



# Biodiversity

Biodiversity management  
FSA63, 64, 67

Protecting Biodiversity  
FSA65, 66, 68

## Best practice :

- Implement a Biodiversity Plan on farm scale
- Follow the mitigation hierarchy as well as the principle of continuous improvement to reduce your direct and indirect negative impacts on biodiversity
- Take part in trainings on biodiversity and the implementation of the Biodiversity Plan

### FSA63

Have you assessed biodiversity and identified priority actions to preserve biodiversity on your farm?

### FSA64

Do you have a biodiversity plan for your farm to maintain or improve biodiversity?

### FSA67

Do you practice habitat restoration and do you compensate for areas on your farm that have been prone to habitat/ biodiversity loss?



Background



How to answer YES



Further information

# Biodiversity management

A Biodiversity Plan or Biodiversity Action Plan (BAP) is a practical tool to improve biodiversity at farm scale. An effective BAP supports farmers and advisors to understand the current situation and existing practices, to identify the potential for improvement and to set priorities for increasing biodiversity performance facilitating monitoring of the impact of biodiversity management on the farm.

A BAP focuses on the protection of biodiversity. Measures to protect biodiversity can also have other benefits such as mitigation of greenhouse gases, increasing soil fertility and conservation of water.

The two main components of a BAP are:

- The protection of existing biodiversity and the creation of more potential for biodiversity on the farm and its immediate surroundings
- The continuous reduction of negative impacts on biodiversity caused by agricultural activities (Implementation of agro-ecological practices – also called VERY good agricultural practices)

The BAP should be elaborated in four steps, as shown in the graphic on the right. As biodiversity requires a continuous management effort the plan should be reviewed annually, with an update of the steps every 2 – 3 years.





The creation and implementation of a Biodiversity Plan (BAP) can be achieved by following **Five Steps**. Throughout it is important to maintain the following records:

- Baseline assessment (Map and description in form of a table)
- Defined goals and measures
- Monitoring data
- Evaluation of the results.

In case of a cooperative of smallholder farmers or a supplier with various producers in one location, a similar landscape and the same agricultural practices, it makes sense to elaborate one BAP for the whole group!

Upon evaluation of the results the cycle starts again. If negative impacts could not be avoided, you should aim to achieve no net loss and preferably, a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people's use and cultural values associated with biodiversity.. Regional administrations and NGOs can help to define the adequate compensation measure and you should take into account that these measures normally require a long term maintenance (FSA67).

As the real increase of biodiversity also depends on factors outside the influence of the farmer (e.g. impact of climate change, land use practices in the surroundings), the potential created for biodiversity will be monitored. When the farm achieved its optimum, quality assurance should be the main goal.

## How to answer **YES**

Carry out a baseline biodiversity assessment which includes:

- A description of the production system and productive land
- Identifies natural and semi-natural habitats and rare and endangered species
- Identifies needs and opportunities to promote biodiversity on the farm and to reduce negative impacts (FSA63).

Set aims (short, midterm) to preserve biodiversity and priorities based on the outcome of the baseline assessment to improve biodiversity (FSA63).

Develop a written biodiversity plan which includes the assessment developed for FSA63 and actions to be taken to preserve and promote biodiversity on the farm (FSA64).

Document agro-ecological practices that have been implemented to preserve and promote biodiversity on the farm (FSA64).

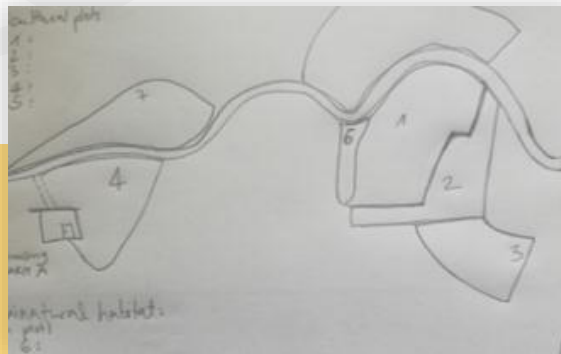
Proof that adequate measures have been implemented for habitat restoration and for the compensation of areas on the farm that have experienced habitat/ biodiversity loss (FSA67).



