



Natural Resources Management

Our impact on the environment – and responsibility to act – extends beyond our greenhouse gas emissions. As an oil, gas, and chemicals company, OMV's environmental footprint is significant due to its water use, environmental degradation caused by spills, biodiversity impacts, and waste. However, we also have the technological know-how to present solutions to reduce this impact, in particular by fostering the circular economy. In contrast to the linear “take-make-waste” model, which will lead to more plastic waste and environmental pollution while putting pressure on the planet's limited resources, a circular economy is regenerative by design and aims to decouple growth from the consumption of finite resources.

OMV is fully committed to taking action when it comes to responsible natural resources management and is proactively expediting the transition from a linear to a circular economy. OMV aims to minimize environmental impacts by preventing water and soil pollution, reducing emissions, using natural resources efficiently, and avoiding the disruption of biodiversity.

The Natural Resources Management strategic focus area combines our commitments and actions relating to environmental preservation under one umbrella. The first step is to manage our operational footprint, as described in the Environment section below. The Circular Economy material topic then describes the strategies and technologies we are applying to recover and reuse by-products or waste to make new materials and products, resulting in a cleaner environment.



Environment

Material Topic: Environment

Protecting natural resources and ecosystems, especially through the prevention of spills and water, air, and soil pollution.

Key GRIs

- ▶ GRI 303: Water and Effluents 2018
- ▶ GRI 305: Emissions 2016
- ▶ GRI 306: Waste 2020
- ▶ GRI 306: Effluents and Waste 2016
- ▶ GRI 307: Environmental Compliance 2016

NaDiVeG

- ▶ Environmental concerns

Most relevant SDGs



OMV aims to protect people and nature through measures such as preventing water and soil pollution. OMV is liable for the impact that our activities have on the environment. Breaching environmental regulations on a local, national, and international level would result in both financial losses and harm to our reputation. Our license to operate depends on compliance with regulations relating to envi-

ronmental protection, which is also of particular importance to governmental authorities, shareholders, and stakeholders such as the public and environmental NGOs and NPOs. OMV's Code of Conduct and HSSE Policy formalize our public commitments to safeguarding the environment.



Targets 2025 and 2030

- ▶ Increase waste reuse and recycling from operations
- ▶ Reduce freshwater withdrawal

Target 2030

- ▶ Reduce use of natural resources by reducing oil and gas production levels to around 350 kboe/d and by reducing crude distillation throughput by 2.6 mn t

Status 2023

- ▶ Waste recovery or recycling rate: 74%
- ▶ Freshwater withdrawal: 154,573 megaliters
- ▶ Production: 364 kboe/d
- ▶ Crude throughput: 15.1 mn t¹⁴

Most relevant SDGs



SDG targets:

- 3.9** By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination
- 6.3** By 2030, improve water quality by reducing pollution, eliminating dumping, minimizing the release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally
- 6.4** By 2030, substantially increase the efficient use of water across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity, and substantially reduce the number of people suffering from water scarcity
- 6.6** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes
- 12.4** By 2020, achieve the environmentally sound management of chemicals and all waste throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water, and soil in order to minimize their adverse impacts on human health and the environment
- 12.5** By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse
- 15.5** Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity, and, by 2020, protect and prevent the extinction of threatened species¹⁵

Our internal Environmental Management (EM) Standard stipulates an assessment of environmental impacts and risks, and adherence to environmental performance requirements in terms of energy use, emissions into the atmosphere, water use and discharge, the use of raw materials, waste management, hazardous substance handling, and biodiversity and ecosystem protection. In 2020, the EM Standard was revised and minimum requirements on odor emissions were established. In 2021, the EM Standard was revised again, following which minimum requirements on H₂S in vented gas and the design of the environmental processes to complement the implementation of the EM Standard were added. The review in 2022 resulted in the addition of two new annexes on a Water Management Plan Framework and Water Management Plan Template.

Before undertaking new operational activities or entering new countries, environmental risk assessments are performed, including evaluations of local legislation, the potential impact of our activities on sensitive and protected areas, and the effects on endangered species. Each subsequent phase of project implementation is accompanied by a detailed assessment of environmental risks.

The framework and methodology for our coordinated Group-wide Environmental Risk Assessment are based on best practice standards, which meet the ISO 14001 requirements and ensure the consistent qualitative assessment of operational risks and impacts related to the environment.

The OMV Group's Environmental Management Standard furthermore defines the process of carrying out Environmental and Social Impact Assessments (ESIAs), mainly for projects. Preventive and mitigation measures and the monitoring program to ensure implementation of the proposed measures are documented in an Environmental and Social Management Plan. The final ESIA report is submitted to the local regulator or lender (whichever is applicable) for review, public disclosure, and approval.

52% of sites certified to ISO 14001

The OMV Group's Environmental Management Standard requires that all relevant OMV businesses and activities (including investment, acquisitions, and divestment) implement an Environmental Management System (EMS) consistent with ISO 14001 and adhering to the minimum requirements listed. All relevant OMV businesses are required to review and update the EMS at least once per year, while a full EMS audit must be carried out either by an external independent auditor or OMV corporate environmental experts every three years for sites not certified to ISO 14001. Internal EMS audits are performed regularly and as necessary at local level to assess whether the guidelines in the EMS are being followed and to identify improvement measures.

¹⁴ In 2023, the utilization rate of the European refineries increased by 12% to 85% (2022: 73%), as the first half of the previous year was impacted by the turnaround and incident at the Schwechat refinery. The turnaround at the Petrobrazi refinery and the petrochemicals turnaround in Schwechat had a negative impact on the utilization rate in 2023.

¹⁵ Several UN SDG subtargets were initially designated to be reached by 2020. However, sources such as the UN's Global Biodiversity Outlook state that goals related to nature have not been met. OMV still considers the attainment of these goals relevant past the year 2020, and thus still links these SDG subtargets to its strategic targets.



Governance

There is a high degree of interdependence between the Environment material topic and the material topics Health, Safety, and Well-Being, and Security, Emergency, and Crisis Resilience. Thus, these distinct material topics are governed centrally by Group HSSE. The OMV Group HSSE department is organized into specialized teams with experienced experts in areas such as:

- ▶ Development and implementation of OMV's HSSE strategy, regulations, and processes
- ▶ HSSE risk assessment
- ▶ Incident investigation
- ▶ HSSE data analysis and reporting
- ▶ Environmental management
- ▶ Process safety management
- ▶ Security and resilience management

Group HSSE is led by the VP HSSE, who reports directly to the Chief Executive Officer. There are HSSE departments at OMV Petrom and Borealis, which oversee their specific issues and coordinate their local HSSE officers and experts. The OMV Petrom and Borealis HSSE departments report functionally to the VP HSSE at Group level.

Environmental awareness is promoted across the Group through various activities. For instance, regular exchanges on Environmental Management are held, where environmental experts and interested colleagues Group-wide can learn about the best practices being implemented at other sites and gain inspiration. At OMV Petrom, a contest to highlight key initiatives in the company was again held in 2023, with winners receiving awards from the OMV Petrom Executive Board.

Strategy Update

As the OMV Group fundamentally updated its transformational business strategy in 2022, a major review of the HSSE Strategy 2025 led to the updated HSSE Strategy 2030. As pressure on the planetary boundaries continues to increase and substantial changes in the regulatory environment are taking place, environmental management will need a stronger and updated strategic focus in the coming years. More information on the strategy update can be found in [Health, Safety, and Security](#).

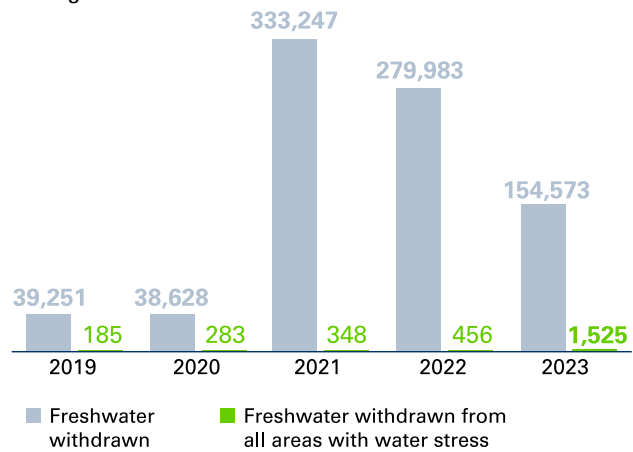
Water

OMV uses significant amounts of water for its operations in its upstream and downstream activities. Freshwater is used for processes such as drilling, steam generation, and cooling, among others. Smaller amounts of water are also used for non-industrial purposes. Any water produced is treated for reinjection into pressurized hydrocarbon reser-

voirs to optimize the extraction rate. Desalinated water is used in some offshore operations. Refineries and various other operating facilities also use brackish and/or recycled water for various operational purposes. Some of OMV's operating facilities are located in water stress areas.¹⁶

Freshwater Withdrawn¹⁷

In megaliters



Specific Policies and Commitments

Our Water Ambition Statement is OMV's public commitment to water management, and states the following:

- ▶ We respect water as a precious limited resource and focus on its sustainable use.
- ▶ We are committed to meeting all applicable legislative requirements or our own OMV regulations, whichever are more stringent.
- ▶ Water management is a key component of our social license to operate. We cooperate with local communities and prove to be responsible partners.
- ▶ We are committed to transparency when it comes to our impact on water resources.
- ▶ Every OMV employee is responsible for minimizing the impact of our activities on water resources.

The OMV Group's Environmental Management Standard requires all OMV businesses and activities to minimize the impact of effluent on the environment and on local communities and outlines specific requirements for wastewater discharge onshore and offshore. The direct discharge of wastewater on land, in wetlands, or in other bodies of water without prior treatment is not permitted. No discharge may alter or diminish the value of the receiving environment. Based on the national legislation and permits, all discharge must be systematically monitored, and any environmental impact must be managed appropriately. Local regulatory and river basin authorities are involved to ensure that OMV complies with local envi-

¹⁶ Areas of water stress are areas where the demand for water exceeds the available amount during a certain period, or when poor quality restricts its use. In such areas, water stress causes deterioration of freshwater resources in terms of quantity (aquifer overexploitation, dry rivers, etc.) and quality (eutrophication, organic matter pollution, saline intrusion, etc.). Source: [European Environmental Agency](#).

