



# BIODIVERSITY IN GLOBAL AGRI-SUPPLY CHAINS

Protecting nature, shaping the future



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## IMPRINT

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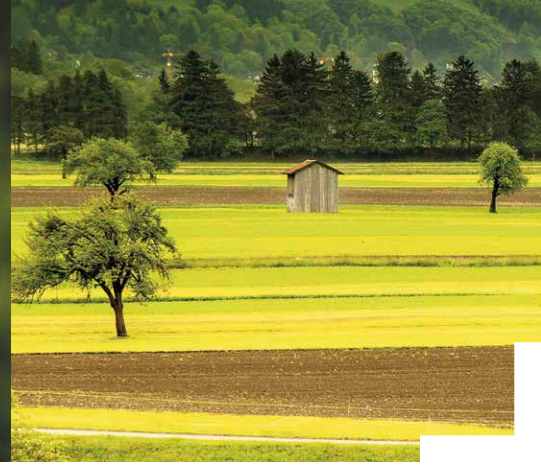


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## 1. INTRODUCTION

### The need for transformation towards biodiversity-friendly agricultural and food systems

Biodiversity loss is the most significant environmental problem of our time, outstripping climate change. This is the conclusion of the Swedish climate researcher Johan Rockström.<sup>1</sup> According to the report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), around one million species are acutely threatened with extinction<sup>2</sup>; the global extinction rate today is three to ten times higher than the average over the last ten million years.<sup>3</sup>

There is an immediate need for action, but the good news is that the issue is getting increasing attention by governments, the media, and the public.

Intensive agriculture is a decisive driver for the loss of biodiversity<sup>5</sup>, which at the same time means that it holds an enormous potential for biodiversity protection. Companies that actively work for more biodiversity within their global agricultural supply chains can make an important contribution towards addressing this global challenge. This brochure informs corporate decision-makers about the legal framework as well as relevant agricultural goods from the Global South. At the same time, it provides insights into both standards and instruments for recording measures as well as opportunities for participation in agricultural projects of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The focus lies on agricultural commodities from Latin America, especially Ecuador and Colombia.

*Biodiversity is defined as the diversity within a species (e.g., plant, animal), the diversity between species, and the diversity of ecosystems<sup>4</sup>.*

### BIOLOGICAL DIVERSITY

– also known as biodiversity – encompasses the variety of life. Only intact ecosystems and a great diversity of species enable high living standards for current and future generations and guarantee „ecosystem services“, i.e., the natural processes on which we and the economy depend: clean water, healthy food, and renewable raw materials, to name just a few.



*Main causes for the loss of biodiversity:<sup>6</sup> Intensive agriculture contributes to all five causes.*

## 2. LEGAL AND POLITICAL FRAMEWORKS RELEVANT TO BIODIVERSITY, THE FOOD INDUSTRY, AND ITS GLOBAL SUPPLY CHAINS

### Worldwide – the UN Sustainable Development Goals

The United Nations (UN) have established 17 “Sustainable Development Goals” (SDGs) with the aim of achieving them by 2030. The SDGs serve as a roadmap for all actors involved. Central demands of the SDGs: to use natural resources sustainably and efficiently, to limit the global temperature increase to 1.5 degrees Celsius, and to mobilise the private sector for global climate protection. Likewise, intact ecosystems and their services are to be preserved, restored, and used in a sustainable manner. Natural habitat degradation and biodiversity loss should be prevented.

In the context of this publication, Goal 12 (Responsible Consumption and Production), 13 (Climate Action), 14 (Life below Water), and 15 (Life on Land) are of particular importance for biodiversity conservation in the food industry.<sup>7</sup>

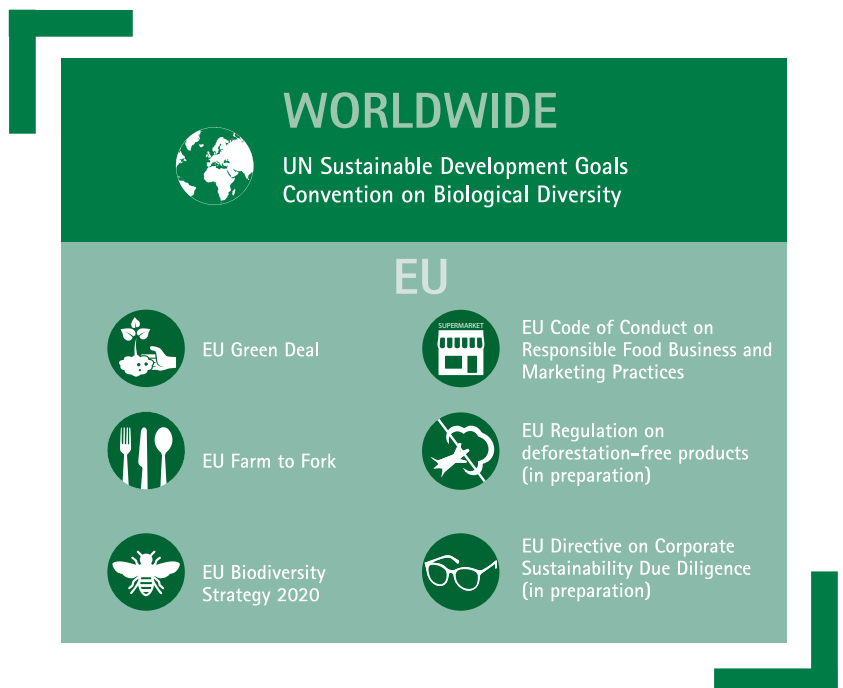


Four of the 17 Sustainable Development Goals (UNDP 2015)

### Convention on Biological Diversity (CBD)

The 1992 CBD is a binding agreement under international law. A set of rules ensures the protection of the living environment and links it with the sustainable use of biological resources. The agreement and its objectives will be updated by the 196 signatory states by the end of 2022. The updated convention must then be integrated into coherent national policies and laws. Several of the CBD goals have a direct link to the agriculture/food industry.

*At a glance: The most important political parameters with regard to biodiversity conservation.*





## In the EU

### EU Green Deal

On the European level, the EU strategy, the so-called "European Green Deal", takes up the SDGs and focuses on the issues of climate change and environmental degradation. The European Green Deal aims to facilitate the transition towards a modern, resource-efficient, and competitive economy that no longer emits any net greenhouse gases by 2050 and decouples growth from resource use. The Green Deal encompasses diverse sustainability strategies, including the "Farm to Fork" Strategy or the "Fit for 55" Strategy, which aims to reduce greenhouse gas emissions by 55 % by 2030 compared to 1990.<sup>8</sup>

### EU Farm to Fork Strategy

The Farm to Fork Strategy focuses on the contribution of a sustainable food system to the European Green Deal. Essential points of this strategy are:<sup>9</sup>

- Food security
- Fair income for primary producers; research and innovation; soil fertility and to preserve and restore agricultural productivity
- Reformulation of foodstuffs in line with guidelines for a healthy and sustainable nutrition
- Labelling of groceries

This is the first time that the EU Commission has formulated a comprehensive, coordinated policy with regard to food. The goals and targets are implemented through various legislative measures, both through the creation of new and the adaptation of existing policies by the member states. Although the Farm to Fork strategy, with its 10-year plan, aims to improve the European food system by making it more sustainable, it also tries to reduce the impact on third countries.

### EU Biodiversity Strategy 2030

In the current Biodiversity Strategy 2030<sup>10</sup>, the EU Commission refers in particular to the economic sectors of construction, agriculture, as well as food and beverages, as these depend to an especially high degree on biodiversity. The Biodiversity Strategy's chapter on "Bring nature back to agricultural land" describes the key commitments for agriculture in Europe. The new European Agricultural Policy and the EU Farm to Fork Strategy are to contribute to the achievement of these goals.

## EU GREEN DEAL AND BIODIVERSITY IN THE FOOD INDUSTRY

The European Commission has identified standards as important tools to improving performance in the area of biodiversity protection. This also includes the measurement of the ecological footprint of products and organisations, i.e., through life cycle approaches and the accounting of natural capital. The EU Commission supports the establishment of an international initiative on natural capital accounting.

## RELEVANCE FOR INTERNATIONAL SUPPLY CHAINS

The EU intends to ensure that in all bilateral EU trade agreements, a substantively ambitious chapter on sustainability is taken up and implemented. In 2021, the Commission proposed legislation and other measures to prevent products that are associated with deforestation and forest degradation from entering the EU market, or to at least reduce them to a minimum. In addition, the EU strives to mainstream international standards in the relevant international bodies. Likewise, high safety and sustainability criteria are to be promoted throughout agricultural and food production. Small businesses are to be supported in complying with these standards and achieving market access.

## EU BIODIVERSITY STRATEGY 2030 AND GLOBAL FOOD TRADE

Within the framework of its international cooperation, the EU promotes sustainable practices and measures in agriculture and fisheries. Special attention lies, among other things, on the sustainable management of water resources, the rehabilitation of damaged areas, as well as on the protection and restoration of biodiverse ecosystems with high ecosystem services and a high climate protection potential. The objectives for the protection of the environment at the international level are explained in the chapters International Cooperation, Neighbourhood Policy, and Mobilization of Resources. They include biodiversity-related financial flows to developing countries, while respecting conservation, restoration, and sustainable use of biological diversity, as well as the inclusion of biodiversity in all measures of development and partnership politics.

