



# EU CODE OF CONDUCT ON RESPONSIBLE FOOD BUSINESS AND MARKETING PRACTICES

BAYER AG
REPORT SUBMITTED ON 28/04/2023

# **CONTACTS**

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# **INTRODUCTION**

For Bayer, sustainability means more than just corporate responsibility – it is a driver for Bayer's future growth. Sustainability is therefore an essential component of our corporate strategy, our business activities, our corporate values and the way in which we operate our businesses.

Sustainability is at the center of our corporate mission "Health for all, hunger for none" and comprises the following three core elements for all divisions:

- // Inclusive growth and value added for society and our investors
- // Reduction of our ecological footprint
- // Responsible business practices along our value chain

Our strategy is aligned to the global Sustainable Development Goals (SDGs) of the United Nations, the attainment of which is targeted for 2030. We can have a significant impact owing to our portfolio, our global reach and our innovative power. In this context, we support particularly those Sustainable Development Goals where there is a pressing need to act and where we can make the greatest contributions through our businesses and their sustainable transformation.

Bayer aims to promote sustainable development worldwide in accordance with the SDGs, while at the same time focusing on the future in how it aligns its businesses so as to grow in line with the sustainability targets. To achieve this, we link the concept of inclusive growth with a reduction in our ecological footprint based on responsible business practices along our entire value chain.

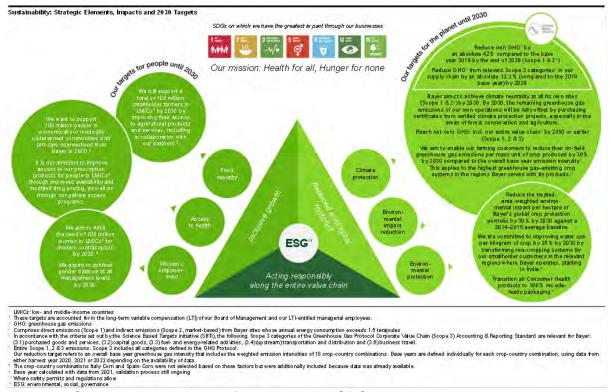


Figure 1: Our strategy and impact focusing on the SDGs



# **UPDATE ON THE PLEDGE**

In this section, we present the commitments and their progress, linked to the Code of Conduct objectives, in which the Bayer Group focuses. The table below represents an overview.

Table 1. EU CoC targets and the Bayer Group commitments and progress for 2023

Type of business/ sector (E.g. retail, dairy)	Input provider and innovation company
Sustainability dimension (E.g. Environmental, social)	Environmental
Code aspirational objective (1-7)	AO3
Individual commitments with baseline	Progress on KPIs and goals (qualitative and/or quantitative)
Climate neutrality of our sites and achievement of a Science Based Target  Reference year 2019:  Scope 1 and 2: 3.76 million metric tons CO2e  Scope 3: 8.82 million metric tons CO2e	Net zero roadmap (2050) installed and medium-term targets (by 2029) validated by SBT:  Net-zero target: We have undertaken to reach net-zero greenhouse gas emissions including our entire value chain by 2050 or earlier (entire Scope 1, 2 and 3 emissions; Scope 3 includes all categories defined in the GHG Protocol). This target was formulated in accordance with the criteria of the SBTi and is thus aligned with the goals of the Paris Agreement of 2015. The target has been submitted to the SBTi and is currently being evaluated.  Interim targets by 2024:  Reduction of own own greenhouse gas emissions by an absolute 20% compared to the base year 2019 (comprises direct emissions [Scope 1] and indirect emissions [Scope 2, market-based] from Bayer sites whose annual energy consumption exceeds 1.5 terajoules)  Reduction of greenhouse gas emissions from relevant Scope 3 categories in our supply chain by an absolute 6% (compared to the 2019 base year). In accordance with the criteria set out by the Science-Based Targets initiative (SBTi), the following Scope 3 categories of the GHG Protocol Corporate Value Chain (Scope 3) Accounting & Reporting Standard are relevant for Bayer: (3.1) purchased goods and services, (3.2) capital goods, (3.3) fuel- and energy-related activities, (3.4) (upstream) transportation and distribution and (3.6) business travel – in line with the reduction pathway of our Science Based Target (SBT). Depending on the validation of our renewed targets by the SBTi, we plan to update our interim targets.  Medium-term climate targets by 2029:  Reduction of our own greenhouse gas emissions by an absolute 42% compared to the base year 2019 by the end of 2029 (comprises direct emissions [Scope 1] and indirect emissions [Scope 2, market-based] from Bayer sites whose annual energy consumption exceeds 1.5 terajoules). This target on the pathway to a 1.5°C scenario was reviewed and acknowledged by the SBTi.  Reduction of greenhouse gas emissions from relevant Scope 3 categories in our supply chain by an absolute 12



 By 2030, the remaining greenhouse gas emissions of our own operations (Scope 1 & 2) will be fully offset by purchasing certificates from verified climate protection projects, especially in the areas of forest conservation and agriculture.