¹⁷ The decrease in freshwater withdrawn in 2023 vs. 2022 is due to the divestment of Borealis Nitro in 2023. The majority of freshwater withdrawn at Borealis is once-through cooling water, meaning it is discharged to the environment in its original quality, only with a very slightly elevated temperature. See [European Environmental Agency](#) for details.



ronmental regulations and has obtained all of the required permits. The OMV Group's Environmental Management Standard was updated in 2022, with key additions being new annexes for the development and implementation of Water Management Plans.

Management and Due Diligence Processes

OMV's Group-wide Water Strategy was drafted in 2014 and is based on five strategic pillars: transparency, risks and opportunities, water efficiency and treatment, training and awareness, and stakeholder engagement.

Risk Assessments

High-level water stress assessments are conducted annually. In order to identify operations in areas affected by water scarcity and water stress, OMV uses international tools and indexes such as the Verisk Maplecroft Water Stress Index complemented by the World Resources Institute (WRI) Aqueduct Baseline Water Stress Index, and its own assessments as required. Some regions where OMV operates have already experienced water stress in dry years and a further decline in water availability is expected, mainly due to climate change.

A bottom-up approach in the assessment of water-related risks is followed in accordance with OMV's Group-wide Environmental Risk Assessment (ERA) guideline to ensure consistent qualitative assessments of operational risks and impacts related to the environment, including water. Significant risks are integrated into OMV's Enterprise-Wide Risk Management (EWRM) system. When entering a new country or considering new operational activities, OMV primarily uses the World Resources Institute (WRI) Aqueduct tools and Verisk Maplecroft indices to identify future potential water-related constraints, such as baseline water stress, groundwater stress, and seasonal variability.

Water management-related risks are closely linked with the topic of spill prevention. Offshore operations may lead to oil spills that have a significant impact on marine water resources and ecosystems. The response strategy aims to minimize the probability of such risks and maximize preparedness so that we can provide timely remediation measures in the unlikely event of an oil spill. OMV allocates significant resources to prevention and mitigation measures. Read more about spill prevention in the section [Spills](#). Any new or existing offshore drilling activity is accompanied by a third-party analysis evaluating the magnitude of a potential major event and its possible consequences. As part of the biannual Group-wide EWRM process, water-related risks and mitigation measures are assessed in a larger strategic context, while a systematic approach is taken in day-to-day operations to monitor and manage high-impact/low-probability risks, such as blowouts during offshore drilling.

Water Management Plans

Water Management Plans are an effective tool for addressing all water-related topics, issues, and tasks, with the aim of improving water management performance. They provide information about current water uses and chart a course for water efficiency improvements, conservation activities, and water reduction goals.

Every location in the OMV Group must develop, implement, and maintain a Water Management Plan, which should include at least the following elements:

- ▶ Scope and objectives including site description
- ▶ Applicable legislation, other requirements, and permits
- ▶ Identification of water sources, discharges including water quality parameters, and monitoring plans
- ▶ Water map, inventory, and balance including discharges
- ▶ Water transport, storage, and treatment systems
- ▶ Significant water-related risks and mitigation measures
- ▶ Water conservation and water efficiency measures including an action plan

Operating facilities located in places that are affected or are likely to be affected by water scarcity issues, and operations utilizing significant water resources (e.g., Tunisia) are prioritized when developing and implementing Water Management Plans. These plans aim to allow sustainable long-term production with minimal effects on the environment.

Best Available Technologies

We implement measures to reduce freshwater withdrawal to a minimum. These include: reduction of operational complexity, water recirculation (e.g., at CCPP Brazil), upgrade of equipment (boilers), maintenance of equipment to reduce water loss, replacement of water cooling systems with air coolers (for example, the C3+ fraction recovery plant from Petromar), the use of desalinated seawater rather than freshwater, the installation of recirculating cooling systems, the use of air or glycol as a cooling agent instead of water (e.g., at Oltenia's 2 Bustuchin compressor station asset), and optimization of pipeline routes for water supply. In addition to implementing measures to reduce freshwater withdrawal, we implement the Best Available Technology (BAT) to sustainably treat water.

Stakeholder Engagement

Our impact on water resources is important to various stakeholders. We engage with government authorities, such as river basin management authorities, on compli-



ance with water use rules and environmental parameters relating to any wastewater generated. We also engage with local water utility companies to discuss the supply of freshwater for OMV operations and the treatment of wastewater. We additionally work with NGOs on environmental preservation and water resource conservation, as well as with local communities on the sharing of local water resources and the quality of discharged wastewater. For instance, in Austria, there are local fisherpersons who fish the Danube in Schwechat, close to both the refinery and the Lobau Tank Farm, and in the harbor there, with whom we have maintained an active and open dialogue for several years. In areas where OMV operations require large amounts of water, or areas that suffer from water stress, it is particularly important to include local stakeholders in water management activities to secure a “social license to operate.” OMV’s water management activities pursue socially equitable water use, and OMV regularly carries out supplier audits to ensure compliance with our human rights requirements.

To ensure that the interests of local communities are known and taken into account during the project life cycle, OMV conducts social baseline studies and community needs assessments as part of Social Impact Assessments (SIAs). If these assessments identify the need, OMV launches community projects aimed at increasing access to clean water for local communities. Our Community Grievance Mechanisms also enable communities to raise concerns about water-related issues. For more information, see [Community Impacts and Grievances](#).

2023 Actions

The following key activities were carried out across the Group in 2023:

Water Management Plans completed for **68%** of priority sites

1% of freshwater withdrawal is in water scarce areas

0.012 mg/l dispersed oil concentration in discharged water

- ▶ Water Management Plans have been completed for 68% of priority sites, with the development of plans in progress at the remaining sites. All plans are developed according to the new annexes of the OMV Group’s Environmental Management Standard.

- ▶ At OMV Tunisia, we implemented improvement projects to reduce freshwater use and increase the safe reuse of wastewater. To reduce freshwater use at the buffer firewater pit, we modified the outlet of our reverse osmosis unit and now use lower-quality retentate water for refilling instead of the previously used higher-quality well water. In order to safely reuse wastewater, we implemented downstream enhancements to the existing sewage water unit by installing additional sand filters and UV disinfection to act on pathogenic bacteria. This has enabled wider water reuse for the green zone irrigation and extension.
- ▶ In 2023, Borealis put a new wastewater treatment plant in Stenungsund into operation. The new wastewater treatment unit is designed according to the BAT for this purpose and fulfills all legal requirements from the Swedish authorities. A new and modern wastewater treatment unit will improve the environmental performance of the cracker plant and reduce the environmental impact on the surroundings. The new wastewater treatment unit will reduce the emission of contaminants to the Baltic Sea and will also minimize VOC emissions to the air, since all treatment steps are covered and enclosed. The new unit includes buffering in two tanks and physical and chemical treatment of the water in dissolved nitrogen flotation units. The off-gas from the different steps will be treated by adsorption in carbon filters.

Outlook

As part of our Sustainability Strategy 2025, we aim to reduce freshwater use. As a next step, we plan to establish quantitative targets to improve water management. Over the coming years, the aim is for all operated OMV Group sites to have finalized and implemented their Water Management Plans.

Spills

Oil spills¹⁸ are a critical environmental issue for our industry. Spill management is defined as the prevention of spills in operations and those caused by incidents such as sabotage or natural hazards, and the management and remediation of spills resulting from an incident. Our key commitment is to prevent spills from happening in the first place. If they do occur, we aim to reduce their impact through appropriate and fast oil spill response and clean-up.

Multiple stakeholder groups are affected by our spill management activities. Government authorities are involved through potential breaches of environmental regulations, while employees and contractors are impacted by potential health and safety issues arising from accidents and damage to the environment and society. NGOs/NPOs are interested in potential damage to the environment and society, society may suffer as a result of damage to the

¹⁸ Oil spills are defined as hydrocarbon liquid spills that reach the environment.



surrounding environment, and shareholders may have to deal with direct financial losses due to the costs of remediation measures and reputational damage.

Furthermore, as OMV is diversifying, oil spills are no longer the only spills we need to deal with. For our subsidiary Borealis, preventing pellet spills is also a key issue. Borealis is committed to achieving zero pellet loss in and around its operations, during transportation, and across the entire value chain. The company was therefore an early signatory to Operation Clean Sweep® (OCS), an international program initiated by the Plastics Industry Association and the American Chemistry Council and rolled out in Europe by Plastics Europe. Borealis is also a signatory of the Zero Pellet Loss pact in Austria, which is the Austrian equivalent of OCS. Achieving zero pellet loss is an ongoing journey and requires leadership, effort, investment, and targeted and effective work practices. The following section will discuss our management of oil spills. Read more about our efforts on pellet spills in the [Borealis Annual Report](#).

Management and Due Diligence Processes

We aim to prevent and reduce oil spills and leakage in our operations at sea as well as on land. Appropriate spill prevention and control plans that account for specific business conditions have been put in place and are summarized in the Spill Preparedness and Response Planning annex of our Environmental Standard. These include proactive management plans comprising risk assessments, preventive measures, and inspections, as well as reactive management plans comprising control, response, and clean-up procedures. The majority of our oil spills involve OMV Petrom’s Exploration & Production division, where we concentrate our efforts on safeguarding and maintaining our infrastructure and improving the reliability of our facilities.