### EU Code of Conduct on Responsible Food Business and Marketing Practices

The EU Code of Conduct on Responsible Business and Marketing Practices in the food sector<sup>11</sup> is one of the outcomes of the EU Farm to Fork Strategy. This Code of Conduct sets out the objectives to which actors in the food sector can voluntarily commit to, in order to tangibly improve and communicate their sustainability performance.

The Code of Conduct includes seven ambitious goals:

1. Healthy, balanced, and sustainable diets for all European consumers;
2. Prevention and reduction of food loss and waste;
3. A climate neutral food chain in Europe by 2050;
4. An optimised circular and resource-efficient food chain in Europe;
5. Stable, inclusive, and sustainable economic growth, employment and humane work for all;
6. Sustainable value creation in the European food supply chain through partnership structures;
7. Sustainable procurement in the food supply chain.

The 65 first signatories include well-known companies and associations from the food industry.

### CODE OF CONDUCT AND PROTECTION OF BIODIVERSITY

The Code of Conduct envisages, among other things, „transformed commodity supply chains which do not contribute to deforestation, forest degradation and destruction of natural habitat and which preserve and protect high value ecosystems and biodiversity.“

To achieve the goals, signatories commit to:

- Promote sustainable agricultural practices in order to improve biodiversity
- Promote sustainable sourcing of materials in relation with (direct) suppliers, inside or outside of the EU
- Encourage the uptake of scientifically-robust sustainability certification/audit schemes for food (incl. fish and fishery products)

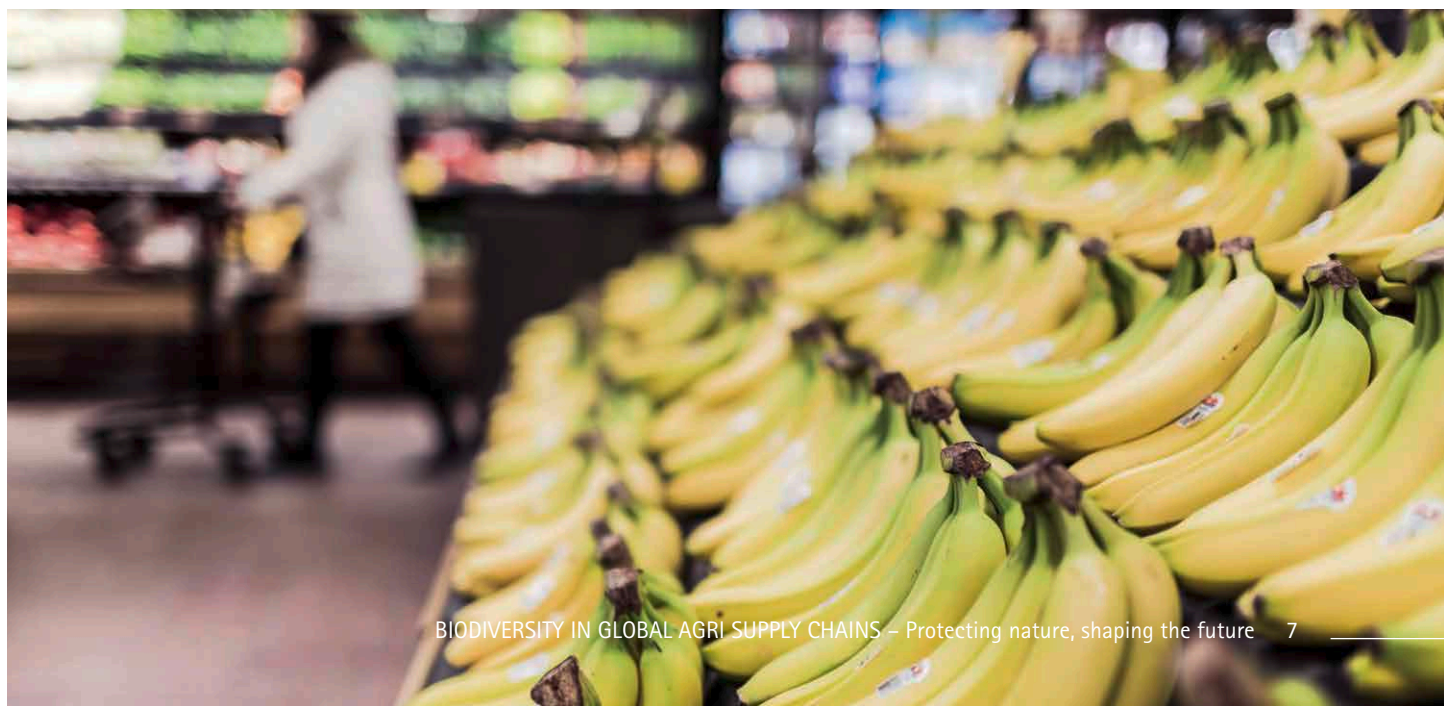
### EU regulation on deforestation-free products (in preparation)

The EU Regulation on deforestation-free products, proposed by the Commission on 17 November 2021,<sup>12</sup> initially applies to six products: soy, beef, palm oil, timber, cocoa, and coffee, as well as certain products derived from them, such as leather, chocolate, and furniture. This will be adapted in the ongoing process.

The regulation aims to ensure the following:

- Binding due diligence obligations for economic operators who sell products associated with deforestation and forest degradation on the EU market
- Mandatory documentation using geographical coordinates
- Introduction of a benchmarking system for quality assurance and verification of compliance of economic operators and public authorities
- Cooperation of the Commission with partner countries, as well as governments, academia, the private sector and civil society to discuss policies and measures to reduce deforestation and forest degradation at the international level.

In Germany, the Federal Government adopted the Guidelines for the Promotion of Deforestation-Free Supply Chains for Agricultural Commodities in April 2020<sup>13</sup> with the goal to increase the commitment to forest protection in agricultural supply chains – nationally, internationally, and in bilateral development cooperation.





**EU Directive on Corporate Sustainability Due Diligence (in preparation)**

In February 2022, the European Commission published a proposal for a Directive on Corporate Sustainability Due Diligence<sup>14</sup> as the basis for a possible EU-wide legislative initiative on mandatory corporate due diligence. It explicitly looks at the introduction of binding due diligence obligations for companies and new obligations for company managements to prevent environmental and labour rights violations in their supply chains and to integrate sustainability criteria into business decisions. The Commission explicitly justifies the need for a legal requirement with the current negative effects on biodiversity along global value chains. Companies from the EU are also responsible and will be identified in the future. The food industry is listed in the EU Commission's proposal as a sector with a high damage potential.





### 3. FOUR KEY COMMODITIES AND THEIR BIODIVERSITY RISKS IN COLOMBIA AND ECUADOR

#### COFFEE

##### Cultivation areas

Tropical areas of Africa, Java, Sumatra, India, the Pacific Islands, Mexico, Central and South America

##### Background

After water, coffee is one of the most consumed<sup>15</sup> and one of the most traded commodities in the world. Coffee is grown in around 80 countries, 90% of which are developing countries, where the production is of significant socio-economic and societal importance. As in most agricultural sectors, coffee production has also been subject to intensification during the Green Revolution. In the 1970s, the modernisation of agriculture led to the high-yielding coffee varieties grown in full sun and with the use of chemicals. The production density could thus be increased from originally 1,100 to 1,500 coffee trees per hectare to 4,000 to 7,000 coffee trees per hectare.

#### Biodiversity risks

##### Deforestation

Mountain forests have been cut down at an alarming rate and replaced by monoculture coffee plantations. These forests play an important ecological role in protecting atmospheric dynamics, water quality, and wildlife – aspects that are particularly important for the quality of life of the people living in these mountain regions. The accompanying habitat loss leads to a decline in animal and plant biodiversity. Studies of the Smithsonian Migratory Bird Centre in Mexico and Colombia, for example, show that there are 90% fewer bird species present in sun-exposed plantations than in shady coffee plantations.<sup>16</sup> Compared to „booming“ products such as oil palms, rice, cane sugar, bananas, and soy for livestock breeding, which are responsible for the most severe forest destruction in recent years, coffee is not considered to be particularly problematic. This is due to the fact that cultivation areas are no longer expanding. Since the 1990s, the number of worldwide cultivation areas has levelled in at around ten million hectares. However, due to climate change and rising temperatures, it is expected that coffee farmers have to move to higher altitudes, especially when growing the Arabica variety.



##### Pesticide contamination

Compared to the traditional shade-oriented coffee growing systems, sun-exposed coffee cultivation relies on the increased use of pesticides and chemical fertilisers. In numerous areas with intensive coffee cultivation, from Jamaica to Indonesia, the contamination of soils and aquatic ecosystems as a result of this production has been documented. Some of the chemicals used in intensive coffee production (DDT, lindane and paraquat) are prohibited in industrialised countries due to their carcinogenic potential or their long persistence in the environment. However, they are still used legally or illegally in developing countries. The use of agrochemicals has a direct negative impact on the health of farmers and the overall rural population, as well as on the quality of the soil, water, and biodiversity.<sup>17</sup>



### Soil erosion

Mountainous regions are particularly sensitive areas. Coffee monocultures can lead to a significant deterioration of the soil quality and to increased erosion. It is documented that areas with high rainfall and unshaded plantations lose about three times more soil nitrogen than areas with shaded plantations. As a result, the former production method significantly reduces yields and productivity.