**Achievements** 

## Scope 1 and 2:

Overall, we have already reduced our own emissions to 3.00 million metric tons CO2e in 2023 compared with the base year 2019. Regarding Scope 1 and 2 we have already achieved a decline of 20.2% since 2019.

#### Scope 3:

We reduced our scope 3 emission in 2023 to 9.18 million metric tons CO2e compared to the 2019 base year. Reducing emissions in our value chain (Scope 3) is an increasing challenge in the face of a growing business. To achieve significant reductions in the supply chain in the coming years, we are intensifying our collaboration with suppliers, in particular in terms of a shift to renewable energies. We have also specified this in our updated Supplier Code of Conduct.

#### Total (scope 1, 2 and 3):

In 2023, we reduced our total greenhouse gas emissions (Scope 1, 2 and 3) compared to the base year 2019 by around 1.1 million metric tons, while our business has grown over the same period. Regarding the reduction in our own emissions (Scope 1 and 2) we have already exceeded our targets, achieving a decline of 20.2% since 2019.

In addition to our commitments to climate neutrality for our own operations, we aim to enable our farming customers to reduce their on-field greenhouse gas emissions per mass unit of crop produced by 30% by 2030 compared to the overall base-year emission intensity. The overall base year greenhouse gas intensity includes the weighted emission intensities of 18 crop-country combinations. Base years are defined individually for each crop-country combination, using data from either harvest year 2020, 2021 or 2022 depending on the availability of data. This reduction target applies to the highest greenhouse gas-emitting crop systems in the regions Bayer serves with its products (with the exception of the cropcountry combinations Italy-Corn and Spain-Corn that were not selected based on these factors but were additionally included because data were already available).

Base line calculation; our overall customers' greenhouse gas intensity weighted across all crop-country combinations in the scope of our commitment was 443 kilograms CO2e per metric ton of crop produced (base-year greenhouse gas intensity of our commitment). We will assess and report every two years our progress toward the target we have set. The first reporting of our progress against our base-year greenhouse gas intensity will be published in our 2024 Sustainability Report. We described our methodology in detail in a report reviewed by an external panel of experts to ensure that the baselining and performance tracking methodology is adequate.

Reducing Greenhouse Gas Emissions: Reporting on our Progress | Bayer Global

Bayer is also driving forward the implementation of carbon farming initiatives in every region we serve. More information on our Bayer Carbon Programs can be found in our 2023 Sustainability Report (p. 51) or here: Climate Change and Agriculture | Bayer Global

Sustainability dimension (E.g. Environmental, social)

Environmental

Code aspirational objective (1-7)

**AO4** 

Individual commitments with baseline

Progress on KPIs and goals (qualitative and/or quantitative)



