-2	Programs for upgrading employee skills and transition assistance programs	79–81		11.10.7	
	404-3	Percentage of employees receiving regular performance and career development reviews	80			
Occupational Health & Safety						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	103–107, 115–116			
GRI 403: Occupational Health and Safety 2018	**403-1**	Occupational health and safety management system	103–105		11.9.2	
	403-2	Hazard identification, risk assessment, and incident investigation	104		11.9.3	
	403-3	Occupational health services	105		11.9.4	
	403-4	Worker participation, consultation, and communication on occupational health and safety	103–104		11.9.5	

20230711119959

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
Occupational Health & Safety						
GRI 403: Occupational Health and Safety 2018	**403-5**	Worker training on occupational health and safety	104–105		11.9.6	
	403-6	Promotion of worker health	105–106		11.9.7	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	115–116		11.9.8	
	403-8	Workers covered by an occupational health and safety management system	104	Information incomplete. For HC&E/PO only coverage by an external certified system in FTE's is reported as other data cannot be reported at the moment. For Fertilizers, Melamine and TEN only coverage by an internal certified system in FTE's is reported as other data cannot be reported at the moment.	11.9.9	From 2021 onwards, Borealis adopted OMV's TRI criteria, which are based on the reporting guidelines from IOGP (International Association of Oil & Gas Producers). All employees, contractors and sub-contractors are included in data. Suppliers of raw materials, chemicals, additives and other commodities and hauliers are excluded from the TRI statistics (except if Borealis has caused the accident, this would be counted as TRI).
	403-9	Work-related injuries	106–109		11.9.10	
	403-10	Work-related ill health	–		11.9.11	*We define work-related illness* as any case that is reported and confirmed to Borealis via a formal medical statement/ diagnosis. In 2022, zero such statements were received by Borealis.
Diversity and Equal Opportunity						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	76–89			
GRI 405: Diversity and Equal Opportunity 2016	**405-1**	Diversity of governance bodies and employees	86		11.11.5	
	405-2	Ratio of basic salary and remuneration of women to men	82		11.11.6	
GRI 202: Market Presence 2016	**202-1**	Ratios of standard entry level wage by gender compared to local minimum wage	81–82			
	202-2	Proportion of senior management hired from the local community	88		11.11.2	
GRI 201: Economic Performance 2016	**201-3**	Defined benefit plan obligations and other retirement plans	82–83	Information incomplete. Percentage of employee salary cannot be reported as it is different from country to country and therefore a reporting on percentages on Group level is not possible.		Further information can be found in the financial part of the report.

GRI Standard	Disclosure		Location/ Page	Omissions Requirement(s) omitted/Reason/ Explanation	GRI Sector Standard Ref. No	Further information
Stakeholder Engagement						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	40–41, 45–47			
GRI 415: Public Policy 2016	**415-1**	Political Contributions	51		11.22.2	Further information can be found in the financial part of the report.
GRI 201: Economic Performance 2016	**201-4**	Financial assistance received from government	–	Information unavailable. The amounts related to government assistance (grants) received for projects could not be collected in time. The information will be provided next year.	11.21.3	
Product Safety						
GRI 3: Material Topics 2021	**3-3**	Management of material topics	114–118			
GRI 416: Customer Health and Safety 2016	**416-1**	Assessment of the health and safety impacts of product and service categories	115		11.3.3	All products are assessed for health and safety impacts.
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	116			
GRI 417: Marketing and Labeling 2016	**417-1**	Requirements for product and service information and labeling	115–116			
	417-2	Incidents of non-compliance concerning product and service information and labeling	116			No significant instance of non-compliance with laws and regulations during the reporting period.
	417-3	Incidents of non-compliance concerning marketing communications	–	Not applicable for Borealis as only B2B products are sold.		

20230711119960

Topics in the applicable GRI Sector Standards determined as not material

Topic		Explanation
Oil and Gas Sector Standard		
11.4	**Biodiversity**	Borealis' activities have no material impacts on biodiversity, including on plant and animal species, genetic diversity or natural ecosystems as there is negligible change in land use and production sites are situated in industrial areas.
11.7	**Closure and rehabilitation**	Borealis' activities have no material impacts on the environment, local communities and workers due to closure and rehabilitation as the business is built in such a way that production facilities are operated on a long-term basis (even after a sale).
11.15	**Local communities**	Borealis' activities have no material impacts on local communities; as there are negligible socioeconomic, cultural, health and human rights impacts on local communities as Borealis operates in industrial areas.
11.16	**Land and resource rights**	Borealis' activities have no material impacts on human rights and tenure rights, including from resettlement of local communities in the course of the use of land and natural resources; there are no resettlements as Borealis conducts no explorations.
11.17	**Rights of indigenous peoples**	Borealis' activities have no material impacts on the rights of indigenous people as operations are not performed within indigenous peoples' lands but in industrial areas without any exploration.
11.18	**Conflict and security**	Borealis' activities have no material impacts on security practices to operate safely as there are no operations in conflict areas and Borealis does not conduct operations relating to exploration and pipelines.
11.21	**Payments to governments**	Borealis' activities have no material impacts on payments to governments as transparency is complied with by applying all relevant laws.
11.22	**Public policy**	Borealis' activities have no material impacts on public policy development as Borealis operates mainly in the European Union with strict regulations among other things regarding lobbying.

Notes

Notes

20230711119961

Notes

20230711119962

IMPRINT
This report is available in English and German. The original version was written in English. Both documents are available online and can be downloaded from www.borealisgroup.com.

Trademark Information:
Ambicat, Baystar, Borcycle, Borlink, Bormed, The Bornewables, Casico, Daploy, EverMinds, Nimblicity, Visico, Visioneering Philosophy, Quentys and Queo are trademarks of Borealis AG.
Borstar is a registered trademark of Borealis AG.
ReOil is a registered trademark of OMV AG.
Responsible Care is a registered trademark of the Chemistry Industry Association of Canada.

Content owner:
Borealis AG
Trabrennstr. 6–8, 1020 Vienna, Austria
Tel.: +43 1 22 400 300
www.borealisgroup.com | info@borealisgroup.com

Project Management: Virginia Wieser, Dorothea Wiplinger, Borealis;
support: Ute Greutter, UKcom Finance
Editorial team: Virginia Wieser, Dorothea Wiplinger and representatives of featured business segments of Borealis; support: Carina Schneeberger, denkstatt GmbH
Sustainability Report advisor: denkstatt GmbH
Graphic Design: Martina Veratschnig
Photography: Cover: © Borealis AG; Borealis AG archive, Daniela Beranek, ADNOC
Published in March 2023
© Borealis AG

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

Keep Discovering

Borealis AG
Trabrennstr. 6–8 · A-1020 Vienna · Austria
Tel. +43 1 22 400 300 · Fax +43 1 22 400 333
www.borealisgroup.com · info@borealisgroup.com