



Biodiversity in Standards and Labels for the Food Sector

Layman's Report – Achievements 2016 - 2020

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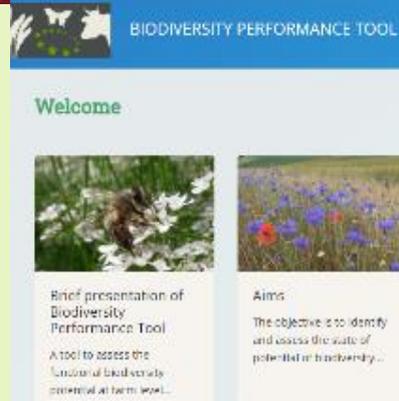
National Biodiversity Initiatives of the Food Sector established



Biodiversity measures on
5,363 ha
of 79 certified farms in Europe



39
Standards, companies and cooperatives improving policies and criteria of their food standards or sourcing requirements



23,000

people reached at around 170 fairs and events in EU and worldwide



Online Tool

to evaluate Biodiversity Performance of farms and a Biodiversity Monitoring System for standards, companies & cooperatives

LIFE Food & Biodiversity – Biodiversity in Standards and Labels

In combination with the agricultural sector, food producers and retailers have a significant impact on biodiversity. Standards and labels for the food sector help qualify certain attributes of a product and the process of production itself. In addition to required certifications, many food companies have their own sourcing guidelines for suppliers and farmers and implement their own audits to ensure compliance.

The LIFE Food & Biodiversity Project was directed at standard setting organizations as well as companies with own sourcing requirements. The main objective was to improve the biodiversity performance of the food sector by

- Supporting standard-setting organizations to include efficient biodiversity criteria into their schemes.
- Motivating food processing companies and retailers to include biodiversity criteria into sourcing guidelines.
- Providing training on biodiversity to farm advisors and standard certifiers, as well as professionals responsible for product quality and the purchase of commodities in companies.
- Developing a Biodiversity Performance Tool in order to improve the biodiversity management on farms.
- Developing a Biodiversity Monitoring System for standards and food companies.
- Providing transferable outputs, intensive communication and dissemination towards the food sector and political decision makers.
- Demonstrating the applicability of measures beneficial for biodiversity on various pilot farms across Europe.
- Supporting the creation of national Food Sector Initiatives on Biodiversity.

This report summarizes the achievements of the project implemented between August 2016 and September 2020.

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1. Background: The Food Sector and Biodiversity

The agricultural sector – including food processors and food retailers - has a huge impact on biodiversity. With the support of food standards and through effective and goal-oriented sourcing requirements, the food sector can make a significant contribution to curbing biodiversity loss.



Figure 1: Spain, France, Portugal and Germany were target countries of the EU LIFE Food & Biodiversity Project. The project partners transferred experiences and results at EU level and worldwide.

Appropriate integration of biodiversity aspects into sourcing strategies helps companies to analyse biodiversity-related risks that may affect internal operations, brand management or the reputation of the company. A good biodiversity strategy goes hand in hand with increased opportunities for differentiation in the market, value proposition, consumer satisfaction and more sustainable sourcing strategies.

There is an urgent need to act: highly industrialised and intensive production systems have made agriculture one of the main drivers of biodiversity loss. Monocultures of high-yield varieties coupled with increased chemical and mechanical inputs led to a loss of ecological functions and a degradation of crucial ecosystem services in agricultural landscapes. Much too often “modern” agriculture results in land-use-changes and a simplification of landscapes, the destruction of primary ecosystems and the over-exploitation of natural resources such as water and soil. Agriculture and the food sector can also cause air pollution and climate change effects and contribute to the spread of invasive species. The continuous reduction of crops and breed diversity used for food production contributes to the dramatic decline of agro-biodiversity.

WHAT IS BIODIVERSITY?

Biodiversity is defined as the

- 1 diversity within species (genetic diversity)
- 2 diversity of species (number of species)
- 3 diversity of ecosystems and their services

The projected fast-growing human global population will require large increases in food production within the next decades.