Report yearly R&D	Our R&D investment in 2023 was 1.896 billion euro.
investments  Health, Safety Environmental audits	We aim to cover 80% of our business activities (based on energy consumption at environmentally relevant sites) with certification to ISO 14001 or ISO 45001 by the end of 2025.
	In 2023 CDP has awarded Bayer an A- rating in the area of water.
	<ul> <li>At the UN2023 Water Conference Bayer together with the WWF and the water activist Mina Guli drew attention to the global water problems caused by climate change with the RUN BLUE campaign. Mina Guli ran 200 marathons in 32 countries within one year to raise awareness and sent out a call to action regarding the challenges connected with the issue of water. During this time, Bayer organized joint activities with Mina Guli in 15 countries to increase awareness of the need for action to address the water crisis. These activities included conferences and joint runs in countries such as India, Brazil, Germany, the United States and South Africa.</li> </ul>
	<ul> <li>Water management systems established at all relevant sites in water-scarce areas or in areas identified as being threatened by water scarcity by the end of 2020. These areas were identified using the Aqueduct Water Risk Atlas of the World Resources Institute (WRI).</li> </ul>
	<ul> <li>To avert future and current risks for our sites and the local communities, we met our goal in 2023 of establishing suitable water management systems at all relevant sites that will be threatened by water scarcity by 2030. We identify such sites using the base scenario of the World Resources Institute (WRI).</li> </ul>
	<ul> <li>As we recycle water several times at many of our sites, our total water requirement of 53 million cubic meters (2022: 53 million cubic meters) is much lower than the actual water use volume of 381 million cubic meters (2022: 399 million cubic meters). This yields a mathematical recycling rate of more than 710% (2022: more than 750%).</li> </ul>
Responsible water usage & awareness	<ul> <li>Wastewater at our sites is subject to strict monitoring before it is discharged into the various disposal channels. Compliance with internal and external thresholds is regularly monitored, overseen by supervisory authorities and regulatory authorities, and also reviewed at regular intervals during onsite audits by internal experts.</li> </ul>
	<ul> <li>Resilient Agriculture: Bayer promotes a concept of regenerative agriculture (mainly downstream in our value chain) that is defined as an outcome-based production system aiming to increase food production, farm incomes and resilience in a changing climate, while restoring nature. Our mission is to transform the agricultural sector at scale on the basis of regenerative farming and to create a more sustainable food production system. For us, regenerative agriculture is an outcome-based production model based on two key building blocks: productivity, which focuses on helping farms to produce more with less; and regeneration, which focuses on delivering a positive impact on nature. Key outcomes we strive for are yield increase and improved social and economic well-being of farmers and communities, and positive impact on nature, which can be achieved, for instance, by improving soil health, reducing on-field greenhouse gas emissions, and increasing carbon sequestration to mitigate climate change, restoring biodiversity and conserving water. Soil coverage, minimization of soil disturbance, a diversification of rotations, an optimization of inputs and a reduction of impacts are therefore important practices for achieving regenerative agriculture.</li> </ul>
	<ul> <li>Bayer is committed to increasing water productivity in farming. Our top priority is rice growing, for which irrigation accounts for up to 43% of global water extraction. We are committed to improving water use per kilogram of crop by 25% by 2030 by transforming rice-cropping systems for our smallholder customers in the relevant regions where Bayer operates, starting in India (base year calculated with data from 2021, validation process still ongoing). Our aim to reduce the treated-area-weighted environmental impact per hectare of</li> </ul>



Bayer's global crop protection portfolio by 30% by 2030 against a 2014–2018 average baseline also helps to improve water quality.

Sustainability dimension (E.g. Environmental, social)	Environmental and social
Code aspirational objective (1-7)	AO5
Individual commitments with baseline	Progress on KPIs and goals (qualitative and/or quantitative)
Report yearly our core social indicators	Bayer is a founding member of the U.N. Global Compact and supports the United Nations' Universal Declaration of Human Rights and a number of globally recognized declarations for multinational corporations such as the OECD Guidelines for Multinational Enterprises and the Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy of the International Labor Organization (ILO), as well as the latter's core labor standards.  In addition to these guidelines, we support the United Nations Guiding Principles on Business and Human Rights - also known as the "Ruggie Framework".
<ul> <li>Inclusion and diversity:</li> <li>33% of women in top management by 2025 and 50% by 2030.</li> <li>The average proportion of women at all management levels is to be increased to 50% by 2025.</li> </ul>	The proportion of women in management rose slightly to 43.6% in 2023 (2022: 43.2%).  The proportion of women in top management increased in 2023, amounting to 31.8% at year-end (2022: 27.9%).  Currently, 40 nationalities are represented in Bayer's top management, with around 69% of these employees working in their home countries.
ESG investment	Removal of red flags: MSCI-ESG 2023 Bayer received score A ISS-ESG 2022 Bayer received score B- ("Prima Status"; 1st decile of industry)  Ratings, Rankings and Awards   Bayer Global
Sustainability dimension	Environmental and social
(E.g. Environmental, social)  Code aspirational objective (1-7)	AO6 Support sustainable agriculture
Individual commitments with baseline	Progress on KPIs and goals (qualitative and/or quantitative)
100 million smallholder farmers in LMICs given support by 2030  Reference year 2019: 42 million	In 2023, we supported 53 million smallholder farmers in LMICs by our products, services and partnerships.
Reduction of the treated-area-weighted environmental impact per hectare of Bayer's global crop protection portfolio by 30% by 2030 against a 2014–2018 average baseline	Based on the data collected between 2018 to 2022, Bayer has reduced the treated-area-weighted environmental impact per hectare of our global crop protection portfolio by 12% against the 2014 – 2018 baseline. The reduction was mainly the result of changes in our crop protection product portfolio in recent years.  For the reporting period 2017 to 2021, we must restate our progress as 11% as opposed to the previously reported 14%, due to model enhancements and newly identified data corrections.