### Water consumption and water pollution<sup>18</sup>

The wet processing of the coffee cherries requires large quantities of water at each processing stage. During the so-called wet milling, the harvested red coffee cherries are mixed with water in a mill and broken open. The pulpy mass of fruit flesh and beans is then fermented in a basin, and the rest of the pulp is rinsed off in a multi-stage process before the beans are dried. Thus, for every five kilograms of coffee cherries, around two kilograms of pulp are extracted. In this process, traditionally, about 40-60 litres of water per kilogram of coffee cherries are used. The wastewater, which contains a high content of organic residues and bitter substances, is often discharged unpurified into rivers.



## EXAMPLE COLOMBIA

The geographical and geological characteristics of the country have, among other factors, led to a great diversity of ecosystems, ranging from coral reefs and coastal mangroves to tropical rainforests, mountain forests, páramos, and tropical glaciers on the peaks of the Cordillera. As a so-called mega diverse country, Colombia and 16 other countries are home to over 70% of the world's biodiversity. Coffee cultivation found an ideal place in the Cordilleras: between 1,000 and 1,800 metres above sea level, a region originally dominated by the Andean forest and characterised by a high level of biodiversity in various taxonomic groups. About 96% of the coffee growers are smallholders with an average plot size of 1.5 hectares, accounting for 82% of production. Since the expansion of coffee cultivation, 60% of the natural ecosystem of the Cordillera has been converted into coffee plantations.<sup>19</sup> Today, these agricultural systems face the challenge of maintaining biodiversity and ecosystem services in order to ensure the availability and quality of water, prevent erosion, and to maintain soil fertility.

## COCOA

### Cultivation areas

Countries near the equator

### Background

Although the cocoa tree originally grew in the tropical rainforests of Latin America, today only just under 18% of cocoa beans are derived from there. Worldwide, in 2019 cocoa was cultivated on an area of 12.2 million hectares, on which a total of just under 5.6 million tons of cocoa beans were produced. A large proportion of the cocoa beans – almost 40% – are processed in Europe.<sup>20</sup> As the plant is dependent on pollination by gnats, which are only found in shaded areas under larger tree species, cocoa is traditionally grown in agroforestry systems, i.e., cocoa is grown in combination with shade trees which can often be used as valuable timber.<sup>21</sup> 90-95% of cocoa is grown by smallholders. Their average cultivated area is two to five hectares. Worldwide, many cocoa farmers live far below the international poverty line of 1.25 US dollars a day.<sup>22</sup> The social challenges since the intensification of cocoa cultivation include abusive child labour and the lack of respect for human rights all along the supply chain.<sup>23</sup>

### Biodiversity risks

#### Deforestation

Since 1960, global cocoa production has quadrupled, which has been accompanied by an expansion and intensification of cultivation. In order to maximise harvests in the short term, primary and secondary forests, especially in West Africa, have been cleared to grow cocoa.

Studies have shown, however, that yields in sunny locations decrease in the long term.<sup>24</sup>





**Poverty**

Poverty is a driver of biodiversity loss, too. In order to maintain their livelihood and gain further income, farmers increasingly use protected forests for cultivating fruit and cocoa. Unregulated ownership and land rights also play a role in the (over)use of forests. Climate change exacerbates the situation: Researchers from the International Center for Tropical Agriculture (CIAT) predict that by 2050, large parts of Ghana and Côte d'Ivoire will be too dry for cocoa cultivation.

**Contamination through pesticides**

The use of pesticides is also an increasing problem in cocoa cultivation. Various fungal infestations can be effectively treated with fungicides, however, small farmers, in particular, cannot afford them, which is why pesticides are mainly used in larger monocultures. Since monocultures are much more sensitive to fungal infestations and other diseases compared to agroforestry systems, the further use of pesticides and fertilisers is necessary to secure high yields.<sup>25</sup>

**EXAMPLE ECUADOR**

The country is the third largest cocoa producer in the world. Although Ecuador produces less than 10% of the world's cocoa, it provides more than 70 % of the world's high-quality cocoa. Cocoa is one of the country's main exports. The sector employs 5% of the rural population, of which more than 70 % are smallholder farmers.<sup>26</sup>

**EXAMPLE COLOMBIA**

Colombia is in tenth place among the world's top cocoa producers. In contrast to the western African countries, however, Colombia processes considerably more of its cocoa inside the country. In 2017, Colombia lost around 425,000 hectares of forest, doubling the average for 2001–2015.<sup>27</sup> The main reason for this development is the peace agreement with the FARC rebels. As a result of the agreement, large areas previously occupied by rebels have been made accessible and usable. Cocoa has not yet been one of the biggest forest destroyers in Colombia, far more forest is destroyed due to increasing livestock farming, land speculation, coca cultivation, infrastructure construction, and mining. In the medium term, however, the country would like to expand its cocoa cultivation significantly, which will increase the pressure on the remaining forest areas.<sup>28</sup> By 2025, Colombia aims to organise its cocoa production in such a way that no forest is cleared for it. After deforestation in Colombia had risen by 46% in recent years, the country has joined the Cocoa & Forest Initiative – an initiative of the Chocolate companies Mars, Hershey, and Barry Callebaut (among others), as well as the two largest cocoa producer countries, Ivory Coast and Ghana. The second largest cocoa buyer in Colombia, and one of the world's largest processors of fine cocoa, CasaLuker, the Compañía Nacional de Chocolates, and the National Cocoa Federation have adopted a joint action plan to end deforestation. This also includes the reforestation of already lost primeval forests and the creation of jobs for farmers who have cultivated cocoa on this land.



## BANANAS

### Cultivation areas

Ecuador, Costa Rica, Colombia, Panama; for organic bananas: Dominican Republic

### Background

With an average per capita consumption of 11.9 kg in 2020, the banana is the second most important fruit for Germans after the apple.<sup>29</sup> Overall, Latin America, with a share of more than 80 %, is the world's largest exporter of bananas. 95 % of organic bananas are exported to the European Union, with the Dominican Republic having a leading position in the organic and fair trade markets. Germany is one of the largest buyers in Europe.

### Biodiversity risks

#### Deforestation and soil erosion

Bananas are mostly grown on large plantations and in monocultures. Tropical soils are generally preferred because they have high organic content and do not require a lot of work. For the expansion of intensive banana cultivation, widespread clearing of rainforests has been – and is still being – carried out. As a result of these clearings, natural erosion barriers ensuring the stability of soils on slopes disappear. This leads – just like the pollution of water bodies by pesticides and fertilisers, as well as the leaching of soils – to great ecological damage.



#### Contamination through pesticides

Large-scale monocultures, combined with the rather warm and humid climatic conditions, favour fungal infestation by the Sigatoka Negra and often lead to the use of a variety of fungicides, insecticides, and herbicides. In order to prevent insect infestation, the banana plants are wrapped in plastic film, the inside of which is impregnated with an insecticide, which then transpires through the pores of the film onto the bananas over a period of weeks.<sup>30</sup> In the battle against fungi, planes fly over thousands of hectares of plantations and spray the plants with fungicides about once a month.<sup>31</sup> The use of chemicals often leads to accumulation of these substances in the soil and in groundwater. Negative effects on biodiversity, such as the degradation of ecosystems, contamination of groundwater, rivers and coastal waters near river mouths, erosion and sedimentation, are often the result. The negative health impacts on the local population are also considerable.<sup>32</sup>



### EXAMPLE ECUADOR

On average, the number of pesticide treatments has increased from 22 to 45 per year and per plantation in Ecuador, which translates into almost one application per week. The workers also use backpack sprayers with nematicides to kill nematodes and other pests that live in the soil twice to four times per year. Herbicides such as glyphosate are also used.<sup>33</sup>





## OIL PALMS

### Cultivation areas

Indonesia, Latin America

### Background

From margarine to ice cream, animal feed to cosmetics, or biodiesel – palm oil is present in every second supermarket product. Due to its very high yields per hectare, in addition to its good cooking properties and preserving effect, the demand for palm oil is high in almost all industries. With a 30% market share, palm oil is the most extracted vegetable oil in the world. India, China, Indonesia, and Europe are the main consumers of palm oil. In the last 25 years, the area under oil palm cultivation has tripled and now extends worldwide to an area of about 19 million hectares, producing over 70 million tons of palm oil.<sup>34</sup> Latin America is currently less important with regard to produced volume, but rather because of its growth rates and the expansion potential of the palm oil sector.

### Biodiversity risks

#### Deforestation

The main ecological problem with the cultivation of oil palms is deforestation for growth of new plantations. Only rarely is former farmland converted.<sup>35</sup> Another problem for biodiversity and ecosystems occurs due to the physiology of oil palms: After harvesting the plants, the fruits have to be processed into oil in the shortest possible time. Thus, palm oil production on a large scale is not possible without a corresponding infrastructure – such as oil mills and transport routes.

Certification can be a way to make palm oil more sustainable, but it can promote production on a large scale, too. It is particularly worrying that certification by the RSPO (Round Table for Sustainable Palm Oil) explicitly includes large-scale, input-intensive monocultures and even prefers those, as the certification process is easier to carry out. According to its own information, RSPO certifies about 19% of palm oil production in Latin America. This makes certification not a „game changer“ but rather legitimises a questionable production model in order to find sales markets for the export of certified palm oil to Europe.<sup>36</sup>



#### The disappearance of small-scale areas & small-scale farming structures

On the one hand, infrastructure development is associated with considerable interventions in ecosystems, and on the other hand, it hardly allows for small-scale farming structures. The facilities are usually closely linked to investors and their expectations of returns. The pressure on ecosystems and protected areas increases, as a huge number of contiguous lands are needed.<sup>37</sup> Cultivation on supposedly „degraded“ lands must also be seen as extremely critical, as these are oftentimes valuable, small-scale and less intensively used areas.