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Globally 50 % of all habitable land has been converted to farmland.

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Utilised agricultural area in the EU covers 40 % of the total land area.

Agriculture depends on BIODIVERSITY

Of the 100 globally most used agricultural crops, delivering about 90 % of nutrition, 71 are pollinated by bees.

15 billion EUR of annual EU agricultural output is directly attributed to pollinators.

FOOD security & agricultural intensification

GLOBALLY, FOOD SYSTEMS ARE RESPONSIBLE FOR:

- ◆ around 24 % of the global greenhouse gas emissions,
- ◆ 33 % of degraded soils,
- ◆ **60 % of global terrestrial biodiversity loss.**

Due to:

- changes in land-use
- destruction of primary ecosystems
- over-exploitation
- pollution of water and soils
- non-native invasive species

Biodiversity can be supported by AGRICULTURE

Agriculture is important for the conservation of biodiversity because the presence of many species and habitats is closely linked to agricultural land-use.

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Approximately **50 % of European species** are dependent on agricultural habitats.

The conservation and sustainable use of biodiversity is not simply an environmental issue but it is a key requirement for our nutrition, production processes, services and the overall quality of life.

Figure 2: Agriculture and biodiversity – impacts and dependencies are high.

2. Biodiversity Performance of Standards and Sourcing Guidelines improved and awareness raised

- A **Baseline Report** was published in the framework of the project in 2017. 1,250 criteria in 54 standards and labels of relevance for the European food sector were screened against their transparency, verifiability and effectivity related to biodiversity. Individual feedback was provided to all standards and labels screened, including advice on how to improve their criteria and policies on biodiversity.
- **Recommendations for effective biodiversity criteria in standards and sourcing requirements** were elaborated in collaboration with more than 90 representatives from standards, companies, NGOs, scientific institutions, and ministries. They were published in five languages and disseminated among over 5,000 stakeholders from the food sector.
 - The **Recommendations were** presented in 2018, during the European conference “Sourcing while respecting biodiversity: the case of food”, organized by the Belgian Federal Public Service for Health, Food Chain Safety and Environment, Global Nature Fund and others. They were also presented at national level in the four countries.
 - Approx. 1,100 food companies and standards consider or already considered the recommendations in the revision of their schemes and sourcing requirements.
 - The project worked directly on the improvement of criteria and biodiversity policies with 58 companies (Nestlé, Kaufland, ALB-GOLD, Bjorg Bonnetterre & Compagnie, Bonduelle, Lu Harmony, Beauvallet, among others), with 37 standards (e.g. Fairtrade, Rainforest Alliance, Global GAP, UEBT, organic label and various regional standards in Germany, France, Spain and Portugal) and 14 farmers cooperatives. 39 of these have improved or are in the process of improving their biodiversity-related policies and criteria.
- **Two Easy Guides** helped product, quality and procurement managers to understand the role of effective biodiversity criteria (1st version) and what food standards need to consider to effectively protect insect biodiversity (2nd version).

