

## Biodiversity

### Strategy and management

Biodiversity is one of Evonik's 15 material topics. We are aware that our business operations involve both opportunities and risks with regard to biodiversity. These include, for example, the loss or protection of biodiversity on land and in the oceans, including microbial organisms. It is important to avoid supply chain disruption and production stoppages caused by reduced biodiversity and damaged ecosystems.

The starting points for our examination of biodiversity are conventional environmental topics such as emissions into water and the air and responsible water and waste management, which we report on regularly. In addition, the following aspects of biodiversity are addressed in the sustainability analysis of our business: water, eutrophication, acidification, land use, use of renewable raw materials, emissions of critical and persistent chemicals, and microplastics. Our contributions to maintaining diversity are bundled in our Sustainability Focus Area safeguard ecosystems p.140.

In the reporting period, we were involved in various biodiversity workstreams at the German chemical industry association (VCI) and the federation of German industries (BDI) and also took part in various consultation procedures. Moreover, we continued our discussions with the European Commission on the EU biodiversity strategy for 2030 with a focus on the proposed EU soil legislation.

In 2023, we also set up internal expert groups to examine relevant aspects of biodiversity. We started to analyze new reporting guidelines and methods and to define and calculate additional biodiversity indicators. In addition, we are preparing for the new EU reporting requirements of the CSRD, ESRS E4 Biodiversity and ecosystems. We follow the activities of biodiversity initiatives such as the Task Force on Nature-related Financial Disclosures (TNFD), Science Based Targets for Nature (SBTN), and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

For biodiversity analyses, we still use a geoinformation system based on the data of the IBAT Alliance<sup>1</sup>. On this basis, we annually examine the potential impact of our worldwide sites on areas of special significance for biodiversity. This focuses on all sites within one kilometer of conservation areas or key biodiversity areas. Key biodiversity areas are areas with land, freshwater, and marine ecosystems that play a key role in protecting global biodiversity. Areas are classified as global key biodiversity areas if they meet one or more of eleven criteria, which are subdivided into the following five categories: threatened biodiversity, geographically restricted biodiversity, ecological integrity, biological processes, and biological irreplaceability. The data on key biodiversity areas are also made available by the IBAT alliance and are linked to the data on Evonik sites in our geoinformation system GIS-Sus. Overall, 37 percent of our production sites are located within one kilometer of conservation areas or key biodiversity areas. The table showing sites adjacent to conservation areas in 2023 includes Natura 2000 areas.

### Ecosystem services and direct drivers of biodiversity loss based on IPBES<sup>2,3</sup>

Biodiversity and ecosystems are natural capital and form the basis for processes that are vital for life. They provide what are known as ecosystem services, which can be divided into four categories:

- Provisioning services (e.g., wood, water, clean air)
- Regulating services (e.g., climate regulation, pollutant decomposition, water purification)
- Supporting services (e.g., nitrogen and carbon cycles, water cycle, soil formation)
- Cultural services (e.g., therapeutic, recreational, spiritual fulfillment)

Communities and economic systems are supported by these ecosystem services. The IPBES reports that biodiversity and ecosystem services are decreasing as a result of anthropogenic influences. According to the IPBES, the direct drivers of the reduction in biodiversity and ecosystems are:

- Land use/seascape change
- Resource use
- Climate change
- Pollution
- Invasive alien species

<sup>1</sup> The IBAT Alliance comprises the following four non-governmental organizations: (1) Bird Life International, (2) Conservation International, (3) International Union for Conservation of Nature (IUCN), (4) United Nations Environment Programme World Monitoring Centre (UNEP-WCMC).

<sup>2</sup> IPBES = Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

<sup>3</sup> Source: IPBES 2019; Global Assessment Report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Diaz, H. T. Ngo [ipbes.net/global-assessment](https://ipbes.net/global-assessment)



**Evonik production sites adjacent to conservation areas 2023** 304-1

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Production site	Country	Area in km <sup>2</sup>	IUCN <sup>a</sup> categories	Ramsar <sup>b</sup> area	Natura 2000 <sup>c</sup> area
Lafayette	USA	7.004	V		
Marl	Germany	6.529	IV, V		x
Morrisburg	Canada	1.132	Ia		
Antwerp	Belgium	1.083	IV	x	x
Hanau-Wolfgang	Germany	0.779	IV, V		x
Rheinfelden	Germany	0.554	V		
Wesseling	Germany	0.331	IV, V		x
Herne	Germany	0.261	IV, V		
Krefeld	Germany	0.237	IV, V		x
Greensboro	USA	0.235	V		

<sup>a</sup> IUCN = International Union for Conservation of Nature.

<sup>b</sup> Ramsar Convention = convention on wetlands, especially as habitats for waterfowl.

<sup>c</sup> Natura 2000 = an EU-wide network of protected areas to protect endangered or typical species and habitats.

Compared with 2022, the list of the ten largest production sites adjacent to conservation areas no longer includes Lülldorf (Germany) because this site was sold to International Chemical Investors Group (ICIG), effective June 30, 2023. Instead, the list now contains Greensboro (North Carolina, USA). Moreover, the area of some sites deviates slightly from the data published in 2022.

Overall, there are 34 production sites adjacent to conservation areas. The total area of all production sites adjacent to conservation areas is 19.8 km<sup>2</sup>.