Hazard Identification and Risk Assessments

We have a Well Integrity Management System (WIMS) in place covering all active wells operated by OMV. WIMS enables a uniform and structured approach for describing, documenting, and reporting the status of the well integrity throughout the production phase of a well in a predefined operating envelope. WIMS therefore ensures that we operate our wells safely for people and the environment. OMV’s Energy division has also developed a Corrosion Management Framework (CMF) to provide a proactive and consistent approach to corrosion monitoring and management across the entire division. Covering the full life cycle of the equipment exposed to the risk of corrosion in both oil and gas facilities, from the well to the sales point, this framework encompasses the entire value chain of our business. A team of dedicated in-house experts with multidisciplinary and multicultural backgrounds is working to embed CMF principles into everyday operations.

Emergency Response and Contingency Plans

We conduct spill responses according to a plan that identifies appropriate resources (persons in charge and intervention materials) and expertise. This plan assists on-site personnel with dealing with spills by clearly setting out the responsibilities for the actions necessary to stop and contain the spill and to mitigate its effects. This includes techniques for preventing the spill from moving beyond the immediate site and collecting the spilled substance and contaminated material. Clear communication and coordination protocols are set out in the local plans, particularly where national or international response resources may be required. We carry out regular oil spill response drills and training.

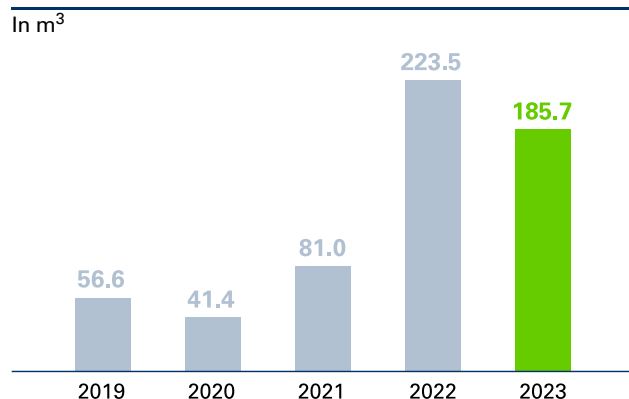
Clean-up and Remediation

Oil spills are assessed and cleaned up immediately after their occurrence in accordance with the Spill Preparedness and Response Planning Annex of our Environmental Standard. In particularly difficult cases, we rely on third-party support for capping and containment, surface clean-up, and emergency management. Leaks are repaired immediately or within defined time frames in accordance with the site’s maintenance processes and based on the risk assessment outcome and other factors, such as feasibility of repair during operation. To strengthen our response to and reduce the environmental impact of oil spills, we continue to perform emergency drills, including pollution scenarios. We approach remediation measures in line with the relevant legal requirements, which include clean-up, restoration, rehabilitation, and/or replacement of damaged environmental receptors.

We ensure that the affected land is fit for the intended use by implementing remediation measures, including cleaning up spills (e.g., by excavation and clean earth filling) as well as relying on natural attenuation (recovery) based on the respective decision of the environmental authorities. Provisions are included in our accounts for the liabilities related to spills and cover cleaning and remediation costs.

2023 Actions

Total volume of spills





In 2023, another significant spill occurred in the Exploration & Production division of OMV Petrom in Romania. Between June 4 and 5, 2023, an oil-water spill occurred downhill from a buried pumping pipeline connecting Park 11 to Tank Farm (TF) Independenta, Asset Moldova E&P. An agricultural area of 500 m² was affected. The Loss of Primary Containment (LOPC) event lasted for around 20 hours, until Monday, June 5 (10 p.m.) when the pumping was stopped. Production measurement at the Tank Farm and calculations indicated an estimated loss of 200 m³ gross oil-water volume (85 t oil and 100 m³ produced water). Lessons learned from 2022 could not prevent this spill because of the specific design and age of the pipeline. The incident was thoroughly investigated in accordance with internal regulations and the root causes were identified. All recommendations raised address the technical upgrade of pipelines with an old design as well as updating the work instructions to prevent major consequences. All measures are in the implementation phase and lessons learned are being shared and discussed within the organization.

The majority of our spills occur at OMV Petrom. In 2023, the Pipeline Integrity Management Program in the Exploration & Production division continued, and the resulting actions were embedded in the Integrated Risk Register. A total of 31 pipeline projects were executed to show our commitment to this program. The Pipeline Inspection Program also witnessed the completion of a number of successful New Technology projects, resulting in the capacity to perform inspections that were not possible in the past. These new technologies are now part of our regular inspection options and will serve to enhance pipeline integrity in the future. In addition, OMV Petrom continues to reduce the number of kilometers of pipelines through several field optimization projects, which will reduce the risk of exposure by removing numerous aging pipelines while maintaining optimal production.

The Corrosion Management Plans developed over the past few years are now fully implemented and the remaining locations are being finalized. This has helped improve the integrity and longevity of our pipelines through cleaning, inspection, and introduction of inhibition chemicals, along with new corrosion monitoring techniques. In our offshore asset, a large maintenance optimization project was kicked off in 2023 that will ensure all the right maintenance is being performed at the optimal intervals. This review will conclude in 2024.

Outlook

Every year, we assess any occurrences of spills and use any “lessons learned” as a basis for improving our process safety in the coming years. For the significant spill in Romania in 2023, lessons learned included reviewing the risk ranking of pipelines crossing environmentally sensitive areas, reviewing pipeline testing procedures, and reassessing the methodology for inspecting aging pipelines. In 2024, the OMV Group aims to prevent process safety events at all our sites across the globe, ulti-

mately resulting in the reduction of spills. Read more in [Process Safety](#).

Waste

Our production activities generate solid and liquid waste, including hazardous waste such as oily sludge, waste chemicals, and catalysts. Examples of non-hazardous waste include excavated soil, as well as mixed municipal waste, paper, and metal.

In addition, as a producer of plastics, we are deeply aware of the issue of plastic waste. Too often, unmanaged plastic waste is dumped in unsanitary landfills or burned, therefore increasing the risk of leakage into waterways, lakes, or oceans and thus causing negative impacts on the environment, marine life, and, potentially, human health. This section of the Sustainability Report focuses on waste management in our operations. For more on end-of-life waste, please see the focus area [Circular Economy](#).

Specific Policies and Commitments

According to OMV’s Environmental Management Standard, all OMV Group businesses and activities are required to identify and use the least hazardous material option and to minimize both the use of raw materials and the subsequent generation of waste. The following hierarchy is applied to controlling waste: prevention, preparation for reuse, recycling, other recovery (e.g., energy recovery), and, lastly, disposal in a controlled manner. The disposal of liquids in landfills and the burning of solid and liquid materials in open burning pits or any other location are not permitted.

The OMV Group’s Environmental Management Standard further requires that environmental and social components be identified for the entire life cycle of facilities, including decommissioning and abandonment, so that any future adaptation measures can be identified and planned for. The needs of local communities, including indigenous peoples, are incorporated and addressed throughout all phases of the project life cycle, including during decommissioning or abandonment.

Management and Due Diligence Processes

Application of Best Practices

International industry best practice is applied for the management and treatment of waste, including drilling waste. Where existing local, regional, or national waste management facilities are inadequate, OMV supports third parties in developing their capability.

Recycling

Waste is recovered and recycled where possible, including during site closure and decommissioning. If recycling is

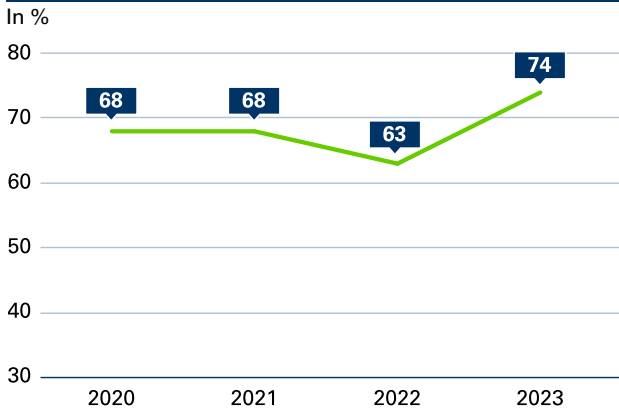


not possible, all waste is processed and/or disposed of only in licensed facilities or via reputable licensed contractors. Waste contractors are regularly audited.

2023 Actions

The following key activities were carried out across the Group in 2023:

Waste Recovery or Recycling Rate



- ▶ 81% of OMV’s total waste comes from OMV Petrom. OMV Petrom continued to work on site restoration at the remaining five depots in Constanța, Zalău ANRS, Iași, Oradea, and Găești. At the Zalău ANRS, Oradea, and Găești depots, the restoration works were finalized in 2023. Over the past few years, 42 former fuel terminals have already been restored, with sites having been remediated to initial preoperational state. In addition to the 249,575 m³ of soil/subsoil contaminated with petroleum products generated and treated over previous years, around 53,372 m³ of additional contaminated soil was treated in 2023. The treatment is performed using site-specific methods in line with best practice (e.g., bioremediation technologies off site and on site with injection). We achieved a recovery rate of 99% for the contaminated soil treated, which we then used for on-site backfills or directed to other authorized locations. We performed periodic monitoring during and after site rehabilitation, as requested for each site by environmental authorities. The site status (e.g., land covered by grass, soil compaction) is monitored quarterly for one year after our works are finalized. The decontamination work on the former petroleum products terminal in Constanța was carried out in close collaboration and alongside the archaeological research conducted by the Museum of National History and Archaeology Constanța (MINAC). This was done according to national legislation, and due to the site’s high archaeological potential. During the archaeological survey, many artefacts of historical significance were also discovered.

- ▶ To celebrate World Environment Day (WED), which takes place annually on June 5, OMV Tunisia launched the #BeatPlasticPollution campaign in Gabès and the south of Tunisia where it operates. Some 25 people from corporate volunteering, including members of the OMV Tunisia leadership team, were present at the beach in Gabès to participate in the “Run and Plog” activities jointly organized by OMV and other public sector institutions and local non-government organizations. Participants engaged in a plastic waste collection rally. The Gabès coastline is home to a vulnerable ecosystem in the Mediterranean with increased interest in preserving marine biodiversity (e.g., endangered turtle species). From Gabès, we moved to our sites in the desert of Tataouine. Another cleaning campaign was held in the heart of the desert, where Waha CPF, Nawara CPF field teams, and contractors gathered to pick up littered plastic. Two permanent containers were also placed on the road to allow travelers to dispose of plastic bottles in an adequate way.

