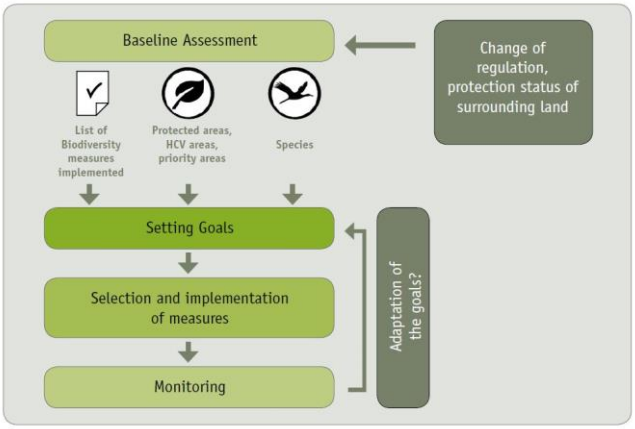
FOOD & BIODIVERSITY

Methodological Guideline for a Biodiversity Action Plan

Setting Goals and Priorities

The Biodiversity Action Plan



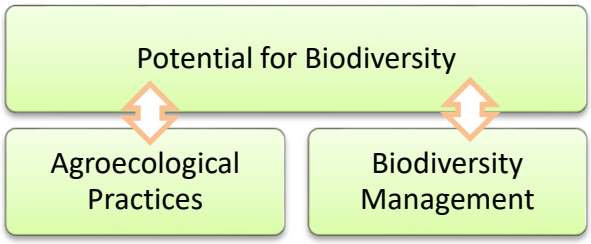
The Biodiversity Action Plan (BAP) consists out of four main steps. This methodological guideline focuses on the setting of goals and priorities for biodiversity protection. As shown in the graph on the left side, the setting of goals builds up on the baseline assessment prepares the monitoring approach. Both of which are subject to additional methodological guidelines that aim to support farmers in the application of the BAP.

Graphic 1: The four steps of a Biodiversity Action Plan

All methodological guidelines with relation to the Biodiversity Action Plan can be accessed here:

www.business-biodiversity.eu/en/biodiversity-training/advisors

Creating Potential for Biodiversity



Biodiversity is unique in its ways und unpredictable in its establishment. However, agroecological farming practices and the protection, enhancement and recreation of ecological structures create potential for biodiversity to settle and flourish. Thereby, the creation and protection of habitats is of outmost importance. Furthermore, the reduction of negative impacts of farming on biodiversity creates potential for biodiversity to develop. An example of how good farming practices give room for biodiversity is the integrated pest management and especially the promotion of beneficial insects.

Opportunities for more biodiversity and impacts on nature

After the description of the current situation (baseline assessment), it is necessary to identify the main impacts on and opportunities for biodiversity as well as to set measurable goals, which are needed to select and later on evaluate implemented measures.

To find out about the opportunities of the farm for protecting biodiversity but also to see the main impacts of farming activities on biodiversity, the farmer shall answer the following questions and document the statements:

A - What are the main opportunities to protect existing biodiversity and to create potential for biodiversity?

The baseline assessment may help to answer this question as it maps and lists biodiversity related information of the farm. Based on the map, the farmer and/or the technical advisor of the company/standard shall identify the areas of high value for biodiversity and semi-natural habitats on the farm and its surroundings as well as the agroecological measures that the farm has already implemented. The question to be asked next is, which measures are not yet taken, but can suit the region and enhance biodiversity and/or protect and enlarge areas of high value for animals and plants?

This question forms the basis for future activities and identifies opportunities on the farm. Some examples of such opportunities are displayed in the next graph.

Current situation	Possible opportunity ….
Existing areas with high value for biodiversity, semi-natural habitats are not connected.	… to create a corridor network?
Semi-natural habitats are not present.	….. to plant trees or bushes or develop other semi-natural habitats
A river is flowing through the production site.	….to create buffer zones?
No trees present	….to plant trees?
The farm is near or adjacent to an area with high value for biodiversity.	….to identify protected and endangered species?
Endangered/protected species are present on or in the immediate surroundings of the farm.	…. to protect these species by maintaining their habitat?

B - What are the main impacts on biodiversity that should be avoided and/or reduced?

Besides enlarging habitats and protecting the ecological structures that are placed on the farm, opportunities for the protection of biodiversity also arise from the reduction of negative effects of farming activities. As a first step, however, the main impacts of the farming activities on biodiversity have to be identified. In this regards it is helpful to look at the main drivers for the loss of biodiversity:

Degradation or destruction of ecosystems	•... is often caused by agricultural activities through e.g. contamination of ground water or other water bodies due to nutrient/pesticide run off/drift etc.
Overexploitation of natural resources	•... is often caused by e.g. overfishing of species, soil erosion; overuse of water resources beyond its recharge rate etc.
Contamination	•... is often caused by e.g. dumping of fertilizer and pesticides in nature, disposal of pesticides and fertilizer packages in nature, use of too much chemical inputs on the farm (drift and run-off) etc.
The expansion of alien invasive species	•... is often caused by heedless trade between nations and regions as well as the use and toleration of new/different crops and weeds.
Climate Change	•... is caused globally but local actions like transformation of pristine ecosystems into agricultural land, diverse agricultural landcapes into simplified production regimes etc. support it.