#### Contamination from fertilisers & processing

Synthetic fertilisers have to be used in order to secure high yields. The processing of the fruits into palm oil and palm kernel oil can result in considerable pollutant inputs into the environment, too: washing the fruit requires a lot of water, and the wastewater is often released untreated into the environment.



### EXAMPLE ECUADOR

Between 2004 and 2016, the area under cultivation has more than doubled. The share of the agricultural sector's GDP generated by palm oil is 4.5%. 61% of Ecuador's palm oil grows on deforested land. This means that palm oil cultivation in Ecuador has the highest deforestation rate in the world.<sup>38</sup>

### EXAMPLE COLOMBIA

The production of palm oil currently reaches a volume of 1.75 million tons.<sup>39</sup> This makes Colombia the world's fourth largest palm oil producer. The government sees enormous economic potential in expanding the area under oil palm cultivation, however, in the past this has been linked to the expulsion of indigenous peoples and land grabbing.<sup>40</sup>

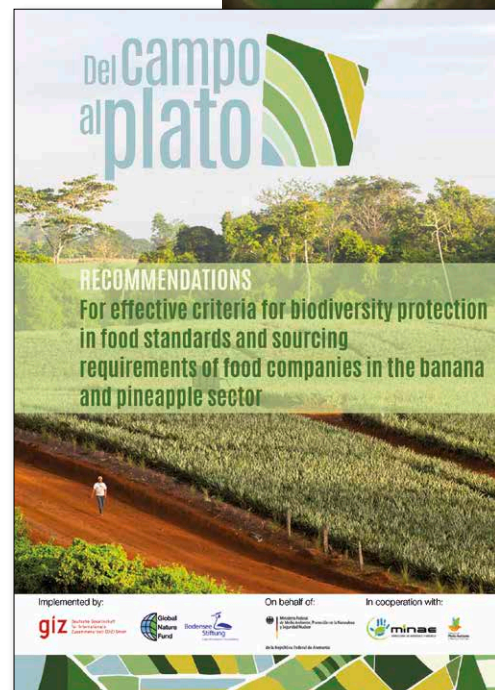
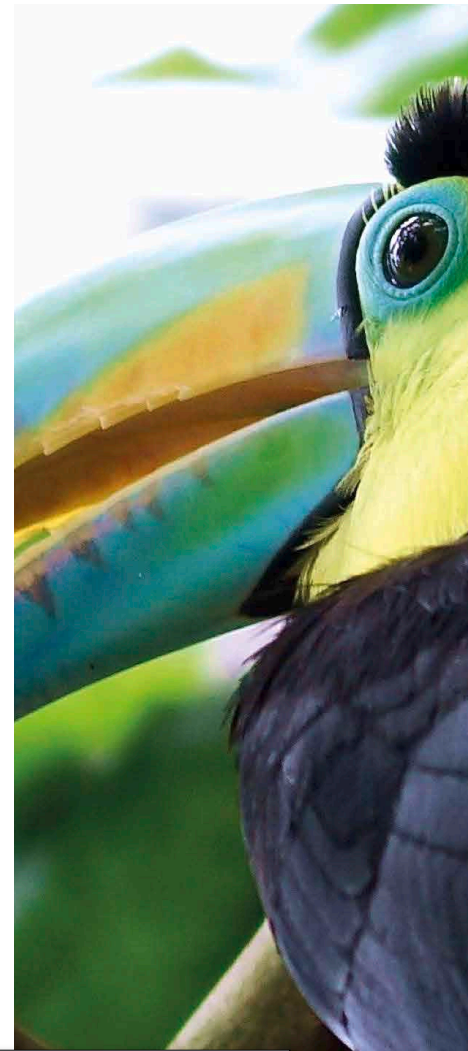


## 4. STANDARDS AND BIODIVERSITY ACTION PLANS: TOOLS FOR THE PROMOTION OF BIODIVERSITY IN CULTIVATION IN TROPICAL AND SUBTROPICAL REGIONS

Food standards certify cultivation methods or products that meet certain quality requirements. They thus represent an important orientation for corporate purchasing and product quality managers. Standards that are communicated to the end customer also fulfil this orientation function vis-à-vis consumers. Oftentimes, food companies demand certain certifications from their producers or suppliers before they can be listed. Other companies additionally have their own procurement requirements.

**The biodiversity performance of cultivation can be significantly improved through standards and specifications that set effective criteria for biodiversity protection.**

What criteria or measures should be included in a standard or procurement guideline to guarantee effective and comprehensive protection of biodiversity in cultivation? This question was discussed extensively with various stakeholders and experts. The results were compiled in a basic set of biodiversity criteria, as well as in additional recommendations for the cultivation of tropical fruits such as bananas and pineapples.



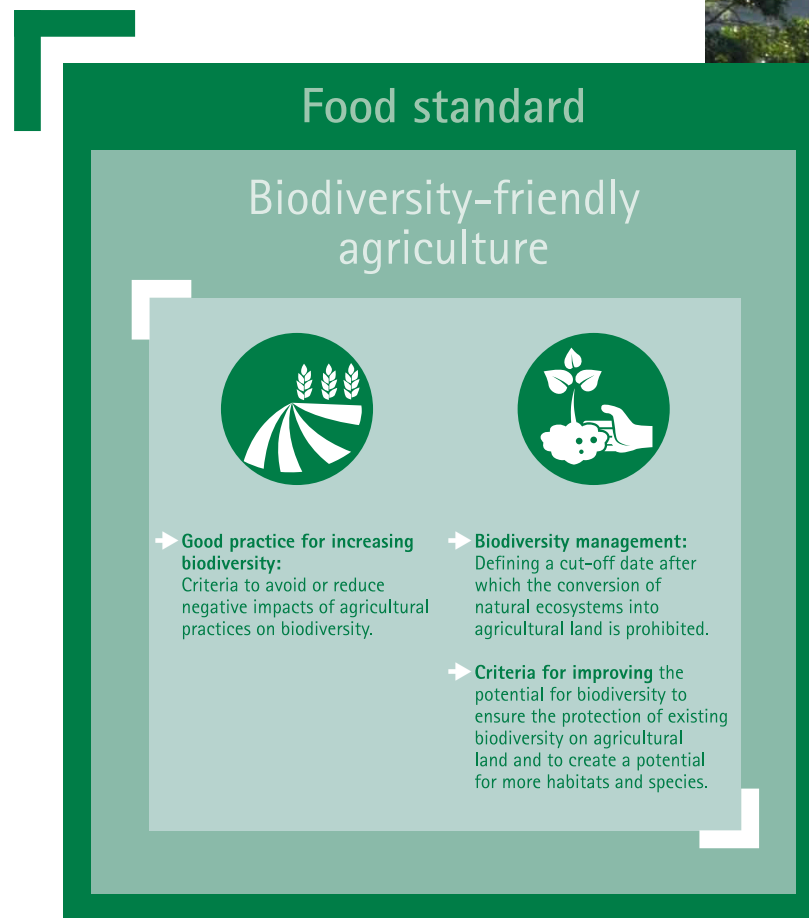


## General requirements for food standards and companies

### Standard organisations and companies should:

- Address all the main relevant causes of biodiversity loss;
- Work on 100% traceability of raw materials with the support of standards;
- Have the explicit goal of making a relevant contribution to reducing the loss of biodiversity and to create the conditions for a „no-net-loss“ of biodiversity. The key to achieving this goal is a long-term strategy in cooperation with the certified companies and suppliers, as well as regular monitoring;
- Support „round tables“ or similar initiatives to protect biodiversity in growing regions, especially in protected areas and/or High Conservation Value Areas, involving all relevant stakeholders in the region. Advocate for comprehensive Biodiversity Action Plans (BAPs), which are developed and implemented for these areas;
- Support local and regional initiatives to protect agro-biodiversity (diversity of varieties and livestock breeds);
- Promote organic farming and other farming practices that use significantly fewer pesticides.
- Promote techniques and processes that help to reduce the use of chemicals used for the preservation of food;
- Continuously improve the protection of biodiversity. They know the initial situation on the farms and record and review the essential direct and indirect effects on biodiversity through monitoring;
- Ensure that biodiversity becomes a resilient (core) competency of the standard or the company. Biodiversity is appropriately integrated into all training activities for certified companies. Companies adequately integrate biodiversity aspects into all activities related to the training of producers, suppliers, and product and quality managers.