Outlook

As part of our Sustainability Strategy 2025, we plan to increase the reuse and recycling of waste from operations. Over the coming year, we plan to review the Waste Management Plans across the OMV Group.

Biodiversity

Biodiversity supports human and societal needs, including food and nutrition security, energy, development of medicines and pharmaceuticals, freshwater, and clean air, which together underpin good health. It also supports economic opportunities and leisure activities that contribute to our overall well-being. Biodiversity conservation provides substantial benefits, such as clean, consistent water flows, protection from floods and storms, and a stable climate. The loss of biodiversity is perilous, and its consequences are immediate.

In December 2022, the Kunming-Montreal Global Biodiversity Framework (GBF) was adopted with the objective of taking urgent action to halt and reverse biodiversity loss, thereby putting nature on a path to recovery by 2030. Accordingly, the EU’s biodiversity strategy for 2030, which is a comprehensive, ambitious, and long-term plan to protect nature and reverse the degradation of ecosystems, aims to put Europe’s biodiversity on a path to recovery by 2030 and contains specific actions and commitments.

Specific Policies and Commitments

The OMV Group is committed to preserving and restoring biodiversity and ecosystems in alignment with the post-2020 Global Biodiversity Framework (GBF) and the EU’s biodiversity strategy. The OMV Group’s Environ-



mental Management Standard and Environmental Impact Assessment Procedure state that all OMV activities must be conducted in such a way as to cause minimal disturbance to protected areas and to local flora and fauna.

Management and Due Diligence Processes

Risk Assessments

Observed or predicted direct and indirect impacts on biodiversity and ecosystem services (BES) are described and analyzed in environmental impact assessments. Through these impact assessments, the presence of nationally or globally endangered species and nationally or internationally recognized protected areas are identified.

Biodiversity Management Plans

OMV is in contact with Ipieca's Biodiversity Task Force, which issued a guide on how to develop biodiversity action plans in 2022. OMV aims to develop Biodiversity Management Plans based on this guide for all operations and projects where significant risks are identified.

Mitigation and Rehabilitation

In the event of significant observed or predicted impacts, we apply the mitigation hierarchy, and action planning gives priority to avoidance and minimization over the restoration and offsetting of the impact. Mitigation measures include, for example, the rerouting of pipelines or scheduling projects during seasons when the impact on breeding populations can be avoided.

An example of good practice in biodiversity management can be taken from the Berling development project (formerly Iris Hades) in offshore Norway. The aim was to avoid any damage to sensitive cold-water coral. Building on available know-how and technology, biodiversity screening and baseline studies were executed as part of the environmental impact assessment. The mitigation hierarchy was applied by selecting the well location, template location, and pipeline routing as far away as possible from any coral colonies. The best available technologies were utilized to minimize any impact on the environment.

In 2023, OMV Petrom continued the cleaning, remediation, and ecological reconstruction works for five former fuel terminals (for more information, see [Waste](#)). During this project, we performed periodic monitoring during and after site rehabilitation, as requested for each site by the environmental authorities. Examples of this monitoring include taking samples of soil/subsoil and checking the groundwater in each phase of the project (e.g., excavation, bioremediation). This is carried out on a quarterly basis for one year after our work is finalized.

Working with Third Parties

OMV works locally with third parties on restoration and rehabilitation projects. For example, in 2023, we supported the following biodiversity-related projects in New Zealand as part of our wider Stakeholder Engagement and Corporate Social Responsibility portfolio. New Zealand has the highest number of threatened indigenous species in the world.¹⁹

- ▶ Partnership with Ngāti Koata and the Department of Conservation for the Moawhitu lake and wetland regeneration project
- ▶ Partnership with the Rotokare Scenic Reserve Trust, creating a predator-free reserve in South Taranaki, thereby protecting the endemic hihi bird (stitchbird) in this reserve located just outside of New Plymouth
- ▶ Partnership with the local hapū at Pohokura to restore and protect the wetlands on site

2023 Actions

- ▶ We initiated a Group-wide project to establish a nature and biodiversity framework for the OMV Group, as part of which we are applying the Taskforce on Nature-related Financial Disclosures' (TNFD) Locate, Evaluate, Assess, and Prepare (LEAP) approach to identify priority sites, evaluate impacts and dependencies, assess risks and opportunities, and prepare to respond to nature-related risks and opportunities and to report on material nature-related issues.
- ▶ We again took steps to prevent impacts on sensitive species and ecosystems. For instance, during our exploration activities at the Wittau site in Austria, a range of technologies were used to mitigate impacts on insects and birds as much as possible. As the target location was positioned below a sensitive area, we moved the drill site to a less sensitive place and applied directional drilling technology. Insect-friendly lighting was used during the whole drilling operation. For well testing, enclosed incinerators were used instead of open flares to minimize disturbance to the local ecosystem.

Outlook

In 2024, we plan to apply the TNFD LEAP approach to all our operated sites (excluding filling stations) and develop the processes for consistent biodiversity management in our operated sites. Subsequently, we plan to extend the scope to value chain impacts. In 2024, OMV will also continue supporting local biodiversity initiatives such as the Ngāti Koata and the Department of Conservation for the Moawhitu lake and wetland regeneration project, and the partnership with the Rotokare Scenic Reserve Trust in New Zealand.

¹⁹ Source: [Environment Aotearoa 2019, Ministry for the Environment](#)



Non-GHG Air Emissions

Exposure to air pollution can affect everyone's health. It is the greatest environmental threat to public health globally. The World Health Organization (WHO) recently issued stricter recommendations on safe air pollution levels in a bid to curb the millions of premature deaths and loss of millions more healthy years of life caused by air pollution.

Specific Policies and Commitments

The OMV Group's Environmental Management Standard stipulates that all OMV Group businesses and activities must understand the impacts of their air emissions on local and regional ambient air quality. Air emissions are required to be monitored, controlled, and minimized in order to mitigate the potential effects on human health and harm to the environment. There are strong legal requirements surrounding air emissions in the EU, which is where all our refineries are located. For instance, the EU does not permit the use of fuels containing sulfur to prevent transport-related SO_x emissions. Sulfur has a significant impact on health, for example sulfur dioxide affects the respiratory system, particularly lung function, and can irritate the eyes. It causes coughing and mucus secretion and aggravates conditions such as asthma and chronic bronchitis.

Management and Due Diligence Processes

Monitoring

In all our refineries, we monitor emissions of pollutants such as sulfur oxides (SO_x), nitrogen oxides (NO_x), carbon monoxide (CO), particulate matter/dust, and non-methane volatile organic compounds (NMVOCs) as required by European and national legislation and the respective permits. If emissions are found to be in excess of nationally prescribed limits and/or limits defined in a permit, additional monitoring stations are installed, and measures are implemented. For example, in OMV Tunisia, pollutant emissions from combustion processes such as NO_x or CO have caused great public concern due to their impact on health and the environment. The past decade has witnessed rapid changes both in the regulations for controlling gas turbine emissions and in the technologies used to meet these regulations. Monitoring of these emissions is typically performed with a Continuous Emissions Monitoring System (CEMS), which is a packaged system of gas analyzers necessary for the determination of gases and particles to stay within Tunisian emissions regulations. Because of this, we installed a pollutant analyzer on the turbines at GTP.

Prevention and Treatment

OMV has long implemented technologies to reduce emissions, such as installing end-of-pipes, abatement technolo-

gies, and floating roofs to reduce emissions of VOCs. Over the past years, we have focused on upgrading such technologies to ensure that they are still effective and reducing emissions. For instance, a SNO_x flue gas cleaning plant at the Schwechat refinery was commissioned. With the SNO_x Refurbishment of Wet Sulfuric Acid (WSA) program, in which a solution patented by OMV (two-layer PFA film structure with monitoring system) was implemented, both the reliability and the availability of the flue gas cleaning system could be increased. The flue gas cleaning plant at the Schwechat refinery is used for the removal of dust, and for denitrification and desulfurization of flue gases from the two power plants before they are emitted via the stack. As a first process step, dust is separated via electrostatic precipitators. During selective catalytic reduction, nitrogen oxides (NO_x) are converted into free nitrogen (N₂) and water (H₂O) by injecting ammonia (NH₃). In the third step, sulfur dioxide (SO₂) is oxidized with the aid of a catalyst and reacts with residual moisture to form gaseous sulfuric acid. Finally, the sulfuric acid is condensed in the WSA by means of air cooling and heat recovery. The sulfuric acid obtained in this way is then either sold or used for pH adjustment within the refinery. By applying these process steps, 98% of dust can be separated, more than 96% of sulfur can be recovered, and around 95% of NO_x emissions can be prevented. With the catalyst update, a NO_x reduction rate of around 95% is now achievable again. At other emissions sources at the Schwechat refinery, we continued our work on reducing emissions to air. The installation of a fourth electrical field at the existing electrostatic precipitator of the FCC plant aided the significant reduction of dust emissions.

2023 Actions

The following key activities were carried out across the Group in 2023:

- ▶ In Norway, we included the reduction of emissions to air in our drilling operations by incentivizing emissions reduction measures in our drilling contracts. As a result, in the Velocette drilling campaign, selective catalytic reduction was installed at the engine exhausts to reduce NO_x emissions by approximately 74%.
- ▶ In 2023, Borealis put a wastewater treatment plant in Stenungsund into operation. The new wastewater treatment unit will reduce the emission of contaminants to the sea and will also minimize VOC emissions to the air, since all treatment steps are covered and enclosed. The new unit includes buffering in two tanks and physical and chemical treatment of the water in Dissolved Nitrogen Flotation (DNF) units. The off-gas from the different steps will be treated by adsorption in carbon filters.