All five drivers of biodiversity loss have an immediate or future effect on biodiversity as well as on human livelihoods. Starting from contaminated water to climate change, people's health and survival often depend on a functioning ecosystem. However, ecosystems can only function if they are left intact and if its diverse components can interact accordingly.

Agroecological farming practices are suited to avoid or reduce the negative effects of farming on its natural surroundings. Depending on the agricultural production system, the culture and regional climatic conditions appropriate measures vary. In collaboration with the company/standard advisor, the farmer has to choose those practices that suit the local reality. The Chapter "Agroecological Practices for more Biodiversity" of the Biodiversity Action Plan gives a general overview over the measures.

Furthermore, land use changes pose a significant threat to biodiversity. If farmers plan to create new agricultural land, the following questions must be answered:

- Is the natural/semi-natural land that is subject to the transformation of high ecological value?
- Are there habitats of protected/endangered species?
- Would the "new" agricultural area be next to or in a protected area?
- Would the "new" agricultural area be in or next to an ecological corridor?
- Would the "new" agricultural area be in a water-scarce area with stressed water sources (rivers, creeks, lakes, groundwater)?

If any of these questions were answered with yes, then the potential impact on biodiversity of agricultural activities will be high and it must be considered if the area can be used for agricultural activities at all.

If it was decided that the area could be used agriculturally, than the priority goal should be to implement special protection measures to ensure that the current situation of the boundary areas and the occurrence of species there will not be influenced.

Setting goals and priorities for more biodiversity

In collaboration with the standards/companies advisor, the farmer shall set goals for biodiversity protection. Goals must be measurable and base on the identified impacts of the farming activities and the related opportunities. When it is not possible to quantify a development; then qualitative goals are appropriate.

Example of how to formulate a goal based on the baseline assessment:

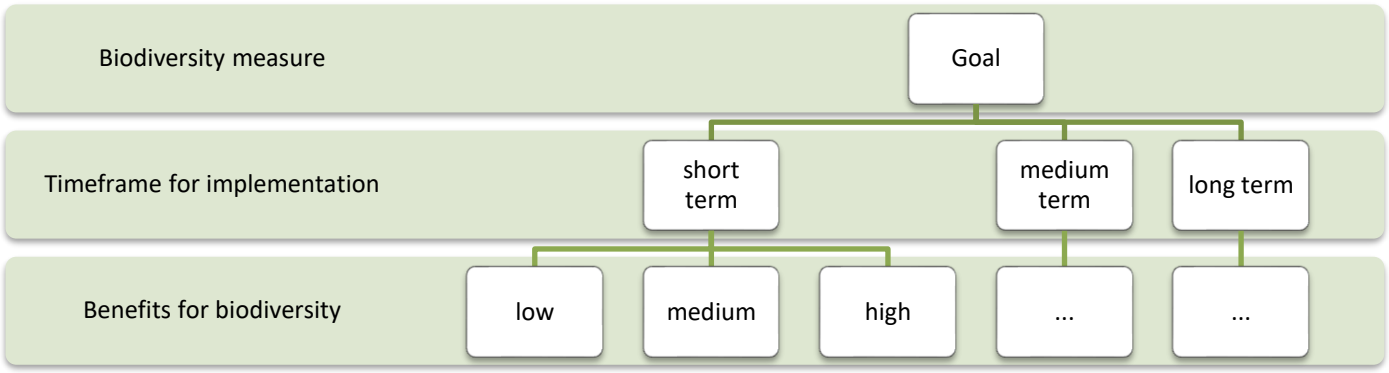
Current situation	Possible opportunity ….	Goal
No trees present	….to plant trees?	Increase the number of trees (number)

Further examples of measurable goals could be but are not limited to:

- Increase of semi-natural habitats (% of the total farm area)
- Increase of ecological corridor areas (size / % of corridors)
- Promotion of a protected / endangered species - occurrence on farm operations will increase within xy years (number of species). It will be difficult to measure the achievement of goals focusing on animal species, because animals move and will not always be present on the farm. But the monitoring of plant species could be a good way – see Monitoring
- Continuous increase of implementation of "very good practices for more biodiversity"
- Strengthening of protected areas in the neighborhood of the farm
- Regular meetings of farmers, leaders and elders, including women on biodiversity in the region in order to join efforts and to contribute to the regional Biodiversity Strategy
- Establish a practicable and meaningful monitoring on biodiversity

It is recommendable to prioritize the goals regarding:

- how long it may take to reach them (short term, medium term, long term)
- and the benefits for biodiversity (low, medium, and high)



The aim is to reach the greatest benefits for biodiversity at the shortest time; short-term goals with a high positive impact on biodiversity thus receive a high priority.