Transferred to the structure of a standard, this means requirements and criteria in relation to:



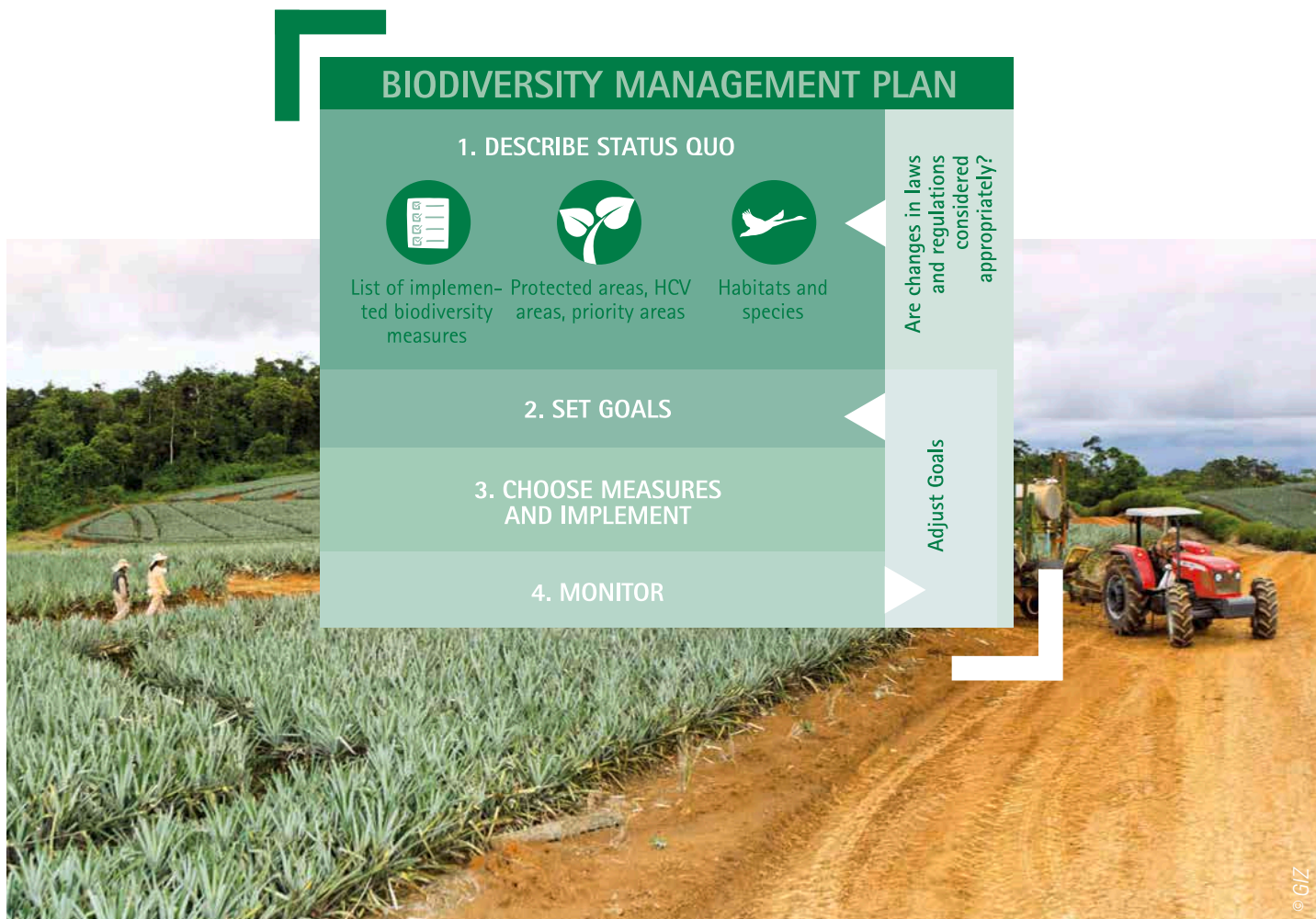
## Criteria/requirements for agricultural production

For effective protection of biodiversity, agricultural production standards and procurement requirements should take all the main drivers of biodiversity loss into account, especially degradation and destruction of ecosystems, overexploitation of natural resources, environmental pollution, climate change, and invasive species.

At the core of good biodiversity management is the development of a Biodiversity Action Plan and a biodiversity management plan based on the analysis of the current situation of the agricultural operation. These plans include both measures for the protection of natural and near-natural habitats as well as the creation of ecological structures to ensure a minimum proportion of high-quality areas for biodiversity conservation.

### Other important requirements:

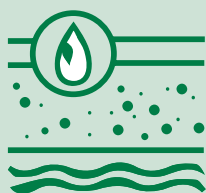
- Natural and semi-natural habitats, as well as ecological structures, must not be treated with pesticides and fertilisers.
- Connecting habitats through biotope corridors and thus enhancing habitats and enabling the migration of species even in intensively used agricultural regions.
- The farm implements measures to safeguard protected and endangered species and avoids practices that disturb or threaten protected and endangered species.
- Water resources of all kinds are protected from pollution, including observing adequate buffer zones (at least 10 metres) with native vegetation (which also serve as biotope corridors).
- Invasive species are identified, reported to the regional nature conservation authorities, and
- Combated or controlled following the authorities' recommendations.
- No use of genetically modified plants or seeds.





Very good professional practice includes criteria on:

### Soil and fertilisation



- Nutrient balances and regular humus balances; fertilisation according to analyses of fertiliser requirements; continuous improvement in the efficient use of fertiliser(s) towards optimal fertiliser management.
- Measures against erosion and pro diverse crops – also for permanent crops.

### Crop protection



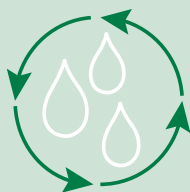
- No use of pesticides that have been shown to have a harmful effect on beneficial organisms, insects, amphibians, or fish.
- Consistent implementation of all principles of Integrated Pest Management as well as their documentation.
- The farm regularly informs about progress in using beneficial insects. It has a plan for the biological control of pests.

### Water use and water management



- The farm obtains water for farm-specific activities exclusively via traceable and documented paths. The amount of consumed water is plausible concerning the demand and does not exceed the officially permitted withdrawal quantities.
- The farm documents the amount of water it uses at each irrigation and demonstrates efficient water use.

### Wastewater



- Wastewater is adequately treated before being discharged into the soil or a body of water.

### Agro-biodiversity



- Standards, companies, and farms should support an improved market access for traditional crop varieties and livestock breeds.
- Certified farms and suppliers are motivated to use traditional cultivars and livestock breeds, e.g., through a bonus point system or other benefits.

## Status quo and potential for improvement of the standards

Several standard organisations have started to optimise their biodiversity specifications based on the recommendations of the EU Food & Biodiversity Initiative.

Some examples:

### GLOBALG.A.P.



- Version 6.0 of the standard from April 2022: farms are to submit a Biodiversity Management plan based on EU Food & Biodiversity
- Recommendations for measures to protect biodiversity outside of the farm operation
- „Biodiversity add-on“ from mid-2022 (initially only for fruit and vegetables from Europe)

### Union for Ethical BioTrade (UEBT)



- Standard with a focus on biodiversity
- Biodiversity Action Plan (BAP) mandatory (guideline on the preparation of BAPs published)
- Use of the Biodiversity Action Plan Monitoring Tool to survey the measures & their implementation

### Rainforest Alliance

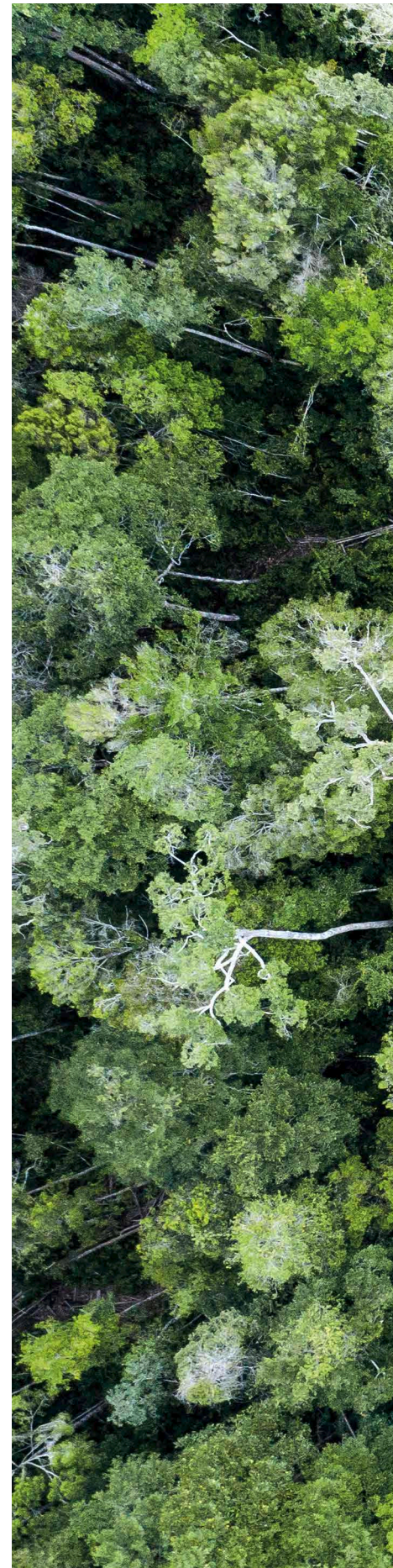


- Requires comprehensive Integrated Pesticide Management in the new 2020 Standard, including prevention, monitoring, and intervention measures for the entire operation & processing facilities
- Requires implementation of a plan for the conservation of natural ecosystems
- Minimum percentages for natural vegetation have been defined (target: at least 10% of the total area with natural vegetation or 15% vegetation in operations with shade-tolerant products)

### Fairtrade



- Water sources must be known & measures for sustainable use be taken
- Prohibits deforestation & destruction of vegetation in carbon-storing areas
- Obligation for companies to prove that effective measures to protect biodiversity – especially ecosystems – are implemented
- Training programs on biodiversity for lead farmers and advisors were expanded








A recent evaluation of the most important standards by the environmental foundation Global Nature Fund shows where there is a potential for improving specifications and criteria:

REQUIREMENT	Demeter	Fair Trade Hired Labour	Fair Trade Small Scale Organisations	GLOBAL G.A.P. - Integrated Farm Assurance	Rainforest Alliance	RSPO	EU Organic Certification Label	UEBT
<b>STANDARD POLICY</b>								
Recognised definitions of biodiversity	Fulfilled	Fulfilled	Fulfilled	Fulfilled	Fulfilled	Partly fulfilled	Fulfilled	Fulfilled
Compliance with the avoidance hierarchy (Avoid, Minimise, Restore)	Partly fulfilled	Fulfilled	Not fulfilled	Fulfilled	Fulfilled	Partly fulfilled	Partly fulfilled	Partly fulfilled
Landscape approach: beyond the company	Not fulfilled	Fulfilled	Fulfilled	Not fulfilled	Fulfilled	Fulfilled	Partly fulfilled	Fulfilled
Biodiversity Management Plan	Fulfilled	Partly fulfilled	Partly fulfilled	Partly fulfilled	Fulfilled	Partly fulfilled	Partly fulfilled	Fulfilled
Biodiversity monitoring	Partly fulfilled	Not fulfilled	Not fulfilled	Not fulfilled	Partly fulfilled	Partly fulfilled	Not fulfilled	Fulfilled
Biodiversity training for standard recipients, auditors, advisors	Partly fulfilled	Partly fulfilled	Partly fulfilled	Not fulfilled	Partly fulfilled	Partly fulfilled	Not fulfilled	Fulfilled
<b>MAIN DRIVERS OF BIODIVERSITY LOSS ADDRESSED</b>								
Ecosystem	Fulfilled	Fulfilled	Partly fulfilled	Partly fulfilled	Fulfilled	Fulfilled	Partly fulfilled	Fulfilled
Overuse	Fulfilled	Fulfilled	Fulfilled	Fulfilled	Fulfilled	Fulfilled	Partly fulfilled	Fulfilled
Invasive species	Partly fulfilled	Fulfilled	Fulfilled	Not fulfilled	Fulfilled	Fulfilled	Partly fulfilled	Fulfilled
Pollution	Partly fulfilled	Fulfilled	Fulfilled	Fulfilled	Fulfilled	Partly fulfilled	Partly fulfilled	Fulfilled

	Fulfilled		Partly fulfilled		Not fulfilled
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## 5. FURTHER INSTRUMENTS FOR THE IMPROVEMENT OF THE BIODIVERSITY PERFORMANCE

### Biodiversity Check Agrícola (BCA) and Biodiversity Action Plan (BAP)



The Biodiversity Check Agrícola (BCA) was developed within the framework of the IKI project Del Campo al Plato (From Farm to Fork), a project implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Global Nature Fund and Lake Constance Foundation. Currently, the BCA is applied on banana and pineapple plantations in the Dominican Republic and Costa Rica.

The BCA is based on the Biodiversity Performance Tool (see next chapter) and supports farmers in assessing and recording the current biodiversity situation on their plantations. With the support of experts, the following levels are taken into account:



Source: © GIZ

The company's management and strategy are analysed as an overarching area, too.

The BCA report describes the initial situation of all the above aspects and contains expert recommendations for measures to improve biodiversity protection. The BCA result is then discussed with the management of the plantation with the aim of developing a Biodiversity Action Plan (BAP) for the plantation. For this step, the management selects the most suitable measures for implementation. As a rule, the BAP is designed for a period of three years and distinguishes between actions that are implemented in the short and medium term. If necessary, management and experts can agree on monitoring the BAP and its effects on biodiversity.

The application of the BCA and the implementation of the BAP are voluntary. Furthermore, the BCA is not a certification. However, it is a good orientation and facilitates the fulfilment of the criteria of the most important certifications in the tropical fruit sector, e.g., Rainforest Alliance, Fairtrade, GLOBALG.A.P. and Demeter. Most standards now require a biodiversity management based on a status quo analysis and risk assessment. The BCA provides the necessary information and additionally considers other standards' requirements.

► **Further information:**

<https://www.delcampoalplato.com/en/home-engl/biodiversity-check-agricola-engl/>





## Biodiversity Performance Tool Café (BPT Café)

The Biodiversity Performance Tool (BPT) is one of the main results of the EU LIFE project Biodiversity in Standards and Labels for the Food Sector and works essentially as described above in the Biodiversity Check Agrícola: The status quo of all key aspects of biodiversity on the farm is recorded, and recommendations for measures are described in a Biodiversity Action Plan. In contrast to the BCA, the Biodiversity Performance Tool is digitalised or functions on an Excel basis. This is also the case with the Biodiversity Performance Tool Café.

It was developed by Rainforest Alliance, the Colombian NGO Fundación Humedales, and the Lake Constance Foundation to be used on coffee plantations in South and Central America. Together with the 4C Coffee Code of Conduct, a further variant of the tool is currently in preparation for coffee cultivation in Vietnam and other South Asian cultivation areas.

The following aspects are scanned and evaluated:

- Ecosystems and habitats on the plantation and in the immediate vicinity: proportion of habitats to the total area of the plantation, habitat types, degree of connectivity through biotope corridors, proximity to protected areas etc.
- Habitat restoration: afforestation, grazing, quality of forest fragments (e.g., density, diversity) etc.
- Use of and influence on habitats: extensive use, grazing, removal of firewood
- Aquatic ecosystems: protection of water sources, buffer zones along rivers, streams, lakes, drainage of areas etc.
- Maintenance of natural and semi-natural habitats
- Agroforestry: quantity and quality
- Ecological structures such as windbreaks, hedges, living fences, dry stone walls, deadwood piles, etc.
- Rare and endangered species
- Further training in the field of nature conservation/biodiversity

For the BPT Coffee South-East-Asia, aspects of agricultural practice are also scanned, compared, and evaluated: Soil and fertiliser management, crop protection, water management, and waste management. The adaptation of the Biodiversity Performance Tool to other products and regions is being worked on; for further information, visit [www.food-biodiversity.de](http://www.food-biodiversity.de) or contact the Global Nature Fund directly.

*left: Coffee cultivation in an agroforestry system, right: plantation displaying degraded soils in Colombia*

*Source: ©Fundación Humedales*



## Cool Farm Tool



The Cool Farm Tool (CFT) was developed by the Cool Farm Alliance (CFA), a network of currently 116 organisations: Food producers and distributors, suppliers, environmental organisations, and scientific institutions. It is an online tool that is provided to farmers for free by the members of the Alliance. The tool primarily focuses on the calculation of greenhouse gases (GHG) on the farm and is applicable to all crops, beef, dairy production as well as other livestock production. In addition, water and biodiversity are covered by different pathways.

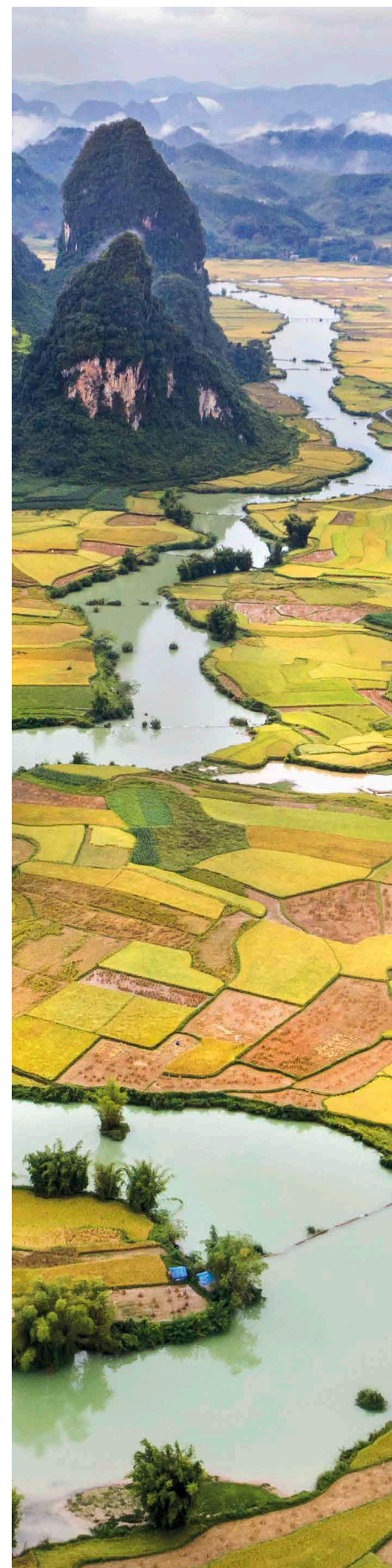
With the appropriate data available, each pathway takes about 30 minutes to complete. Data on GHG emissions (e.g. volume of agricultural products produced, fertiliser use, energy use) and livestock farming (e.g. size of the herd, manure management, feed) are queried. The data is then used to model the GHG estimates of a crop, herd, etc. The Cool Farm Tool is science-based, with support from various academics from University of Edinburgh, University of Cambridge and Wageningen University & Research for example.

The water pathway uses the farms location and irrigation method, along with localised meteorological information, which enables farmers to monitor water demand, water use, and irrigation efficiency. Thereby they can take appropriate measures. How the data is taken into account and how the algorithms are constructed is described in the metric description: <https://coolfarmtool.org/coolfarmtool/water/>

The Cool Farm Biodiversity module uses expert judgement and evidence based analysis to evaluate farm management actions for their biodiversity benefits. The module draws on the Gaia Biodiversity Yardstick and the Conservation Evidence database to enable farmers to describe their farm practices against four dimensions: the farmed products, the farming practices, provision for small habitats and for large habitats. The module provides an overall score for general biodiversity and individual scores for a set of species groups, including arable flora, aquatic flora, soil fauna, beneficial invertebrates, and meadow nesting birds. From this, the farmers can see which species groups are benefiting from their practices and how they can increase and expand the benefits.