	Commitment to Reducing Environmental Impact   Bayer Global
Report yearly on the status of the Food Chain Partnership	We have 382 Food Chain Partnerships running in 35 countries across regions, covering 65 crops and 41 Food Chain Partners.
Sustainability dimension (E.g. Environmental, social)	Environmental and social
Code aspirational objective (1-7)	<ul> <li>Improving social performance in global food supply chains</li> <li>Contribute to solutions for supporting habitats and biodiversity and preventing negative impacts of operations on air, land, soil, water, forests</li> </ul>
Individual commitments with baseline	Progress on KPIs and goals (qualitative and/or quantitative)
Human rights are respected.	Bayer is fully committed to upholding human rights and has documented its stance in a globally binding Bayer Human Rights Policy, which defines the human rights requirements within the company and obligates us to respect and foster human rights within our own business activities and in business relations. This policy was adopted by the Board of Management and is publicly available on the company's website. This applies to all Bayer employees worldwide and the entire value chain, i.e. vis-à-vis suppliers, business partners, customers, consumers and local communities alike.  • The implementation of our human rights standards in business operations is regulated by Group regulations, processes, and management and monitoring systems.  • Our commitment encompasses respecting human rights along the entire global value chain including all Bayer employees and their interactions with Bayer business partners, (direct and indirect) suppliers, contractors, customers, consumers, local community members and government officials. It also applies to third parties acting on behalf of Bayer or conducting business in facilities owned or operated by Bayer and its subsidiaries.  • Support human rights in local communities.  • Position on child labour: zero tolerance; thanks to a stringent monitoring system and the support of local information and educational initiatives, no cases of child labor have been identified in India, Bangladesh and the Philippines to date since the 2021/22 growing season.
Improve water use per kilogram of crop by 25% by 2030 through the transformation of rice-cropping systems for our smallholder customers in the relevant regions where Bayer operates, starting in India (base year calculated with data from 2021, validation process still ongoing).	Drive positive change in water productivity in water scarce regional cropping systems, starting with rice, which is responsible for up to 43% of the world's irrigation water withdrawals as well as 10 -12% of global methane emissions.
Bayer evaluates the sustainability performance of all strategically important suppliers and of selected high-sustainability-risk suppliers including water as an evaluation criterion.	Bayer's Supplier Code of Conduct (SCoC) includes dedicated items to address water and wastewater. At the same time the company will continue to drive improvements in water-use efficiency with growers across seed production.

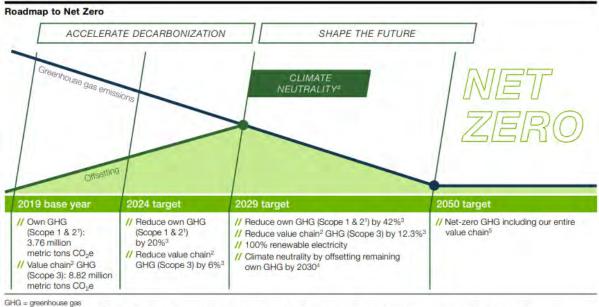


(E.g. partnerships, geographical coverage, sharing best practices, links with other COM initiatives, with other reporting initiatives)

### **OBJECTIVE AO3**

We have developed a net zero roadmap to achieve our ambitious climate targets. The Science Based Targets initiative (SBTi) has validated our target and confirms our contribution to fulfilling the Paris Agreement.

As an external expression of commitment to net-zero greenhouse gas emissions, the company also signed the Business Ambition for 1.5 °C, a campaign of the SBTi in partnership with the UN Global Compact and the We Mean Business Coalition.



- <sup>1</sup> Comprises direct emissions (Scope 1) and indirect emissions (Scope 2, market-based) from Bayer sites whose annual energy consumption exceeds 1.5 terajoules <sup>2</sup> In accordance with the criteria set out by the Science-Based Targets initiative (SBTi), the following Scope 3 categories of the Greenhouse Gas Protocol Corporate Value Chain
- (Scope 3) Accounting & Reporting Standard are relevant for Bayer: (3.1) purchased goods and services, (3.2) capital goods, (3.3) fuel- and energy-related activities, (3.4) (upstream) transportation and distribution, (3.6) business travel.
- 3 Absolute, compared to the 2019 base year
- <sup>4</sup> Bayer aims to achieve climate neutrality at all its own sites (Scope 1 & 2) by 2030. By 2030, the remaining greenhouse gas emissions of our own operations will be fully offset by purchasing certificates from verified climate protection projects, especially in the areas of forest conservation and agriculture.
- Defined as a 90% reduction in our entire Scope 1, 2 & 3 emissions compared with the base year 2019. Scope 3 includes all categories defined in the GHG Protocol.

Figure 2: Bayer Group net zero road map

# Scope 1 and 2

Our roadmap comprises various measures in the areas of energy & efficiency, governance and certificates.