- ▶ OMV Petrom continues to restore sites as it has done previously for former fuel terminals or abandoned facilities. The best practices applied include the use of a water spray curtain, dust protection nets, forced ventilation, off-site bioremediation of the most heavily contaminated soil, and periodic communication with the community and the authorities. In periods of strong wind, OMV Petrom always minimizes dust-producing activities, wets surfaces more thoroughly, and covers the surfaces of on-site biopiles. This subsequently reduces the impact on the air quality. Regarding odor and dust control during soil excavation and transport, OMV Petrom has optimized transportation routes to minimize disturbance to the community, and always secures loads and cleans the wheels at the site exit to avoid the contamination of public roads, and sprinkles the access roads on site.
- ▶ In OMV Petrom R&M, the leak detection and repair (LDAR) program in accordance with BAT Reference Documents (BREF) continued to be carried out at the Petrobrazi refinery. The objective of this program is to reduce fugitive emissions from the plant's technical equipment (e.g., vents, flanges). We continued the program, targeting accessible fugitive emissions sources from coking, the catalytic reforming complex, catalytic cracking and GASCON units, as well as the tank park including the screening of inaccessible sources. 48% of the leakages identified could be fixed. The program will run periodically, according to a schedule, in all Petrobrazi installations.

Outlook

In 2021, we launched a pilot project to develop an Odor Management Plan for one representative facility at an E&P asset of OMV Petrom. Due to legal uncertainties, the pilot project could not be finalized in 2023. As soon as requirements are clear, we will finalize the development and implementation of the Odor Management Plan.

Circular Economy

Material Topic: Circular Economy

Decoupling economic growth from resource depletion by recovering and reusing products or waste to make new materials and products, such as recycled or biobased polyolefins

Key GRI

- ▶ GRI 306: Waste 2020

NaDiVeG

- ▶ Environmental concerns

Most relevant SDGs



The OMV Group believes that transitioning to a circular economy will significantly reduce its impact on the environment and its GHG emissions. A circular economy decouples economic growth from resource depletion by keeping materials, resources, and products in circulation and by preventing the leakage of these resources into the environment as much as possible, particularly into the oceans and landfill sites. Transitioning from a linear “take-make-waste” economy to a circular “reduce-reuse-recycle” economy will also help curb global warming. Through the efficient use of precious resources, it is possible to recover and reuse by-products or waste by transforming them into new materials and products. This approach has the poten-

tial to greatly decrease associated emissions along product value chains.

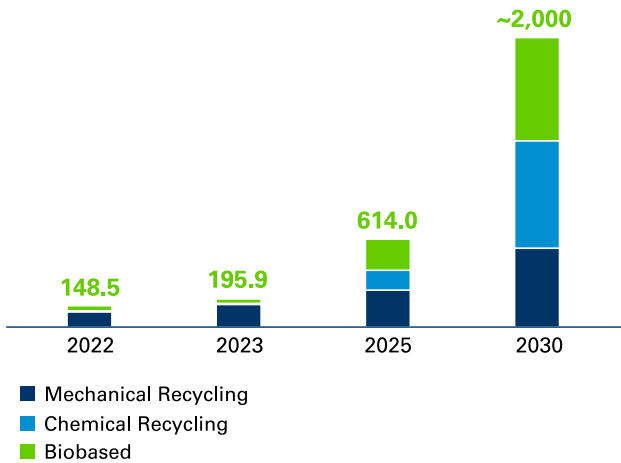
In addition to recycling plastic waste and reusing it to make new materials and products, the OMV Group also sees plastics based on renewable feedstock as playing a key role in the circular economy. The use of renewable feedstock lowers the demand for fossil feedstock and considerably decreases carbon footprints. The OMV Group focuses on utilizing waste biomass, such as residual forestry matter that is not in competition with the food and feed chain, and thus does not require the use of additional natural resources such as land or water. If then recycled,



such second-generation bioplastics can play a vital role in a sustainable, circular economy and reduce greenhouse gas emissions on two fronts, cutting emissions in the input and in the end-of-life phase.

Sustainable polyolefins production capacity

In kt



The creation of a truly circular economy also has wider societal implications. It will provide economic benefits to

society by reducing the major financial burden of ineffective waste management systems and pollution management, and will create new business opportunities and employment at various stages along the value chain. A circular economy will also result in better living and working conditions, and an overall cleaner environment.

Following the acquisition of a majority share in the polyolefins producer Borealis in 2020 and the consolidation of Borealis into the C&M segment within OMV, circular economy is now a cornerstone of the OMV Group's Strategy 2030. By 2030, the aim is to establish a production capacity of 2 mn t of sustainable polymers and chemicals per year, i.e., polyolefin products or other chemicals derived from plastic waste (either through a mechanical or chemical recycling process) or from biobased feedstock. In parallel, the use of fossil fuels will decrease, as the aim is to reduce oil and gas production levels to around 350 kboe/d and reduce crude distillation throughput by 2.6 mn t by 2030. These fossil fuels would ordinarily also be used to make polymers; instead, more polymers will be based on recycled waste or renewable resources such as biobased feedstock. In 2023, the OMV Group established a production capacity of 195.9 kt of sustainable (including recycled and biobased) polyolefins and other chemicals.



Target 2025

- ▶ Establish production capacity of 600 kta sustainable (including recycled and biobased) polyolefins and other chemicals

Target 2030

- ▶ Establish production capacity of approximately 2,000 kta sustainable (including recycled and biobased) polyolefins and other chemicals

Status 2023

- ▶ Production capacity of 195.9 kta established

Most relevant SDGs



SDG targets:

8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programs on sustainable consumption and production, with developed countries taking the lead

9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

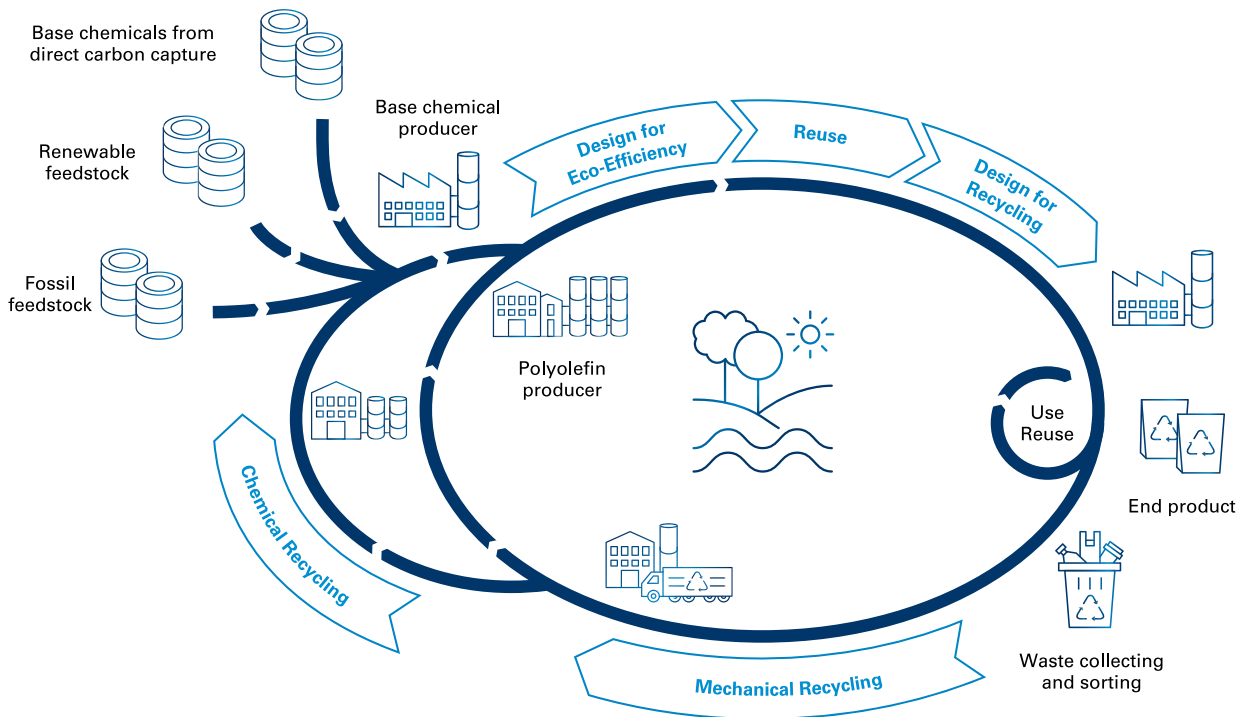
12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution



Through its subsidiary Borealis, the OMV Group is promoting the circular economy across the industry by launching initiatives and participating in activities and platforms that drive recycling options and solutions. Borealis is a core partner in the New Plastics Economy (NPEC), a member of the EU's Circular Plastics Alliance, and, as a member of the Business Coalition for a Global Plastics Treaty, supports the development of the UN treaty to end plastic pollution.

The OMV Group's goal is to take on a leading position in the circularity of plastics and to offer its customers innovative solutions that advance the circular economy. In order to transition to a truly circular and carbon-neutral economy, a variety of solutions will be required to keep products circulating at their highest value, quality, and utility over many lifetimes. This can only be achieved by using a full suite of different, complementary technologies that come into play in a cascading way. This integrated approach is embodied in the Circular Cascade Model.



Design for Eco-Efficiency

This means adopting a fundamental design mindset that starts with minimizing the use of resources during production and maximizing the product's lifetime value. Borealis' foam business is a prime example of eco-efficient polyolefin solutions. This business line is used in industries such as packaging, sports, transportation, 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.

In 2023, Borealis increased its participation in Bockatech EcoCore[®], a patented manufacturing technology for foamed articles that uses Borealis' HMS (high melt strength) polypropylene. The aim is to enable a greater number of global customers, value chain partners, and supply chain players to benefit from a broader range of lighter foam-based applications, primarily in the packaging sector.