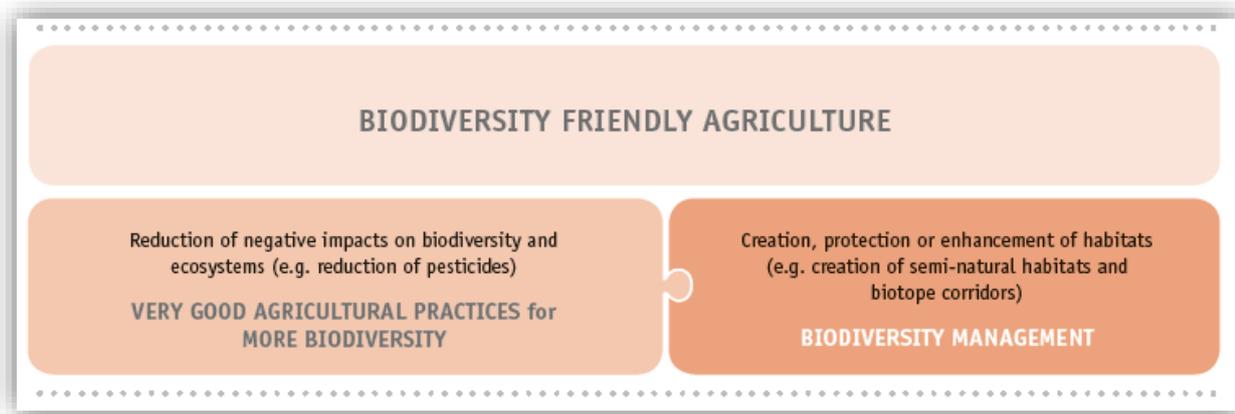


Figure 1: Effective biodiversity criteria in standards and labels need to address both pillars of biodiversity friendly agriculture, the reduction of negative impacts on biodiversity and the creation of habitats.

Good to know

- Standards and labels of the food sector certify worldwide millions of farmers. By improving biodiversity criteria and guidelines in standards and companies in the frame of this LIFE project, an estimated number of 3.1 Mio. certified farmers and suppliers increased their contribution to the protection of ecosystems, species and soil biodiversity.

3. Over 1,200 Advisors, Certifiers and Company Managers trained on Biodiversity

- A **Biodiversity Knowledge Pool** and **77 training products in various languages** (Action Fact Sheets, Biodiversity Fact Sheets, training guidelines and presentations) contribute to capacity building of assessors and auditors of standards and product and quality managers in companies. Providing information such as: How should an ambitious plan for the protection of biodiversity on the farm be elaborated? What biodiversity measures should be implemented on a farm? Why is improvement of biodiversity performance so important for companies? Which biodiversity criteria should a standard include and what is the current situation?



The project team prepared a **Biodiversity Training Module for the FSA Tool of the Sustainable Agriculture Initiative Platform** – a sector initiative with over 100 member companies and organisations.

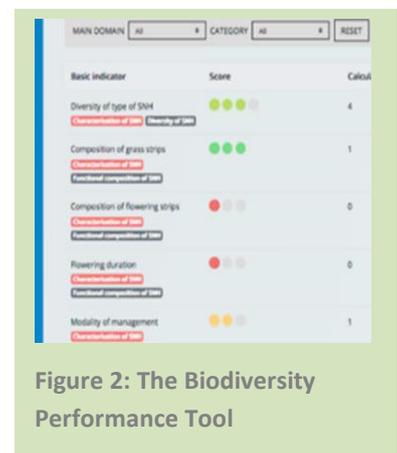
- Over 1,200 certifiers, company/standard managers, assessors and lead farmers participated in **33 trainings** of the project.

Good to know

- Interested in information on Biodiversity Management and Very Good Agricultural Practices in the food sector? Visit the project’s Knowledge Pool at www.business-biodiversity.eu/en/knowledge-pool.

4. Biodiversity Performance Tool for Farms created

- The project created the first online tool that assesses biodiversity performances at farm level and provides input for elaboration of a Biodiversity Action Plan at the end of the diagnosis: the **Biodiversity Performance Tool (BPT)**. The BPT supports decisions on biodiversity management at the farm level and helps farmers to comply with biodiversity criteria and requirements of food standards, companies, and farmers associations. Certifiers and product managers of companies can easily evaluate the quality of the plan and proof if there is a continuous improvement. The BPT is accessible on <https://bpt.biodiversity-performance.eu/login>



- After completing the online questionnaire, the BPT describes the baseline on the farm using a maximum of 78 indicators. Thresholds were defined for scoring each indicator through a traffic light-system (see figure). A map module is proposed to help identifying and quantifying the semi-natural habitats.
- Based on the thresholds, the BPT describes the farm’s strengths and weaknesses in relation to biodiversity issues. Focusing on the strengths and weaknesses, the BPT proposes measures for improvement. This analysis helps farmers and advisors to select the appropriate measures and to prepare a tailor-made Biodiversity Action Plan in order to achieve a continuous improvement at farm and landscape level.
- More than 200 detailed actions are integrated into the BPT to be selected for a sound Biodiversity Action Plan. They are in coherence with other environmental issues such as soil protection, air and water quality, water use and adaptation to climate change. A link to detailed descriptions of the measures is included (Action Factsheets).
- The visualization of strengths and weaknesses as well as implemented measures supports certifiers in verifying whether plans are appropriate and standard criteria related to biodiversity were implemented with high quality.
- The BPT contributes to overall biodiversity monitoring over time by providing statistical series on the biodiversity performance at farm level and through differences in the matrix highlighting indicators that have decreased as well as those that have improved between two dates.