## **Energies & efficiencies**

In 2023, we pressed ahead with the conversion of our Group-wide electricity procurement, and renewable energies now account for 35.4% of our total purchased electricity volume (2022: 32.6%). For example, in 2023, we invested in photovoltaic systems or concluded long-term supply agreements with producers of electricity generated from renewable energies for sites in Australia, China, India, Mexico, Thailand and the United States.

We have defined specific criteria for the procurement of green electricity and published this information on our website. These criteria include the geographical proximity between power generation locations and Bayer's sites, the use of new production sources and a focus on wind and solar energy. The criteria are based on the next-generation green power guidelines of the WWF (World Wide Fund for Nature).



Investment in efficiency measures and renewable energies: to achieve an absolute reduction in our remaining emissions, we intend to invest €500 million and in increasing the energy efficiency of our facilities and buildings by 2030.

By 2030, we aim for our fleet of currently around 25,000 vehicles to consist entirely of electric vehicles wherever this is technically and economically feasible. Bayer joined the EV100 initiative of the Climate Group and has validated its activities according to the criteria of that initiative. In 2023, implementation began in 48 countries (including Germany) that account for around 81% of our vehicle fleet. Including vehicles that have already been ordered, the proportion of hybrid and electric vehicles in our fleet is approximately 18%.

## Offsetting

We will offset those of our emissions (Scope 1 and 2) that still remain following reduction through technological measures and cannot be avoided (such as greenhouse gas emissions generated by chemical processes or through business travel) by purchasing certificates from climate protection projects that meet recognized quality standards. By doing so, Bayer aims to achieve climate neutrality at all its own sites (comprises direct emissions [Scope 1] and indirect emissions [Scope 2, market-based] from Bayer sites whose annual energy consumption exceeds 1.5 terajoules) by 2030. By 2030, the remaining greenhouse gas emissions of our own operations will be fully offset by purchasing carbon certificates from verified climate protection projects, especially in the areas of forest conservation and agriculture. However, our focus is on further reducing our emissions.

The climate protection projects with which we aim to generate additional value toward global climate targets need to have a connection to our business. In this respect, too, we have established specific criteria for procuring carbon certificates from climate protection projects. In this process, we focus on nature-based climate solutions, preferably concerning forestry and agriculture projects. We will also invest in innovative projects to promote the development of voluntary emissions trading. On our website, we report on our strategy and the projects we support.

Our engagement in voluntary carbon markets is supplementary to our reduction targets and projects for our own greenhouse gas emissions. We recognize that climate protection projects are being criticized in the media. But there is no doubt that forest conservation and reforestation are necessary to limit global warming. Applying clear criteria and transparency on these projects, we want to support voluntary carbon markets.

This Is How We Protect the Climate | Bayer Global

In 2023, we additionally supported projects that enabled more than 600,000 metric tons of greenhouse gas emissions in CO2 equivalents to be avoided or reduced. For example, we financed reforestation and forest conservation projects in Brazil, Cambodia, Indonesia, Laos, Nicaragua and Uruguay. We also supported the topic of biochar, which is produced using pyrolysis and has the potential to capture CO2 for more than 1,000 years. Biochar is therefore seen as a future technology. It also has the potential to be used in agriculture as a soil conditioner and to reduce the amount of fertilizers used. In 2022, we joined the Brazilian Initiative for the Voluntary Carbon Market. This initiative brings together companies and institutions from several industries in Brazil with the goal of structuring key measures to develop voluntary carbon emissions trading in that country and to contribute to global carbon emissions trading with accredited certificates. In 2023, we used certificates from the Bayer Carbon Program (as part of ForGround by Bayer) for the first time. These support farmers financially who apply sustainable agricultural practices. The volume of CO2 sequestered in the soil is certified. The resulting emissions certificates can then be sold on the market. Bayer has acquired the equivalent of 100,000 metric tons of CO2 from this program.



Within the framework of its activities to protect forests, Bayer is a participant in the LEAF Coalition (LEAF = Lowering Emissions by Accelerating Forest finance). LEAF has mobilized more than US\$1.5 billion since 2021 to initiate the biggest public-private effort to protect the rainforests.

## Scope 3

In 2023, we launched a new, internal program to reduce our Scope 3 emissions (Scope 3 Decarbonization Accelerator) through which we coordinate and constantly evolve our various activities, such as strengthening the demands and expectations we place on our suppliers as regards greenhouse gas emissions. We defined specific development paths to cooperate more closely with suppliers that account for a major share of our Scope 3 emissions – either because they supply products with a particularly high greenhouse gas footprint or because we procure large volumes of products from them. By 2030, we expect the identified suppliers to manufacture the products we procure from them using electricity from renewable energy sources exclusively. The objective is for the identified suppliers to establish ambitious climate targets by 2025 that include a net-zero target for no later than 2050. Currently 17 of the 100 suppliers accounting for the biggest share of Bayer's Scope 3 emissions have specified climate targets in accordance with the Paris Agreement as defined by the SBTi. The implementation of climate targets by suppliers remains an industry-wide challenge. Without further action, the resulting reductions for us are therefore insufficient to achieve our targets in the future.