The current version of the Cool Farm Tool biodiversity metric refers to temperate forests (e.g. northern Europe, eastern North America), Mediterranean and semi-arid biomes (e.g. the Mediterranean Basin, California, Central Chile, Western South Africa). The CFA is in the process of adapting the metric to tropical forest biomes and collaborate with BPT on further developments.

► **User guide for download:** <https://coolfarmtool.org/coolfarmtool/biodiversity/>





FiBL's SMART tool

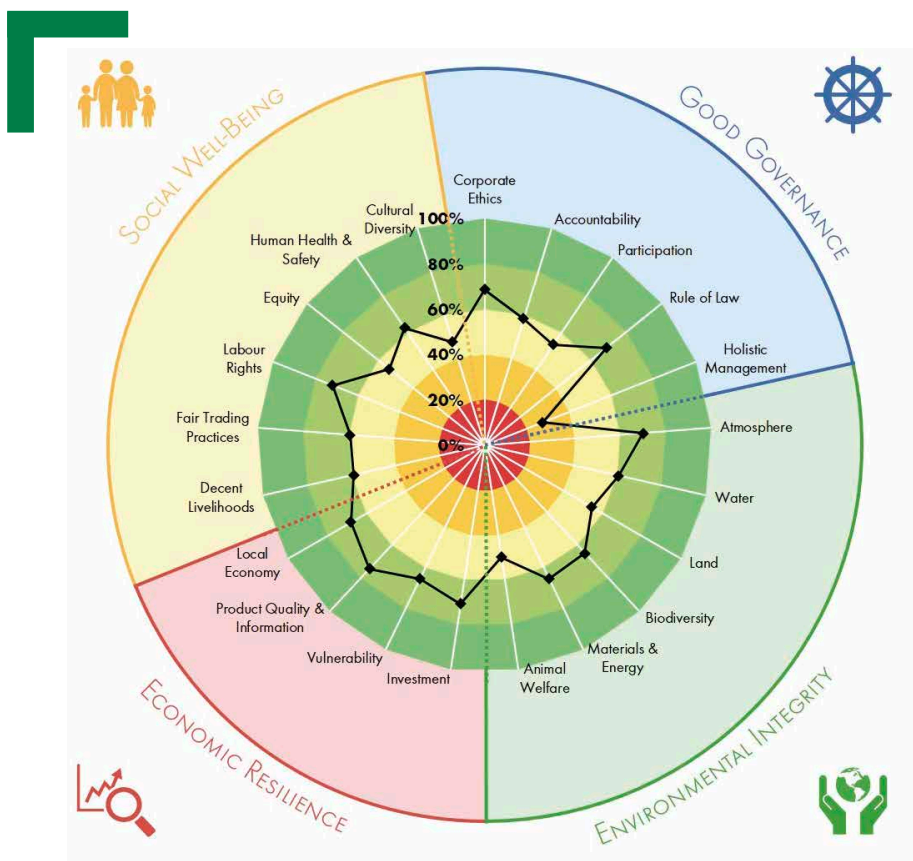


The SMART tool from the Research Institute of Organic Agriculture (FiBL) was established to assess sustainability in the agricultural and food sector.<sup>43</sup> It is intended for agricultural businesses and operations to improve their sustainability performance in a comparable manner and to communicate credibly. The SMART tool is available for the analysis of companies and farms. SMART

is based on the SAFA Sustainability Guidelines, published by the Food and Agriculture Organisation of the United Nations (FAO) in December 2013. It treats four dimensions of sustainability: „Ecological Integrity“, „Economic Resilience“, „Social well-being“, and „Good corporate governance“, which in turn are divided into 21 themes and subdivided into a total of 58 sub-topics.

Over several years, the methodology and the indicators were developed by FiBL experts and are regularly adapted to the latest scientific findings. In a SMART analysis, not only the processes on the company's premises but also the entire sphere of influence and area of responsibility of the respective agricultural holding or enterprise within the value chain are taken into account. This depends, among other things, on the respective position of the farm or company within the value chain, as well as its size and market power, and is identified and determined in advance of the actual analysis. The direct and the indirect influences are considered.

► Further information & downloads are at <https://www.fibl.org/en/themes/smart-en>



Sustainability topics of the SMART-Tool

Source: [www.fibl.org/de/themen/smart.html](http://www.fibl.org/de/themen/smart.html)



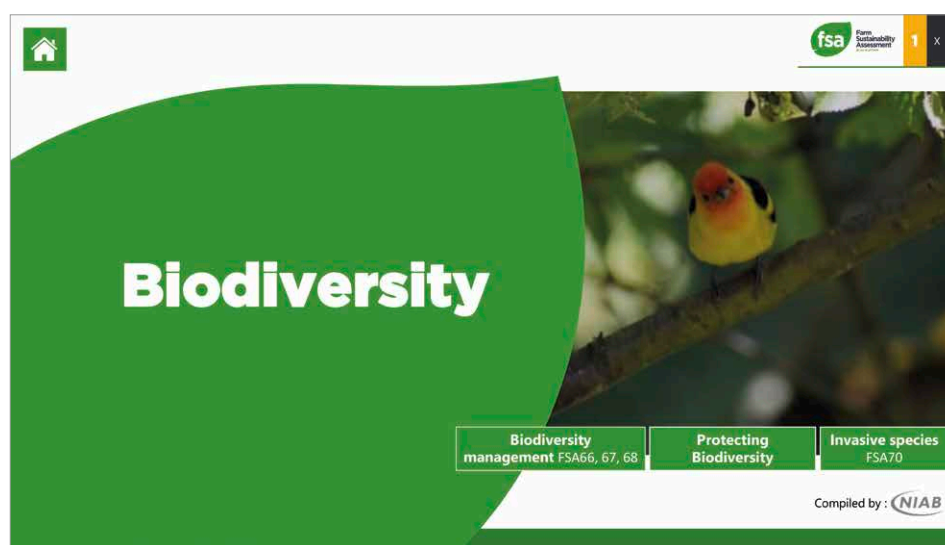
## SAI Platform and FSA Tool

In 2002, Danone, Nestlé, and Unilever founded the Sustainable Agriculture Initiative (SAI Platform), intending to make agriculture more sustainable. The SAI platform is a B2B standard of a rather non-binding nature for sustainable agriculture in food and beverage value chains. It develops methods and guidelines to assist members in procurement and agricultural production.

In 2014, SAI introduced the Farm Sustainability Assessment (FSA) program, an assessment tool for improving and validating sustainability on the farm and in agricultural supply chains. A standardised questionnaire enables farmers to assess the sustainability practices in their production. The FSA self-assessment questionnaire covers ten topics, which, based on 109 questions, examines the legal, environmental, social, and economic dimensions of agricultural practice (version 3.0, April 2021). Concerning ecology, the FSA calls for the protection and sustainable use of natural ecosystems but does not require a complete ban of critical pesticides (e.g., phenylpyrazole) and allows the use of genetically modified organisms (GMOs) under certain conditions. FSA is not a certification standard, but the self-assessment results can be reviewed by an independent review body. GLOBALG.A.P. manages the accreditation and maintenance of FSA verification bodies on behalf of the SAI.

The FSA tool is adapted to all agricultural crops – with a focus on fruit, vegetables, herbs, and spices – applicable, regardless of farm size or type. It is suitable for coffee, cocoa, bananas, and palm oil production. The FSA tool is freely accessible and free of charge, irrespective of membership in the SAI platform.

► **The toolkit** and associated guides are available at <https://saiplatform.org/resource-centre/fsa/>



*Biodiversity guide for the implementation of the Farm Sustainability Assessment (FSA) in agricultural operations*

Source: <https://saiplatform.org/resource-centre/fsa/>



## 6. COOPERATION BETWEEN COMPANIES AND THE GIZ WITHIN THE FRAMEWORK OF PROJECTS OF THE INTERNATIONAL COOPERATION

Together with environmental organisations, GIZ supports producers and smallholder organisations worldwide at implementing measures for improved biodiversity protection. Biodiversity management and good agricultural practices are only respected by farmers if they benefit from them in the long term, and if consumers demand more sustainable, agricultural products with added value. Pilot projects and initiatives are ideal for testing in practice and drawing conclusions to advance such processes. Successful initiatives must then be expanded and mainstreamed – from pilot to general guidelines.

To achieve this, there needs to be commitment and engagement from food industry companies.

How companies can get involved in GIZ projects and which opportunities there are will be illustrated by giving the example of the Global Programme „Sustainability and Value Added in Agricultural Supply Chains“.