- The focus of the BPT on the European agro-climatic zones and the main production systems lies on: arable crops, livestock farming system, vegetables and permanent crops and mixed farms. The methodology of the BPT was also adapted for other crops and regions such as spice production in India, coffee cultivation in South America and banana and pineapple cultivation in Central America.
- More than 80 standards and companies tested the tool. It was applied on 50 pilot farms in Germany, France, Spain and Portugal.

Good to know

- The Biodiversity Performance Tool is the first online tool that offers an overview on biodiversity preservation at farm level through the quantification and qualification on semi-natural habitat management, farming practices and farmers' awareness on biodiversity issues. Added values are a mapping module to calculate the area of and to draw the outlines of semi-natural habitats, a matrix to show strengths and weaknesses and the proposal of measures for a tailor-made Biodiversity Action Plan.
- We invite food companies, standards, farmers and farmers' cooperatives to test the BPT and improve biodiversity management on the farms. The BPT can be tested free of charge until the end of 2020.

5. 79 Pilot Farms tested Biodiversity Measures

- **5,363 hectares were subject to pilot biodiversity measures on farms** in Spain (tomatoes, melons and olives), France (arable crops and dairy), Portugal (livestock grazing in extensive pastures in Montado systems) and Germany (cereals, fruits and potato). 79 certified pilot farms in Europe participated in testing biodiversity measures proposed by the project.
- In Germany, 15 **cereal farms** from two regional producer associations, KraichgauKorn® and Linzgau Korn® tested and documented 18 different measures to enhance biodiversity. The first results show a trend of slight increase of wild herbs on the farms. Producers from the company ALB-GOLD participated with particularly high-quality measures such as the extensive cultivation of Durum.
- Other cooperatives got inspired and implemented biodiversity measures, e.g. 157 **orchard farms** with 1.250 hectares certified by the Pro Planet Label of Rewe Group in the Lake Constance region. More than 400 hectares of flowering areas were established, 800 nesting aids for wild bees installed. In pilot projects in Portugal, 165 ha of **Cork and Holm Oak Montado** were protected and many other measures have been implemented to enhance biodiversity.



Figure 3: Cereals sown in wide rows in order to give wild herbs space and light to germinate (left). New cork oak trees (*Quercus suber*) were strategically planted to help regenerate Montado areas (the Montado is an agroforestry system rich in biodiversity, mid). Green Cover in olive Crops (right).

- In France, 9 **cereal farms** of the cooperative Qualisol and 3 **dairy farms** of the cooperative Jeune Montagne participated by testing implementation of hedges (about 560 meters), traditional orchards (2 ha), flowering strips (800 m²), no-tillage techniques (350 ha), implementation of cover crops (300 ha), diversification through intercropping (150 ha). They realized trainings on conservation biological control, and were involved into biodiversity monitoring (wild flora, carabids and slugs, wild bees and butterflies) and soil quality monitoring in order to better understand the impacts of their farming practices on biodiversity and soil preservation.
- In Spain, biodiversity measures have been tested and implemented on three **olive pilot farms** with about 20 farmers and a total area of more than 300 ha. Measures like green covers, floral bands, organic fertilization and the establishment of ecological structures like watering places for fauna, stone piles and root balls of old almond trees have been applied. The project has also focused on enhancing biodiversity in vegetable production. As a result, 15 **tomato farms** with a total of 300 ha of intensive tomato production have been managed in a more biodiversity friendly way, using cover crops and bat refuges for integrated pest control and restoration of semi natural habitats. In the vegetables sector, a **melons pilot farm** has participated with about 75 ha of crops and improved their irrigation water efficiency and implemented flowering strips for pollinators.