As the ability of one company on its own to reduce the GHG emissions along the value chain is only limited. Hereto Bayer has joined various initiatives and is working on measures. For example: through the Supply Chain Initiative of CDP (formerly the Carbon Disclosure Project), we ask our strategically important suppliers and those who account for a significantly high proportion of our emissions in the value chain to provide us with more exact greenhouse gas emissions data.

Bayer is a member of the EcoTransIT World Initiative. In 2023, we began introducing the EcoTransIT system to calculate transport-related greenhouse gas emissions. This system aims to continuously evolve and harmonize the methods for determining greenhouse gas emissions in the transportation sector worldwide, and thus create a globally recognized methodology.

In addition, also externally, we advocate for a climate position in line with our ambitious targets and demand that our partners also undertake decarbonization measures in accordance with the Paris Agreement.

To ensure maximum transparency:

- We have therefore published a detailed list of our climate policy lobbying activities. 2021 Overview Lobbying-Activities Climate-Change.pdf (bayer.com)
- We disclose both our achievements and the challenges that still lie ahead of us in our current Industry Association Climate Review – Engagement Update 2022. <u>Microsoft</u> <u>Word - Bayer Industry Association Climate Engagement rg\_v05.docx</u>

We aim to enable our farming customers to reduce their on-field greenhouse gas emissions per mass unit of crop produced by 30% by 2030 compared to the overall base-year emission intensity. The overall base year greenhouse gas intensity includes the weighted emission intensities of 18 crop-country combinations. Base years are defined individually for each crop-country combination, using data from either harvest year 2020, 2021 or 2022 depending on the availability of data. This reduction target applies to the highest greenhouse



gas-emitting crop systems in the regions Bayer serves with its products (with the exception of the crop-country combinations Italy-Corn and Spain-Corn that were not selected based on these factors but were additionally included because data were already available). Our major focus lies on soybeans and corn in the United States, Brazil and Argentina, paddy rice in India, and wheat, cotton and oilseed rape/canola in various regions.

The scope of our efforts is focused on emissions of major greenhouse gases from field operations: carbon dioxide (CO2), methane (CH4) and nitrous oxide (N2O). The sources of greenhouse gas emissions include cultivation, decomposition of applied fertilizers and organic matter, and irrigation. In this context, we calculated our overall base-year greenhouse gas intensity based on our customers' greenhouse gas intensities for our major crop-country combinations with data from the 2020-2022 harvest years. We described our methodology in detail in a report reviewed by an external panel of experts to ensure that the baselining and performance tracking methodology is adequate.

Using this methodology, our overall customers' greenhouse gas intensity weighted across all crop-country combinations in the scope of our commitment was 443 kilograms CO2e per metric ton of crop produced (base-year greenhouse gas intensity of our commitment). We will assess and report every two years our progress toward the target we have set. The first reporting of our progress against our base-year greenhouse gas intensity will be published in the 2024 Sustainability Report.

Finally, our Bayer Carbon Programs, for example in North America and Brazil, offer farmers financial incentives to apply climate-friendly methods and capture greenhouse gases in the soil. Climate Change and Agriculture | Bayer Global

# Partnerships / coalitions:

- // Global Soil Health Program (University of Glasgow)
- // Decarbonization of the EU Food System European Carbon+ Farming Coalition
- // Inter-American Institute for Cooperation on Agriculture (IICA), Living Soils in the America's Initiative
- // Coalition of Action 4 Soil Health (CA4SH)
- // Collaboration with Perdue AgriBusiness
- // Collaboration with Nori carbon removal certificates marketplace

## **OBJECTIVE A04**

#### Our innovations

In the areas of plant breeding and crop protection, products are designed to further improve both the quality and the quantity of harvests, while providing highest safety standards, and to enhance plants' resilience against insect pests, diseases, and a changing climate. In addition, we invest in research and development to attain an improved balance between productivity and conserving biodiversity and ecosystem services as, for example pollination. We also invest in new technologies and conduct research into questions such as how plants could use nitrogen from the air for their growth with the help of soil microorganisms. This would enable the use of nitrogen fertilizer to be greatly reduced in the future.