**Evonik production sites adjacent to key biodiversity areas 2023** 304-1

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Production site	Country	Area in km <sup>2</sup>	Criterion
Antwerp	Belgium	1.083	Migratory birds, other
Rheinfelden	Germany	0.554	Other
Delfzijl	Netherlands	0.105	Endangered species, migratory birds, other
Tonawanda	USA	0.087	Migratory birds
Qingdao	China	0.040	Species threatened with extinction, critically endangered, and endangered species
Taoyuan City	Taiwan	0.035	Endangered species, migratory birds
Ami-Machi	Japan	0.034	Endangered species
Rheinmünster	Germany	0.026	Endangered species, migratory birds, other
Umbogintwini	South Africa	0.020	Species threatened with extinction, critically endangered, endangered, and endemic species
Lauterbourg	France	0.018	Endangered species, migratory birds, other

T14 shows our ten biggest production sites adjacent to key biodiversity areas. Compared with 2022, we have added the site in Rheinmünster (Germany). There have also been slight changes in the area of the sites in Rheinfelden (Germany) and Tonawanda (New York, USA) compared with 2022.

We have a total of 11 sites adjacent to key biodiversity areas. The total area of all production sites adjacent to key biodiversity areas is 2.0 km<sup>2</sup>.

In 2023, we embarked on a more detailed examination of the direct drivers of biodiversity loss defined by IPBES. The main drivers of relevance for Evonik are climate change, pollution, direct use of resources, and land-use change. We report extensively on climate change and pollution in CDP Climate Change. In the area of direct use of resources, we are currently focusing on our water consumption, which we report in CDP Water Security. We address aspects of changes in land use in CDP Forests in connection with palm oil, palm kernel oil, and their derivatives p.168. In the selection of raw materials, we apply internationally recommended certification standards for palm oil and plan to use only deforestation-free palm derivatives (see “Value chain and products” p.37).

In the future, we want to analyze the bio-based raw materials we procure. The focus here will be on land use and changes in land use with regard to purchased renewable raw materials and the related water consumption for irrigation. This is an important lever for Evonik’s biodiversity footprint. Invasive alien species are not currently classified as material for Evonik.

Progress with these aspects is altering our analysis of the biodiversity of our sites. In the future, we will be giving greater priority to a holistic perspective. Alongside the drivers of biodiversity loss, we intend to review risk assessments and our dependence on ecosystem services. In the reporting period, we started to identify and evaluate nature-related risks and opportunities, using the LEAP<sup>1</sup> method developed by TNFD. That will help us include biodiversity even better in the sustainability analysis of our business p.20.

<sup>1</sup> LEAP = Locate, Evaluate, Assess, Prepare.

In addition to compiling data on conservation areas, in 2023, for the first time, we used the WWF Biodiversity Risk Filter and the WWF Water Risk Filter to assess the risks of all sites [p.57](#). This shows that, at present, Evonik has five production sites in regions with high physical risks. The biggest physical risks at these sites


In addition, we are working to compile and visualize further biodiversity indicators. To this end, a group-wide biodiversity dashboard is currently being developed so that the most affected sites can be identified more easily in the future and appropriate action can be defined.

### Evonik's products and solutions<sup>2</sup>

Declining biodiversity has a negative effect on Evonik's business activities. At the same time, our business activities can have a negative effect on biodiversity. However, Evonik's products and solutions also play a part in maintaining biodiversity and help protect habitats.


Peracetic acid from Evonik is an effective alternative to established biocides for disinfecting wastewater. Before the treated wastewater is discharged into the environment, it undergoes a disinfection process to eliminate pathogenic bacteria. This prevents the bacteria from getting into waterways used by people for recreational purposes or fishing. One big advantage of peracetic acid compared with chlorinated disinfectants is that it decomposes, and no or only very few toxic by-products are released.

Evonik's Health Care business line markets products that can be used as alternatives to animal-derived substances in pharmaceutical applications and therefore make a positive contribution to circularity and biodiversity. One example is PhytoChol®, a plant-based cholesterol, which is an essential component in the production of lipid nanoparticles, a key technology for drug delivery. Another example is PhytoSquene®, a squalene based on amaranth oil. We therefore offer an alternative to traditional production from shark liver oil, which makes a contribution to preserving the biodiversity because many species of shark are currently endangered.



»» *When upgrading the railroad bridge over the Silvert stream in Marl, we considered all ecological aspects and discussed them with the nature protection organization NABU, local residents, and the local authorities. The project includes rewilding the stream in this area and incorporating a hibernation bat box into the bridge.«*

**Thomas Kruck** | Project Manager, Construction Engineering, Germany



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are environmental pollution, tropical cyclones, and landslides. None of our sites is located in an area classified as having generally high reputational risks, but particularly critical media reports represent a high or very high risk at most sites. At sites where the anticipated risks are high and that are also close to conservation or key biodiversity areas, we want to examine the direct drivers of biodiversity loss in more detail in the future. This could be done through interviews and workshops at the relevant sites.

Our sites are engaged in various initiatives to protect biodiversity. For example, the Evonik site in Antwerp (Belgium) is committed to participating in the Voka<sup>1</sup> Charter for Sustainable Entrepreneurship. This goes hand in hand with the implementation of the 17 SDGs. We have already implemented the first points, including re-nesting protected barn swallows and collecting litter, both on the site and beyond. At our site in Marl (Germany), we are involved in a project to rewild the Silvert stream.

<sup>1</sup> Voka = A Flemish network of companies in Belgium.

<sup>2</sup> Information on CO<sub>2</sub>e avoided by the use of Evonik products can be found in "Strategy and growth" [p.24](#).