Figure 4: Stone piles on olive pilot farm

Good to know

- One challenge for all actions enhancing biodiversity is to cover the costs of implementation and potential losses of yield. This burden cannot only be left with the farmer. The actors of the food sector need to pay an appropriate price, which covers not only the costs but also recognizes the added value of the product.
- In the future, farmers should be adequately remunerated for the ecological services they provide using very good farming practices that contribute to habitats, resources for wild biodiversity, pollination, biological pest control, and the completion of biological N- and C-cycles.

6. Biodiversity Monitoring System for Standards and Companies created

- The **Biodiversity Monitoring System (BMS)** enables the monitoring of impacts on biodiversity on an aggregated level. The target groups are standards, food companies and cooperatives aiming to monitor the biodiversity performance of their certified farms, suppliers or members. The BMS is accessible on www.biodiversity-performance.eu.
- A set of 25 indicators was agreed on in discussions with standards, companies and scientific institutions. The set is in line with the data collected by the BPT, but sources of data can also be audits and other tools. The data is processed in a database ensuring high data protection standards.
- Monitoring results can be filtered (e.g. by regions, countries or production systems) and are presented as graphs or tables structured in nine clusters. Additional individual clusters can be designed.
- Changes in biodiversity performance are monitored by subsequent data collection in replicated time series. The monitoring results support standards, companies and cooperatives in the evaluation of compliance with criteria or requirements, the identification of weaknesses and the selection of activities to improve biodiversity. Furthermore, monitoring provides data for reporting and communication.

Good to know

- The Biodiversity Monitoring System fills the current lack of monitoring in the food sector. The indicators cover the main aspects of biodiversity and are a good compromise between practicability and scientific standards. The BMS can be tested free of charge until the end of 2021.

7. Dissemination, Media and Food Sector Initiatives on Biodiversity Performance

- A project website was launched (www.food-biodiversity.eu), and a Twitter communication channel was established. Furthermore, project flyers, notice boards and roll ups have been developed offering various ways to communicate the project’s progress and achievements.
- **A Position Paper on CAP Reform and Biodiversity**, as well as Biodiversity Fact Sheets for various crops and productions, were published and distributed at European level. The project partners contributed intensely to the elaboration of national and regional policies and new regulations.
- The project was presented at 30 international and more than 140 national **fairs and conferences** in Germany, France, Portugal and Spain, reaching more than 23,000 people.
- **Initiatives on “Biodiversity Performance in the Food Sector”** at the national level were established involving stakeholders from the food sector in Spain, France, Portugal and Germany (e.g. involving the REWE Group, Kaufland, Lidl, Nestlé, GlobalG.A.P., Rainforest Alliance and Fairtrade).



Figure 5: Fact Sheets published in the project



Figure 6: Meeting with Jane Goodall at Biofach Fair 2020, Germany (left); Expert talk on Sustainable Agriculture, Spain (mid); Online Presentation of the Biodiversity Performance Tool (right).



Figure 7: Media Tour to Pilot Olive Farm in Alcaraz, Spain (left). Project technician Carlos Teixeira on TV in Portugal (right).

Good to know

- The actions and tools of the LIFE Food & Biodiversity Project are highly replicable and easily transferable to all agricultural products and production types. Standards, food companies, farmers associations and cooperatives can use the recommendations, the BPT and the BMS. There is a high potential for adapting the BPT to further crops and geographical regions. The approach and methodology to assess standards and sourcing guidelines according to the main drivers of biodiversity loss can be transferred to other industries depending on agricultural raw material (e.g. the textiles industry). Dissemination and outreach activities were particularly successful when implemented jointly by NGOs, standards and companies from the food sector (e.g. on food business fairs).

European Project Team



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LIFE 15 GIE/DE000737
The LIFE Programme is the EU's funding instrument for the environment and climate action created in 1992. The current funding period 2014 - 2020 has a budget of € 3.4 billion.

We appreciate the support of our partner standards and companies



Information: www.food-biodiversity.eu



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Version: November 2020