While implementing such measures, the farmer shall start to plan and set in place measures that have a strong positive effect on biodiversity but may take a longer time period for implementation.

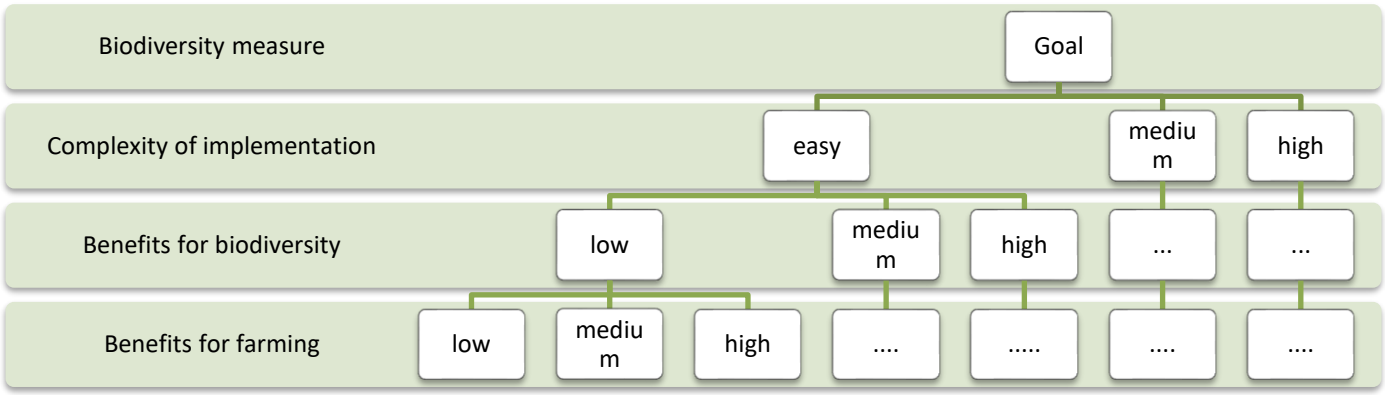
Selection and Implementation of Measures

After setting goals and prioritizing them, appropriate measures need to be identified. At times, more than one measure may suit the achievement of a goal. In that case, it is best to prioritize the measures to set a clear frame for the implementation of the measures, one after the other.

Like the goals, also the measures can be prioritized.

This can be done by assessing each measure regarding:

- how difficult it will be to implement (easy, medium, difficult)
- the benefits for biodiversity (low, medium, and high)
- and benefits for the resilience of the agricultural system (low, medium, high)



For every measure it is important to clarify:

- the reason, why does this measure contribute to reaching the anticipated goal
- the resources needed,
- the responsible person for implementation
- a timetable for implementation
- the expected positive effect/impact for biodiversity and resilience of the agricultural system

The information can be collected in the following table:

Selected Measures	Resources needed	Responsible person	Timeframe/ deadline for implementation

The prioritization as well as the individual situations of the farmer will decide about the sequence of the implementation of measures. Measures with the greatest positive effect on biodiversity and the shortest period of implementation should have a high priority. However, the benefits or cost for farmers to implement the measures comes into play at this stage, too. Only in close collaboration between standard/company advisors and the farmers, the most appropriate measures will be identified.

Regardless of how many measures may have been identified to help reaching a goal, the farmer will not have to implement all measures at once. Farmers can start with a couple of activities and then show a continuous improvement during the next years.

Standard organizations might give more specific requirements to the farmers regarding the amount of goals and/or measures.

Overview of the Project EU LIFE Food & Biodiversity

Food producers and retailers are highly dependent on biodiversity and ecosystem services but also have a huge environmental impact. This is a well-known fact in the food sector. Standards and sourcing requirements can help to reduce this negative impact with effective, transparent and verifiable criteria for the production process and the supply chain. They provide consumers with information about the quality of products, environmental and social footprints, the impact on nature caused by the product.

The LIFE Food & Biodiversity Project "Biodiversity in Standards and Labels for the Food Industry" aims at improving the biodiversity performance of standards and sourcing requirements within the food industry by:

A) Supporting standard-setting organisations to include efficient biodiversity criteria into existing schemes; and encouraging food processing companies and retailers to include biodiversity criteria into respective sourcing guidelines;
B) Training of advisors and certifiers of standards as well as product and quality manager of companies;
C) Implementation of a cross-standard monitoring system on biodiversity;
D) Establishment of a European-wide sector initiative.

Within the EU-LIFE Project Food & Biodiversity, a Knowledge-Pool with background information linked to agriculture and biodiversity is provided. You can access the Knowledge Pool under the following link:

www.business-biodiversity.eu/en/knowledge-pool

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