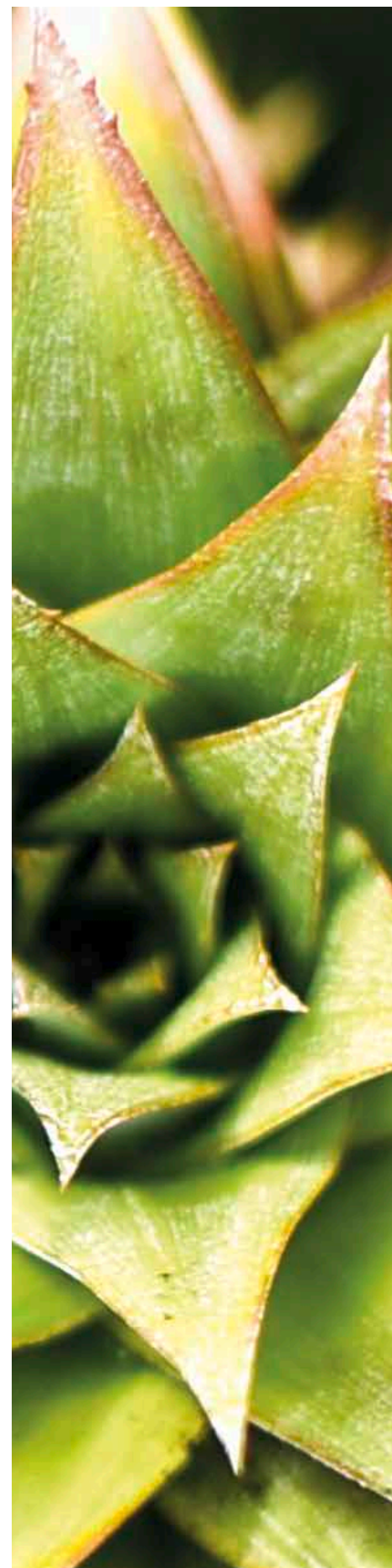
### Global Programme „Sustainability and Value Added in Agricultural Supply Chains“

The Global Programme „Sustainability and Value Added in Agricultural Supply Chains“ (ProAgriChains) is part of the core theme of the German Federal Ministry for Economic Cooperation and Development's program „Living without Hunger – Transforming Agricultural and Food Systems“. It pursues the goal of improving sustainability in selected international agricultural supply chains. From a global perspective, it identifies the most effective levers for tackling cross-border challenges along the supply chains. The focus is on the raw materials banana, cotton, coffee, cocoa and natural rubber, palm oil, and soy. To this end, the ProAgriChains cooperates with actors along the entire supply chain, from international companies to local processors, to smallholder farmers. It is active in eleven countries: Ethiopia, Brazil, Burkina Faso, Côte d'Ivoire, Ecuador, Ghana, India, Indonesia, Cameroon, Colombia, and Uzbekistan.

Expanding cultivation areas of globally traded agricultural commodities is one of the main reasons for the loss of natural ecosystems and their biodiversity. In order to achieve ecological sustainability in global agricultural supply chains, it is crucial to protect rainforests and biodiversity and preserve them. Companies that source their agricultural commodities from the Global South greatly influence markets and supply chains. The ProAgriChains, therefore, cooperates with market-determining, international actors to achieve social, environmental, and economic sustainability in their supply chains and thus improve the living conditions of smallholder farmers and protect natural resources.

Under the header INCAS Global+ (Innovación en cadenas agrícolas sostenibles), the ProAgriChains supports various projects to promote biodiversity in the sustainable cultivation of agricultural commodities in Colombia.

Three practical examples are briefly described below:



### Biodiversity conservation in coffee cultivation – Fundación Humedales

Together with the NGO Fundación Humedales, Coocentral cooperative with 3,000 coffee smallholders implements the Biodiversity Performance Tool (BPT). Since these producers have an average cultivated area of 1.5 hectares, the BPT Convoy method is used: Ten representative farms are selected, and measures to protect biodiversity are identified. The smallholders receive training on developing and implementing action plans to strengthen biodiversity. These are crucial to meet the requirements of the Rainforest Alliance Standard 2020 and be certified accordingly. The Coocentral cooperative produces approximately nine tons of dried parchment coffee annually on 8,000 hectares of cultivated land. From 2023 onwards, this coffee will come from particularly biodiversity-responsible cultivation. By then, cooperation is needed with companies that are willing to pay a fair price, as the coffee then includes both additional costs and offers the added value of being „biodiversity-friendly“. Biodiversity-friendly grown coffee is ideal for premium lines. Examples are „Bird & Wild“, supported by the English environmental organisation RSPB, „Bird-friendly coffee“ by Cafeology (winner of numerous awards such as the European Business Award for the Environment), and one of the nine bird-friendly coffee brands in the USA, „Birds&Beans“.



above: Bird & Wild Coffee,  
Source © Bird & Wild RSPB Coffee

below: The Bird Friendly® Coffee  
Birds & Beans bears the certificate  
of the Smithsonian Migratory Bird  
Center,  
Source: © Birds & Beans

right: The team from ProCAT-Colombia  
at work

left: Jaguar Friendly eco-label,  
Source: © ProCAT Colombia

### Cacao for life + forests for the Amazon (Alisos)

In this project, INCAS Global+ and the non-profit organisation Alisos support introducing a transparency and traceability system, the Sistema de Medición, Reporte y Verificación. In addition to socio-economic and economic indicators, the system also includes indicators for biodiversity monitoring (acoustics, footprints, direct observation, number of nests, etc.). This will provide a simple, participatory platform for reporting on cocoa agroforestry systems' impacts on the region's biodiversity.

The data on biodiversity recorded in this way is collected in a species database, for example to identify bird species that can be used as biodiversity indicators in cocoa growing areas. In addition, the system makes an essential contribution to better understanding and assessing biodiversity in cocoa production and identifying which measures are reversing the trend and turning cultivation areas with formerly high levels of deforestation back into biodiversity-rich regions.

### ProCAT – Water and Land Conservation Project Colombia

INCAS Global+ supports the implementation of a concept for protecting key species in sustainable coffee and cocoa cultivation. The Jaguar Friendly eco-label belongs to the Wildlife Friendly Enterprise Network and is awarded when producers comprehensively meet specific ecological and social criteria. The aim is to meet sustainable production targets, renature degraded ecosystems and create habitats for biodiversity. Based on the positive experiences with coffee producers in Costa Rica and northern Colombia (Sierra Nevada de Santa Marta), the approach is being transferred for the first time to cocoa producers. Cocoa and coffee producers in the region of Caquetá are involved. Caquetá is a biodiversity hotspot and, at the same time, a region strongly affected by socio-economic problems and deforestation. The „Jaguar Friendly“ eco-label is intended to demonstrate the added value of biodiversity-friendly products and benefit the people in production.





## „Del Campo al Plato“ – An example for biodiversity conservation

More and more companies are building direct supply chains, beginning at the starting point of production and keeping close contact with the respective producers. This creates transparency and traceability, reduces risks, and facilitates meeting increasingly strict legal requirements. Within the framework of pilot projects and longer-term projects, GIZ supports processes and measures for the cultivation of agricultural raw materials to improve biodiversity and climate protection. Transferable instruments and methods are provided to companies to assess their suppliers' biodiversity performance.

One example of this is the GIZ project „Del Campo al Plato“ ("From Farm to Plate"), funded by the International Climate Initiative (IKI).

Together with the Global Nature Fund, the Lake Constance Foundation, and local partners, GIZ is implementing this project with the goal of protecting biodiversity in the cultivation of bananas and pineapples in Costa Rica and the Dominican Republic. In the project, the Biodiversity Check Agrícola was developed using the Biodiversity Performance Tool to help farmers assess their current situation and to develop tailor-made action plans for their agricultural businesses (see chapter on Biodiversity Check Agrícola). Companies with supply chains in these countries are invited to motivate their producers and suppliers to participate in the initiative and apply the Biodiversity Check Agrícola. In addition, companies benefit from cooperation with „Del Campo al Plato“ or similar initiatives in many other ways, for example, through training, professional support from the GIZ team on the ground, exchange with ministries, authorities, and local stakeholders as well as with regards to marketing biodiversity-friendly products.

## Joint projects: Investing responsibly, advancing innovative solutions

With regard to the Sustainable Development Goals of the 2030 Agenda (SDGs), close cooperation with the private sector is of great importance. GIZ cooperates with companies and business associations in a variety of ways. The following contact points offer companies opportunities to explore cooperation with GIZ and suitable formats:



### Agency for Economy and Development (AWE)

The Agency for Economy and Development (AWE) advises companies that are active in emerging markets and developing countries and offers them suitable support structures concerning German development cooperation. It also supports the placement of contacts on site and by providing advice on project planning.

► **Business globally engaged: [economy-development.com](https://www.economy-development.com)**



### develoPPP funding programme

With develoPPP, the Federal Ministry for Economic Cooperation and Development (BMZ) promotes public-private projects in areas where entrepreneurial opportunities and development potential come together. Companies that invest sustainably in a developing country or emerging market and want to expand their local operations can access financial and professional support under the program.

► **Invest responsibly. Promoting development. (<https://www.developpp.de/>)**



### Participation in ongoing development projects

As described in the chapter Global Programme „Sustainability and Value Added in Agricultural Supply Chains“ (ProAgriChains), companies can get involved in ongoing projects. Project measures in specific project regions can receive support. For example, corporate funding can increase the impact of the projects and their reach. For this purpose, the appropriate projects should be identified and addressed directly. The GIZ homepage shows the thematic portfolio and the global distribution of projects:

► **<https://www.giz.de/de/html/weltweit.html>**

GIZ uses a variety of formats to cooperate with the private sector. These cooperation formats combine the innovative strength of the economy with the resources, knowledge, and experience of international cooperation. The most suitable format is selected for the respective context – responsibility, costs, and risks are shared in partnership. The common goal: development in the partner countries to protect biodiversity and improve the living conditions of people on the ground.

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The Global Nature Fund coordinates the Food for Biodiversity Association. Numerous business associations and standards from the food industry, as well as scientific Institutions and NGOs are members of this alliance. They all share the same goal: they want to make a decisive contribution to the protection of biodiversity along the agricultural supply chain.



Further information: [www.food-biodiversity.de](http://www.food-biodiversity.de)