One example of the possibilities offered by plant breeding innovations is our Preceon<sup>TM</sup> Smart Corn System. This crop system will include digital support tools and agronomic recommendations to improve the way corn is grown to make it more sustainable. Through breeding, we have succeeded in developing seed hybrids that enable the growth of shorter corn plants that have the potential to not bend or break (agronomists call this root and stalk



lodging) as easily as corn plants of regular height in the presence of strong winds or heavy rain. Losses in the United States due to bent (lodged) plants amount to between 5% and 25% a year depending on the severity of weather events. Due to its short stature, the corn hybrids of the Preceon™ Smart Corn System also allow farmers in-season access, which enables optimized application of crop protection products and nutrients such as nitrogen.

CropKey, our novel and innovative approach to crop protection chemistry allows us to achieve unprecedented levels of precision, safety and sustainability. Our ambition is to unlock new ways to protect our crops, going above and beyond current standards, and to potentially further reduce the impact of crop protection on the environment substantially. In a scientific process called Target Based Discovery, CropKey uses AI (artificial intelligence) and machine learning – the subset of AI that uses algorithms to find patterns in data – to single out specific proteins present in the make-up of pest species far faster and with greater accuracy than ever before. These unique proteins can be thought of as "locks." Using computational predictive modelling, we are designing the crop protection molecule according to predefined safety and sustainability profiles that will inhibit the identified target protein – a process called Profile Driven Discovery. The molecule designed can be thought of as a precise "key" for the unique "lock." The uniqueness of the lock and the precision of the key means that other nontarget species are protected.

### Our measures

Protecting the environment and ensuring the safety of our employees and the people who live near our sites are among our highest priorities. We work continuously to reduce the environmental impact of our business activities and develop product solutions that benefit the environment.

## **OBJECTIVE A06**

## Smallholders

No one can overcome every challenge alone, we establish crop value chain partnerships to provide smallholder farmers with high-quality inputs, agronomic knowledge, cost-effective financing, and risk mitigation solutions, as well as market access to sell their products. We have already forged a number of key partnerships:

Better Life Farming: Better Life Farming is a long-term partnership between Bayer, the International Finance Corporation (IFC, part of the World Bank), Netafim, Yara International and more than 25 local public and private partners as well as NGOs. This partnership helps smallholder farmers make their farms commercially profitable and sustainable. In 2023, we increased the number of Better Life Farming centers in India, Indonesia, Bangladesh, Mexico and Honduras to more than 2,700 and opened the first centers in Tanzania and Ivory Coast. We are planning further growth in the three smallholder regions shown below.



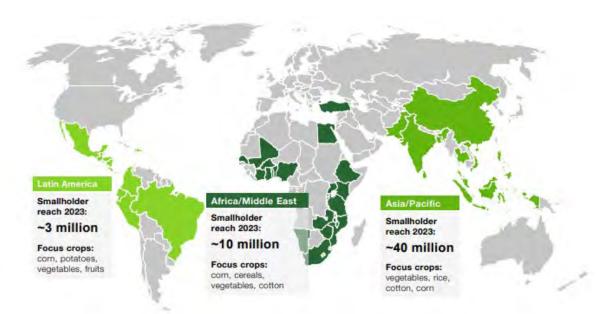


Figure 3: Smallholder Reach 2023

**Noncommercial partnerships:** The Bayer Foundation funds the Digital Farmer II program of our partner Mercy Corps AgriFin together with the Bill & Melinda Gates Foundation. This leverages the spread of digital technologies to develop more efficient digital information and financial products and services for smallholder farmers. In 2023, we reached 1.2 million smallholder farmers via noncommercial partnerships.

## Environmental Impact Reduction

Bayer consistently seeks to develop and offer crop protection products that have the same or better benefits for farmers, while having less impact on the environment. To this end, Bayer adopted a methodology for crop protection environmental impact reduction (CP EIR) and made a commitment to reducing the environmental impact of our crop protection products. Specifically, we aim to reduce the treated-area-weighted environmental impact per hectare of Bayer's global crop protection portfolio by 30% by 2030 against a 2014-2018 average baseline. The methodology we adopted relies on two leading externally developed scientific consensus models (PestLCI and USEtox ®) to enable a quantifiable environmental impact assessment of crop protection. All Bayer crop protection product applications that are characterizable by PestLCI and USEtox® and used in the field globally, as reported in the AgroWin system, are in the scope of our commitment to reducing the environmental impact of our global crop protection portfolio. An external panel of experts is independently performing an assessment of how Bayer and the Technical University of Denmark (DTU) apply the models to assess its crop protection environmental impact, and how Bayer measures performance against its commitment and other methodological considerations. Applying CP EIR allows Bayer to identify hotspots of environmental impact and develop improvement levers. They can be categorized in 1) optimization of crop protection volumes required per hectare through tools (precision application, seed treatment, seeds and traits and biologicals), 2) reduction of the environmental impact of the crop protection product itself and 3) reduction of the emissions into the environment.