Reuse

Reuse is a core element of circularity, as circular change starts first with reduction and reuse, before recovery and recycling close the loop. This step aims to maximize and extend the lifetime of products that are already in circulation. This will be fostered by leveraging knowledge of plastic use and processing, and by establishing systems and business models designed to encourage reuse.

Partnerships are vital for broadening knowledge about reuse activities and ensuring sustainable growth. In 2023, Borealis further strengthened its commitment to the reuse principle by engaging in several collaborative projects with value chain partners. For example, Borealis joined the 4everPack consortium, a two-year research program 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 Recycling

A key challenge in increasing the recycling of plastics is that many products are not intentionally designed for recycling in the first place. For example, flexible packaging often uses layers of different materials, which makes separating and recycling the plastic content extremely difficult. The challenge is to create packaging that uses only a single material, while maintaining or even improving performance. Thus, Design for Recyclability (DfR) emphasizes that a product must be designed with the intention that it can be easily collected, sorted, and recycled. DfR is an important aspect of eco-efficient design and takes a life cycle approach by carefully and intelligently balancing the production, use, and after-use phases of a product.

Inspired by the EU Commission's vision for increased levels of recycling, brand owners worldwide are committing to developing 100% recyclable, reusable, or compostable packaging solutions by 2025. To further DfR, Borealis developed and actively promotes its 10 Codes of Conduct for polyolefin packaging designers. These help designers develop packaging materials that can be successfully recycled and used again, either for the same application or in other products. The Codes 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 and collaborates with value chain partners to expand its range of fully recyclable, mono-material solutions. At the Plastics Recycling Show Europe 2023, Borealis launched a new mono-material pouch containing over 95% polypropylene (PP), which is fully designed for mechanical recycling. This could help meet the ambitious recycling and waste reduction targets set out in the EU's Packaging and Packaging Waste Regulation, as well as eco-modulation criteria for EPR programs.

Borealis is an active member of the HolyGrail 2.0 (HG 2.0) digital wan already to more than 170 members, including over 40 brand owners and retailers. This initiative, which is driven by the AIM (European Brands Association) and powered by the Alliance to End Plastic Waste, is a pilot project working to prove the technical viability of digital watermarks (i.e., almost imperceptible postage stamp-sized codes on the packaging) for the accurate sorting of packaging waste as well as to prove the economic viability of the business case on a large scale. In 2023, digital watermarking initiative Holy Grail 2.0 entered the final phase of research and development trials to validate the technology

at the highest technical level and prepare it for market entry. Borealis will perform recycling tests on the PP film and polyethylene flexibles generated by the sorting trials conducted by Hündgen Entsorgung, who is using the packaging volumes put on the market by Holy Grail 2.0 brand company members in Germany and Denmark.

Closing the Loop

The potential for product reuse also has its limits. This is when the steps of recovery and recycling come into play in the circular cascade model in order to close the loop on plastic waste. The OMV Group is fully committed to broadening the range of circular products. It therefore ranks the development of mechanical and chemical recycling equally, as they are seen as complementary to each other. The Group's ambitions in the area of mechanical recycling lie with its subsidiary Borealis, which continues to work with partners to develop new technologies for mechanical recycling, with the objective of delivering products with near-virgin quality where possible, and with the lowest carbon footprint (read more in [Mechanical Recycling](#)).

Chemical recycling can extract value from residual waste streams from mechanical recycling and mixed plastic waste streams, which would otherwise be sent to landfill or be incinerated. This process involves changing the chemical composition of the plastic. The resulting synthetic pyrolysis oil can then be used again to make any type of plastic or product. Since it is practically comparable to virgin plastics, it can also serve a more diverse field of applications (read more in [Chemical Recycling](#)).

There is rising demand for both high-quality recyclates and product-based solutions for renewable feedstocks. The OMV Group is committed to supporting producers and brand owners in meeting environmental and regulatory challenges and is therefore continuously developing its circular and renewable product offering. The wide range of mechanically recycled products falls under the Borcycle™ M umbrella, and chemically recycled product solutions are in the Borcycle™ C portfolio. Borealis also offers and markets circular polyolefin products based on renewable feedstock: Bornewables™ (read more in [Renewable Feedstock](#)).

Borvida™ represents the portfolio of circular base chemicals. Borvida B, from non-food waste biomass, and Borvida C, from chemically recycled plastic waste, are the first products in the portfolio. In the future, it will be expanded to include Borvida A, from atmospheric carbon capture.

The OMV Group is also committed to reducing plastic leakage. In 2017, Borealis initiated Project STOP (Stop Ocean Plastics) in Indonesia. Co-founded with SYSTEMIQ, this program aims to achieve zero leakage of waste into



the environment and increase plastics recycling. Project STOP focuses on the regions with the highest leakage rates and, with the support of industry and government partners, works hand in hand with cities to create leak-free, low-cost, and more circular waste management systems (read more in [Community Investments](#) and on the [Project STOP website](#)).

Governance

The circular economy has been on the OMV Group's agenda since 2015, and has become even more important since the acquisition of a majority share in Borealis in 2020. Several aspects of the circular economy, in particular mechanical and chemical recycling, are now jointly being developed further.

With the new Strategy 2030, which was introduced in March 2022, OMV emphasized once again the importance of a circular economy for a sustainable chemicals business going forward. This is the reason why the OMV Group plans to implement a fundamental strategic shift from a linear toward a circular business approach. The C&M business segment will act as the growth engine of the Company. It is to be substantially strengthened, expanded, and diversified, with the aim of developing into a leader in high-quality polyolefin solutions, as well as renewable and circular chemicals and materials. In order to implement this strategy, a new target operating model was defined. This new organization came into effect in 2023 and forms the backbone of the strategy execution.

The C&M segment continues to cover the entire chemicals value chain, including responsibility for capturing value from the circular economy. As one of the focus areas in the C&M segment, Circular Economy forms a separate business unit. This unit covers business development activities, as well as activities related to circular feedstock.

The department covering the further development of OMV's ReOil[®] technology is now allocated to the new corporate unit Innovation & Technology, and with that has moved into the direct responsibility of OMV's CEO. Among other things, the new licensing business will also be managed by a separate department within this unit in order to license sustainable technologies developed by OMV to the wider industry. The establishment of a dedicated corporate function focusing on innovation and technology under the leadership of the CEO is based on the idea that the transformation will be fueled by a high degree of innovation and new technologies, while maximizing the value of the life cycle management of current technologies and the new organization will strengthen these capabilities across the Group.

Most of the OMV Group's circular economy initiatives, especially those regarding mechanical recycling and circular products, are run by Borealis. To accelerate its transition to a circular model, Borealis has a dedicated department called Circular Economy Solutions and New Business Development. This department leads the execution of Borealis' circular economy strategy based on several thematic project focus areas, such as recycling or design for recyclability, in addition to assisting all other Borealis business areas in their industry-specific transitions. A dedicated business team is fully focused on short- to mid-term business growth opportunities in mechanical recycling, including Borealis' mtm plastics and Ecoplast businesses. The Circular Economy Innovation Studio at Borealis' Innovation Headquarters in Linz, Austria, remains Borealis' 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 that satisfy today's needs.

In 2018, Borealis launched a dedicated communication platform, EverMinds[™]. This platform serves to streamline all of Borealis' circular economy-related activities in order to boost their impact and promote familiarity with the topic. The platform facilitates deeper collaboration between Borealis and its partners in the interest of developing innovative and sustainable polyolefin solutions based on the circular model of design for circularity, reuse, and recycling. Further details on Borealis' specific initiatives, management, governance, and development of circular products can be found in the [Borealis Annual Report](#).

The OMV Group has a variety of initiatives in place to raise awareness about recycling among its employees, specifically with regard to recycling of plastics. For instance, informative internal blogs are regularly published, and expert talks are organized with the aim of better informing employees on how to identify plastic recycling codes and the etiquette on how to correctly separate different types of plastic waste so that they will eventually be recycled.

From June to September 2023, the newly launched Sustainability Academy provided a series of online training courses on circular economy and sustainable products. The learning path was designed to offer interested colleagues from all divisions information on and insights into the circular economy and give a more detailed overview of ongoing projects related to this material topic within the OMV Group. The training package included online learning material as well as several internal and external instructor-led sessions that focused not only on introducing the concept of the circular economy, but also on providing a deeper dive into topics such as mechanical and chemical recycling. In addition, external factors like sustainability



certifications and EU policies and regulations were introduced and discussed. Around 630 participants from across the OMV Group registered for the instructor-led sessions, emphasizing employees' interest in this topic.

Mechanical Recycling

The diverse properties of plastic enable a plethora of products and applications that make daily life safer, more mobile, and more eco-efficient. These properties allow us to ensure more sustainable living, while the global population grows and demand for plastic increases. However, within the linear economic model, plastic products are made, used, and then discarded. Continuing with this model will lead to more plastic waste and environmental pollution, while putting pressure on the planet's limited resources.

Borealis is one of the world's leading providers of advanced and sustainable polyolefin solutions and a European front-runner in polyolefins recycling. OMV and Borealis are actively developing enhanced technologies to efficiently recycle two key plastic types, polyethylene (PE) and polypropylene (PP), thereby providing an alternative to the linear "take-make-waste" economy. Mechanical recycling is one such technology. With mechanical recycling, the plastic is cleaned, mechanically flaked, melted down, and processed into plastic granulate. In an ideal scenario, this material can be used to make the same products again, i.e., a detergent bottle becomes a new detergent bottle. No change is made to the chemical structure of the plastic, which is why the feedstock must be sorted properly and even split into different colors.