# Food Chain Partnership

In addition, we are working together toward a Sustainable Food Systems. Hereto, Food Chain Partnership-an innovative platform to promote partnerships and to address challenges throughout our food system- brings together farmers, food processors, retailers, traders and others along the value chain. By sharing collective insights, goals, and resources, everyone contributes to tangible Food Chain Partnership initiatives to improve sustainability, food safety, quality, yields, and transparency.



# Best practices:

https://www.bayer.com/en/agriculture/food-chain-partnership

https://www.baygap.bayer.com/en-us/initiatives.html

## **OBJECTIVE A07**

Guided by our LIFE values and supplementary to our Human Rights Policy, we substantiate specific standards and responsibilities for respecting human rights in existing rules and Group regulations. These include the Bayer Societal Engagement (BASE) principles, along with regulations on data privacy, corporate compliance, fairness & respect at work, HSE management & HSE key requirements, security and crisis management, and the Supplier Code of Conduct. This code specifies what we expect of our suppliers and obligates them to fully respect human rights. The Supplier Code of Conduct is based on the principles of the UN Global Compact and the core labor standards of the ILO.

The Bayer commitment to promoting human rights applies to all Bayer locations and business operations worldwide. As a global company, we regard this as representing a social and ethical commitment as well as a key requirement for sustainably developing our business. Human rights standards guide our decision-making and constructive engagement both internally and in our sphere of influence, while the responsibility of national governments for the protection of human rights is respected at the same time.

As an example, our position on child labor is quite clear – it is not tolerated at Bayer. Through our Child Care Program, Bayer has for years taken systematic action to prevent child labor in the seed supply chain. The program is established in India, Bangladesh and the Philippines – the countries in which we identified the potential for child labor infractions through our risk assessment. Thanks to a stringent monitoring system and the support of local information and educational initiatives, no cases of child labor have been identified in India, Bangladesh and the Philippines to date since the 2021/22 growing season.

The goal of the Child Care Program is to take action against child labor in the seed supply chain. It therefore involves systematic and repeated inspections of individual seed producers in their fields by local Bayer employees during the growing season. Furthermore, a pilot of the program is planned for Thailand in the 2023/24 growing season. Through systematic audits in the second half of the growing season (January–April 2024), we want to carry out systematic checks to find out how high the risk of child labor actually is among local seed producers in Thailand. So far, we have not uncovered any concrete indications of child labor cases among our seed producers in that country. Through the Child Care Program, we also conduct activities outside the growing season to prevent child labor. Off season, Bayer employees visit schools to underscore the importance of a good education to schoolchildren and their teachers. Accompanied by medical personnel, they also accentuate the importance of good hygiene.

Finally, we use a risk analysis to identify potentially detrimental effects of our business activity on human rights. In doing so, human rights risks are identified, evaluated and prioritized, from an overarching risk analysis for the entire company to detailed analyses in selected areas. The analyses are conducted at least once per year and on an ad hoc basis. The results of this human rights risk analysis are communicated to relevant internal decision-makers and incorporated into the Bayer risk portfolio of our Group-wide, integrated risk management system in cases where the threshold values are exceeded. There, decisions



on risk mitigation measures are also documented. The risk portfolio is regularly reviewed by the Bayer Assurance Committee.

We have identified six priority issues: Right to health - Responsible use of natural resources - Protection against child labor - Right to freedom from slavery, servitude and forced labor - Right to fair and favorable working conditions - Right to freedom of association.

## **INFORMATION SOURCES**

- 1. Bayer Sustainability Report 2023 Sustainability Reports of Bayer | Bayer Global
- 2. Bayer Crop Protection Environmental Impacthttps://www.bayer.com/en/agriculture/reducing-agricultures-impact-environment
- 3. Bayer Water Strategy and Commitment <u>Water Security Builds Our Resilience to Climate Change | Bayer Global</u>
- 4. Bayer Modern Slavery Statement- <a href="https://www.bayer.com/en/sustainability/bayer-modern-slavery-statement">https://www.bayer.com/en/sustainability/bayer-modern-slavery-statement</a>
- 5. Bayer Food Chain Partnership <a href="https://www.bayer.com/en/agriculture/food-chain-partnership">https://www.bayer.com/en/agriculture/food-chain-partnership</a> and <a href="https://www.baygap.bayer.com/en-us/initiatives.html">https://www.baygap.bayer.com/en-us/initiatives.html</a>
- 6. Bayer Human Rights Policy Human Rights Bayer | Bayer Global
- 7. Bayer Annual Report 2023 Bayer's Integrated Annual Reports | Bayer Global