Borcycle™ M is Borealis' transformational technology for mechanical recycling, which gives polyolefin-based post-consumer waste a new lease of life. Using advanced mechanically recycled products out of the Borcycle™ M portfolio ensures a lower carbon footprint compared to using fully fossil-fuel-based products. Through Borealis and its subsidiaries (mtm plastics, Ecoplast, and a demo plant operated by a joint enterprise in Lahnstein), OMV operates three mechanical recycling plants. The demo plant in Lahnstein is a joint undertaking by Borealis, TOMRA, and Zimmerman, and was commissioned at the beginning of 2021.

Borealis currently runs four mechanical recycling plants in Austria and Germany with a total capacity of around 100 kt p.a.

- ▶ mtm plastics GmbH, a leading German recycler of post-consumer polyolefins, was acquired in 2016. The company runs two plants and produces up to 70 kt p.a. of regranulate.

- ▶ Ecoplast Kunststoffrecycling GmbH in Austria was acquired in 2018. The company processes post-consumer plastic waste from households and industrial consumers into high-quality recyclate destined primarily for the plastic film market. The plant has a capacity of 30 kt p.a.
- ▶ A demo plant for advanced recycling was established in Germany in 2021 as part of a partnership with TOMRA, a Norwegian collection and sorting machine manufacturer, and Zimmermann, a German waste management company. It is one of the world's most advanced mechanical recycling plants and implements the Borcycle™ M technology.

In 2022, Borealis started looking into the development of a commercial-scale advanced mechanical recycling plant in Austria, based on the Borcycle™ M technology. The decision was supported with positive feedback from the market on the recycled polyolefins delivered by the demo plant in Lahnstein, Germany, using the same technology.

The acquisition of Rialti S.p.A. in November 2023 increases the current sustainable polyolefins production capacity by a further 50 kt. As soon as the acquisition of Integra Plastics AD, which was announced in November 2023, is completed, another 20 kt of recycling capacity will be added to Borealis' advanced mechanical recycling portfolio.

Management and Due Diligence Processes

Certification

The Borealis recycling businesses mtm plastics and Ecoplast are certified according to the Europe-wide EuCert-Plast certification program for companies that recycle post-consumer plastic waste.

2023 Actions

- ▶ In January 2023, Borealis announced that its subsidiary Ecoplast Kunststoffrecycling GmbH, a mechanical polyolefin recycler based in Wildon, Austria, had received the International Sustainability and Carbon Certification (ISCC PLUS). ISCC PLUS is a global certification that covers the entire supply chain, from raw material to final product, guaranteeing compliance with the highest standards for ecological and social sustainability, greenhouse gas emissions savings, and traceability. Ecoplast is the first mechanical polyolefin recycler in Austria to achieve the certification.



- ▶ In 2023, Borealis presented a new mono-material pouch containing over 95% PP and designed for recycling, developed in collaboration with value chain partners. When processed within dedicated mechanical recycling streams for PP, this mono-material pouch yields greater volumes of high-quality recyclate fit for use in non-food, flexible PP packaging applications. It is thus the ideal format with which to fulfil the principal aims of the EU's Packaging and Packaging Waste Regulation (PPWR): improve recyclability, grow the market for recycled content, and reduce packaging waste. As a mono-material PP packaging format, it can help meet ambitious recycling and waste reduction targets set forth in the PPWR, as well as eco-modulation criteria for Extended Producer Responsibility (EPR) programs.
- ▶ In June 2023, Borealis acquired Rialti S.p.A., a leading European producer of recycled polypropylene compounds. The transaction was successfully completed in November 2023. Based in Italy, Rialti is one of the European market leaders specialized in the production of sustainable polypropylene (PP) compounds with a focus on mechanically recycled PP feedstock from post-industrial and post-consumer waste. The investment will strengthen Borealis' circular portfolio, adding 50 kt of recycled compounding capacity and meeting growing customer demand for sustainable solutions.
- ▶ In November 2023, Borealis announced the signing of an agreement to acquire a 100% stake in Integra Plastics AD, an advanced mechanical recycling player based in Bulgaria. Integra Plastics AD operates a modern advanced mechanical recycling plant built in 2019 with state-of-the-art equipment. Integra Plastics has the ability to transform post-consumer waste into high-quality polyolefin recyclates suitable for demanding applications. This investment will add more than 20 kt of recycling capacity to Borealis' advanced mechanical recycling portfolio.
- ▶ In July 2023, Borealis' PO compounding site in Monza, Italy, received ISCC PLUS certification, as did its mechanical recycling plant mtm plastics in November. Earlier Borealis had achieved the milestone of having all of its European PO operations and PO compounding sites (with the exception of the newly acquired Rialti in Italy) certified, in addition to the Renasci recycling sites in Ostend, Belgium, and Ecoplast in Austria.

Outlook

In 2024 and over the coming years, OMV will focus on making further investments in Borealis' mechanical recycling production capacities to enable the commercial ramp-up of its circular portfolio to continuously progress toward its targets.

Chemical Recycling

Chemical recycling comes into play when mechanical recycling reaches its limits, for example in products where multiple types of plastics are used together. While most rigid plastic waste can be processed quite effectively through mechanical recycling, flexible materials (e.g., plastic film) are still predominantly incinerated or sent to landfill. Chemical recycling is the only way of overcoming this challenge. It involves altering the chemical composition of the plastic to produce pyrolysis oil from plastic waste. This synthetic oil can then be used to make any type of plastic or product. Because the quality of these products is effectively comparable to virgin plastics, they can also be used in tightly regulated areas such as the food and medical industries. Plastic waste thereby becomes a valuable raw material.

OMV has been exploring the potential for utilizing post-consumer plastics, i.e., polyethylene, polypropylene, and polystyrene, through chemical recycling since 2011. The Austrian Research Promotion Agency has also contributed to this effort with subsidies covering part of the project investment. The first test facility was launched in 2013. In 2018, the next-level test facility – the ReOil® 100 pilot plant – began fully refinery-integrated operation with a processing capacity of up to 100 kg/h and a production capacity of up to 100 l/h of pyrolysis oil.

In 2021, the final investment decision (FID) was made to build a prototype of a ReOil® demonstration plant at an intermediary refinery scale with a design capacity of 16 kta. This plant, called ReOil® 2000, will be fully operational in 2024. To finance this project, OMV entered its first-ever green loan agreement. This is aligned with the green loan principles and is based on a green and project-specific external due diligence appraisal, called a second party opinion, and a project-specific green financing framework. The plant will be fully integrated within the petrochemical production units at the Schwechat refinery in Austria, enabling OMV to guarantee the best use of resources, maximum efficiency, and the highest industrial safety standards, while creating around 50 new jobs. It represents a crucial step in developing ReOil® into an industrial-scale chemical recycling technology with a processing capacity of up to 200 kta.

The pyrolysis oil produced in the ReOil® plant is further processed into monomers in the refinery's steam cracker to produce high-quality base chemicals for the plastics industry. At Borealis, these monomers are then converted into high-grade polymers. Borcycle™ C represents the portfolio of chemically recycled polyolefins that Borealis is offering to the market. These products are suitable for very demanding applications such as food contact materials. Borcycle™ C is not only the label for the portfolio of chemically recycled products offered to its customers, but also the designated name for Borealis' own technology solutions for chemical recycling. Along with



Borcycle™ M, in which “M” stands for mechanical recycling, it forms the Borcycle™ portfolio of all-round polyolefin solutions for plastics circularity based on the Borcycle™ technology suite launched in 2019.

Management and Due Diligence Processes

Selection of Feedstock

The ReOil® facility can process different forms of plastic waste, ranging from household waste to waste from commercial and industrial sources. The main feedstocks are polyethylene (e.g., films), polypropylene (e.g., food packaging and car parts), and polystyrene (e.g., packaging and insulation materials). Currently, the recycled feedstock is sourced almost exclusively from Austrian waste sorting facilities. With regard to the ambition of developing an industrial-scale ReOil® plant and the resulting need for more feedstock, the geographical scope for feedstock sourcing will be expanded and countries neighboring Austria will be explored.

Technology

Plastic is an excellent heat isolator with poor heat transfer properties, compared with glass or metal. These properties, which make plastic desirable in everyday life, also make it difficult to break down. OMV's proprietary ReOil® technology is based on pyrolysis, a well-known refinery process during which thermoplastics are first melted and then cracked at a temperature of about 400–450°C. This means that long-chain hydrocarbons are cracked into shorter-chain light hydrocarbons. One of the inherent challenges in pyrolysis stems from the fact that, compared with glass or metal, plastics are notoriously difficult to melt, and once melted, are highly viscous, which impairs the heat transfer necessary for pyrolysis. The ReOil® technology is unique compared to that of competitors because of the use of an innovative heat transfer technology, which allows the viscosity of the molten plastic to be reduced and thus heat transfer to be improved. As a result, the ReOil® process is scalable to industrial scale (up to 200 kta). Thanks to the integration into OMV's refinery in Schwechat, Austria, ReOil® also achieves higher yields than other non-integrated chemical recycling technologies.

Certification

The ReOil® pilot plant and the ReOil® 2000 demo plant are both certified according to the International Sustainability & Carbon Certification (ISCC). ISCC PLUS is a sustainability certification that is well-recognized by all stakeholders in recycled and biobased materials, providing traceability along the supply chain and verifying that companies meet environmental and social standards. Compliance with the certification means that for each ton of circular feedstock fed into the ReOil® plant and replacing fossil fuels, a certain proportion of the output can be classified as circular by using the mass balance approach.

Emissions Reduction

In 2021, OMV commissioned a life cycle assessment (LCA) to determine the CO₂ reduction potential of its ReOil® chemical recycling technology versus incineration. The LCA was conducted by the Fraunhofer Institute for Environmental, Safety and Energy Technology (UMSICHT) and the Fraunhofer Institute for Chemical Technology (ICT) according to ISO standards 14040 and 14044, and independently peer-reviewed by three world-leading institutes. The LCA analyzes the different treatments of one ton of pre-sorted mixed plastic waste on waste-to-gate level, starting with the collection of waste and ending with the production of polymers and energy. The LCA compares two systems ensuring the same outputs: (i) a linear economy, where waste goes to incineration producing thermal energy and electricity, and where polymers are produced from fossil sources, vs. (ii) a circular economy, where these waste streams are chemically recycled, and the same amount of thermal energy and electricity is produced based on the expected future energy mix in Austria. The LCA shows significant benefits of the circular economy system: 34% of CO_{2e} emissions could be saved by 2030 if waste streams that are currently going to incineration are chemically recycled using the ReOil® technology.

2023 Actions

The following key activities were carried out across the Group in 2023:

- ▶ In October 2023, OMV announced the final investment decision to build an innovative sorting plant developed by Interzero, Europe's leading provider of circular economy solutions, to produce feedstock for chemical recycling. For that purpose, OMV and Interzero established a joint venture, in which OMV holds 89.9% of the shares and 10.1% of the shares belong to Interzero. OMV will invest over EUR 170 mn in building this state-of-the-art facility in Walldürn, southern Germany, which will also lead to the creation of around 120 new jobs on site. With a processing capacity of up to 260,000 t of post-consumer mixed waste plastic per year, this fully automatic sorting facility will be the first of its kind to produce feedstock for OMV's chemical recycling on a large industrial scale. The innovative sorting process used in the new facility will make it possible to recover a polyolefin-rich fraction from a waste stream that currently ends up in thermal recycling due to its unsuitability for mechanical recycling. This process has already been tested on an industrial scale and the product has been successfully processed as feedstock in OMV's ReOil® pilot plant. Construction began in Q4 2023 and production is expected to start in 2026. The strategic partnership between OMV and Interzero combines the complementary strengths and capabilities of both parties, with the joint aim of taking another step toward a world without waste.



- ▶ In October 2023, OMV and Wood, a global leader in consulting and engineering solutions in energy and materials markets, signed a mutually exclusive collaboration agreement for the commercial licensing of OMV's proprietary ReOil® technology, following a Memorandum of Understanding that was signed between the two parties in November 2022. The companies will bring the ReOil® technology to the global market together utilizing Wood's proprietary heater technology and will establish a joint technology and engineering delivery team to support clients throughout the whole process of adopting and successfully implementing the technology at their sites. In addition, Wood will work with ReOil® licensees to provide full asset life cycle support globally.
- ▶ In early 2023, Borealis announced the capability to use its proprietary Borcycle™ C chemical recycling process to recycle cross-linked polyethylene (PE) types such as XLPE and PE-X into recycled polyethylene. Thanks to its suitability for high-performance applications, the recycled PE obtained from the pyrolysis process can replace virgin PE in the manufacture of XLPE and PE-X for use in the wire and cable and infrastructure industries respectively. Using ISCC PLUS certified grades in the Borcycle™ C portfolio enables customers to capitalize on circular solutions while at the same time maintaining high application quality and meeting industry standards.
- ▶ Borealis entered into a partnership with Renasci in 2021 to work on the innovative Smart Chain Processing concept, including a plastic to pyrolysis oils process. In 2022, Borealis acquired a minority share in Renasci, which it increased to a majority shareholding of 50.01% in early 2023. The participation in Renasci was further increased in Q4 2023 to approximately 98%. The investment gives Borealis greater access to chemically recycled feedstock, thereby strengthening the Borcycle™ C portfolio.
- ▶ In February 2023, Neste, Borealis, Uponor, and Waste-wise successfully produced pipes made of cross-linked polyethylene (PE-X), which was based on feedstock gained from chemically recycled post-industrial waste plastic from PE-X pipe production using the ISCC PLUS-certified mass balance approach. PE-X pipes are an important contributor to energy-efficient heating and safe plumbing due to their robustness, temperature resistance, and longevity, yet the interconnected polymer chains make them nearly impossible to recycle using conventional recycling technologies. The project shows that chemical recycling can close the circularity loop for hard-to-recycle waste plastic, turning it into high-quality polymer feedstock and enabling the consecutive manufacturing of products with quality and properties identical to those in their previous life.

Outlook

Since the first ReOil® trials in OMV's own laboratory, there has been a lot of ongoing development. The ReOil® 2000 plant will become operational in 2024 at OMV's refinery site in Schwechat, Austria, with a capacity of 16 kta. The next step is the development of an industrial-scale ReOil® plant with a planned capacity of 200 kta. Furthermore, the first ReOil® licenses are due to be launched to the market over the course of 2024, marking an important milestone in promoting circularity and chemical recycling in the industry.

Renewable Feedstock

Together with partners, OMV is actively pursuing the development of industry-scale projects to produce bio-fuels, biochemicals, and bioplastics from renewable feedstock, including waste streams. Waste biomass, such as residual agricultural, forestry, and wood processing matter, or mixed municipal waste are not in competition with the food and feed chain. While the conversion of such waste biomass into high-value products is often technically challenging, the resulting benefits are a significant reduction in CO₂ compared with fossil fuels and local resource utilization that creates value. The biobased feedstock, which is used at OMV's subsidiary Borealis in order to produce sustainable polyolefins, is currently entirely derived from waste biomass such as residual agricultural processing matter or collected waste streams and is not in competition with the food and feed chain. These polyolefins are marketed to the end customer under the portfolio name Borneables™. In this section, the focus is on plastics based on renewable feedstock. For more information on energy products based on renewable feedstock, please refer to [Energy Transition](#).

Management and Due Diligence Processes

Certification

As a global standard for recycled and biobased materials, ISCC PLUS enables traceability along the supply chain by verifying that companies comply with certain environmental and social standards and by establishing a chain of custody. Applying the mass balance approach enables OMV to provide a verifiable basis for tracking the amount of its renewable and chemically recycled raw materials in the value chain. Providing more products that are certified by ISCC PLUS is crucial for the transition to a more circular economy. OMV's cracker in Burghausen was one of the first 20 worldwide to be ISCC PLUS certified for the production of renewable benzene, butadiene, and isobutylene. Additionally, the production of ethylene and propylene at OMV's Burghausen and Schwechat refineries is also ISCC PLUS certified.



The Borneables™ portfolio, Borcycle™ C, and Borvida™ are certified according to ISCC PLUS, by applying the mass balance approach. This means that the materials are not physically segregated in the production processes throughout the entire supply chain, but they are separated in bookkeeping to provide a verifiable basis for tracking the amount and sustainability characteristics of circular and/or biobased content in the value chain. This certification system ensures the traceability of the renewable, sustainably produced feedstock from its point of origin through the entire chain of custody. The Borneables™ polypropylene, for example, is a second-generation renewable feedstock, derived entirely from waste and residue vegetable oil streams. The milestone of having all of Borealis' European polyolefin and polyolefin compounding sites, the Renasci recycling sites in Oostende, Belgium, and Ecoplast in Austria ISCC PLUS certified was reached in mid-2023, when the PO compounding site in Monza, Italy, received the respective certification.

Life Cycle Assessment

In the life cycle assessment published in 2021, Borealis demonstrated that Borneables™ is especially suited to reducing carbon emissions. The assessment showed that the greenhouse gas emissions of Borneables™ polypropylene and polyethylene go beyond carbon neutrality and can be reduced by at least 120% from cradle to gate (meaning all the steps from the sourcing of raw materials to products leaving Borealis' production site) compared to fossil-fuel-based polypropylene and polyethylene. According to the LCA's findings, using Borneables™ substantially reduces a product's carbon footprint by at least 1.9 kg CO₂e for every kilogram of polymer. This is possible while offering the same high performance levels as virgin polyolefins and the ability to be recycled in the same way.

2023 Actions

- ▶ OMV is currently working on comprehensive life cycle assessments (LCAs) for its fossil-based and renewable petrochemical products being produced at the refineries in Burghausen, Germany, and Schwechat, Austria. These LCAs are being conducted in accordance with the applicable ISO standards 14040 and 14044 and will undergo a critical peer review process. Once completed, the results are expected to be published in 2024.

Over the course of 2023, OMV's subsidiary Borealis continued to commercialize the Borneables™ portfolio. Some significant developments include:

- ▶ In April 2023, it was announced that PFNonwovens Group (PFN) had teamed up with Borealis to enhance their production of nonwoven materials for the personal hygiene market and set a new industry standard by using Borneables™ polypropylene (PP) resins for spunbond and meltblown solutions. Using the certified renewable Borneables™ polymers in the manufacturing of absorbent hygiene products, from baby diapers to feminine hygiene products, supports the PFNonwovens Group in meeting the growing market demand for more sustainable nonwoven solutions.
- ▶ In May 2023, Borealis introduced the Borneables™ line Queo™, a range of high-performance polyolefin elastomers and elastomers based on renewable feedstock. Borealis' production location Geleen, the Netherlands, is the production site for Queo™. The facility received the International Sustainability and Carbon Certification (ISCC PLUS) in March 2023, thus enabling Borealis to introduce this new product line. Queo™ represents an expansion of the Borneables™ portfolio of circular polyolefin products, which offer the same material performance as fossil-based polyolefins yet decoupled from fossil-based feedstock and with reduced carbon emissions. Applications include automotive, flexible and rigid packaging, housewares, and wire and cables.
- ▶ In July 2023, Borealis' polyolefin (PO) compounding site in Monza, Italy, received International Sustainability and Carbon Certification (ISCC PLUS). With the certification of the Monza site, Borealis is now able to offer circular PO products manufactured with renewable feedstocks (Borneables™) and grades based on chemically recycled feedstock (Borcycle™ C) as part of their Monza PO compounds portfolio.
- ▶ Borealis began exploring carbon capture technologies and the use of carbon dioxide as a resource as an alternative to fossil-based resources. Following the proofs of concept, their target is to scale up these initiatives in 2024.

Outlook

By 2030, OMV plans to establish a production capacity of approximately 2,000 kta of sustainable polymers and other chemicals, including biobased polyolefins. To achieve this, OMV will build up capacity for the procurement of sustainable feedstock and develop and implement a sustainable product portfolio for biobased polyolefins.