# Creating an effective Biodiversity Plan (BAP)

## 1 Carry out a baseline assessment.

it is possible to either use a map of the region from a public source (satellite, Google, governmental institution etc.), or to draw a map that includes a short legend of what can be seen in the drawing



Map all land used for agriculture

Map and describe the areas of high value for biodiversity (e.g. natural, semi-natural, protected areas on or around the farm)

Map and describe ecological structures on your farm (e.g. hedges, ponds, single trees etc.)

Map and describe endangered, endemic and characteristic species on your farm

Map and describe agroecological measures already implemented on the farm (e.g. extensively used areas, bee hives, uncut grass strips, flower strips etc.)



# Implementing a sound Biodiversity Plan (BAP)

CLOSE

6

2

Define goals for protection of biodiversity, creation of potential and reduction of negative impacts - measurable if possible. Choose appropriate measures and define a timetable for implementation (short term, midterm, long term).

3

Select and implement measures, such as:

- Creation of ecological structures for biodiversity beyond those legally required for the farm. No treatment with pesticides and fertilisers
- Buffer zones along creeks, rivers, ponds etc. with native vegetation and a minimum 10 meters width
- Corridors to connect habitats inside the farm and – if possible – with habitats in the surroundings of the farm
- Information about protected areas in the local area as well as endangered species that might live on your farm
- Regular exchange and – even better - collaboration with regional nature protection administration, NGOs or other biodiversity experts
- Measures for protected species based on the advice of experts, such as installation and maintenance of breeding places, creation or restoration of ponds, dry stone walls etc.

4

Identify practical and easy to collect indicators to monitor the implementation of the measures and their influence on biodiversity = potential created and negative impacts reduced.

5

Adapt the implemented measures according to the monitoring results. If the desired effects occur, progress towards the implementation of additional measures to promote biodiversity can be made. If the desired effects do not occur, for comprehensible reasons, adjust the measure or substitute it with another one.

## Smallholder farmers and biodiversity management

In the case of creation and management of ecological structures, the burden on a single small scale farmer may be too much. Many of the recommended measures work well at the landscape level, thus farm associations may often be in a better position to:

- Develop a baseline for the whole location/region
- Evaluate who can implement which measures or contribute with specific actions according to the specific situation
- Elaborate a BAP for the whole group.

Additional costs and working time would be distributed across the group and the association may consider developing a small compensation scheme for farmers contributing more to biodiversity protection than others, because of the positive effects for all members (e.g. protection of pollinating insects).



**Mitigation hierarchy**

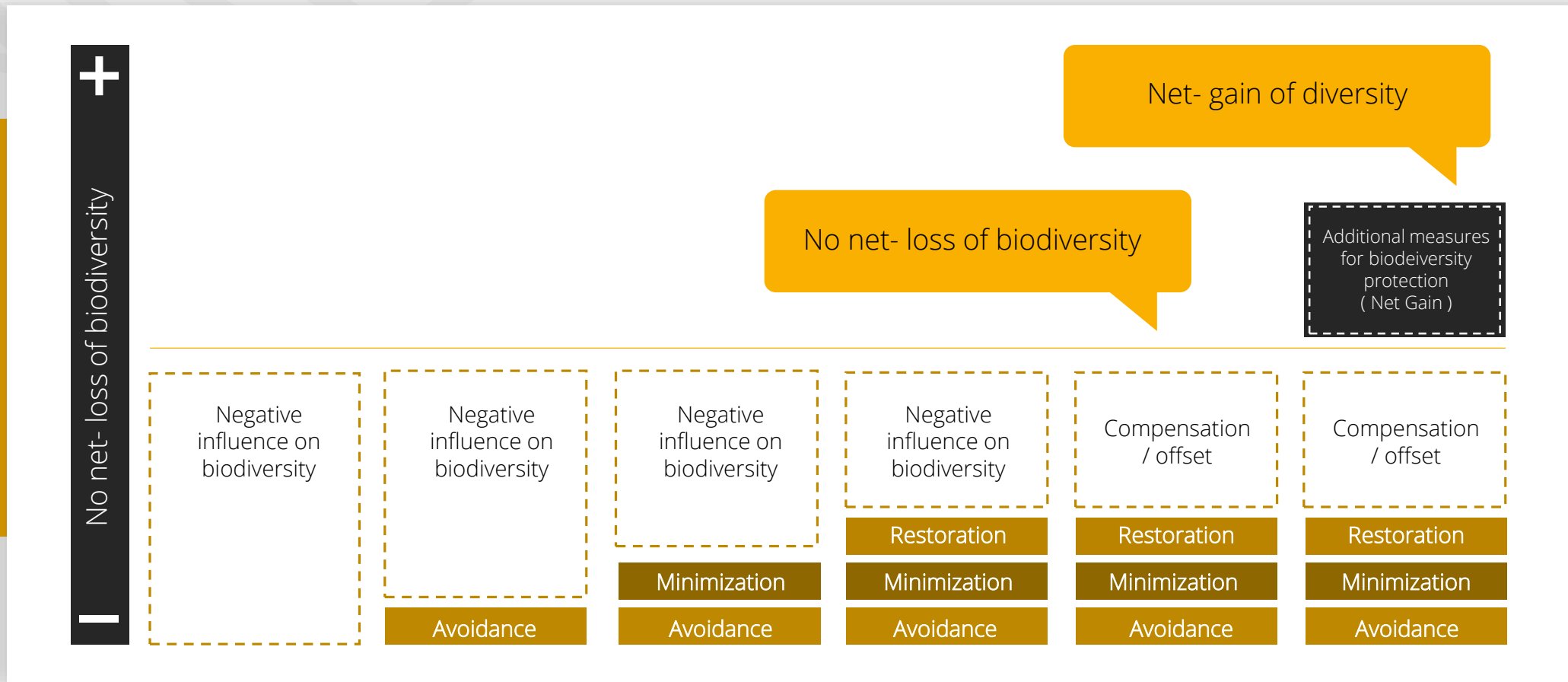
### Further reading and examples:

- [Food & Biodiversity training material:](#)
  - Action Fact Sheets on measures for biodiversity management
  - Step-by-step guidelines for elaboration of a BAP
  - Biodiversity Performance Tool to support the elaboration and monitoring of the BAP
- Cool Farm Alliance: [Biodiversity](#)
- Unilever: [A closer look at biodiversity](#)
- EcoAgriculture Partners: [Initiatives and positive examples from around the world](#)
- European Union: Many voluntary agri-environment measures supported by the EU Commission [e.g. Life steppe farming, halting the population decline of steppe birds](#)



# Mitigation hierarchy

The mitigation hierarchy describes logical steps to reduce any negative effect on nature and biodiversity. This concept should be used by companies and farmers, regardless of size, agricultural production system or region. All ambitions to promote biodiversity fit into the scheme above, but the most important aspects are the avoidance of any negative effects and the minimisation of unavoidable impacts.







# Protecting Biodiversity

## Best practice :

- Deforestation of primary and secondary forests, clearing of grassland and degradation of wetland and peatland are drivers of biodiversity loss and avoided.
- If any secondary forest or grassland has been cleared, you can demonstrate:
  - Legal land title
  - The land is classified as agricultural and/or approved for agricultural use
  - Any required permits are in place and valid
- You are aware of the requirements of the relevant protected areas and if required by law, you hold relevant licenses or permissions for farm activity.

### FSA65

Have you left all primary forest, wetland, peatland, and protected grassland or other native eco-systems in its original condition within the last 5 years?

### FSA66

If you have deforested secondary forest or cleared grassland, did you ensure that you have acted legally and that you have the right permits?

### FSA68

If you work next to or in protected areas, do you work with legal permits and ensure that your activities do not harm the eco-system?



Background



How to answer YES



Further information



# Protecting Biodiversity

The main objective of a protected area is to achieve the long term conservation of nature with associated ecosystem services and cultural values ([IUCN](#)).

Worldwide there exist various categories of protected areas: National (e.g. National Parks or Protected Landscapes, [European Natura 2000 sites](#)) and international (e.g. [UNESCO Biosphere Reserves](#), [World Natural Heritage sites](#), [Ramsar Wetlands](#)).

Other international categories have been developed for areas where no legal protection status is designated. For example:

- [High Conservation Value \(HCV\) areas](#): Identify, manage and monitor biological, ecological, social/ cultural values provided by natural habitats, which are outstandingly significant or critically important at national, regional or global level.
- Key Biodiversity Areas: Organised by the [Key Biodiversity Areas \(KBA\) Partnership](#) of various non-governmental organisations (NGOs).

Regional nature protection authorities and environmental NGOs can inform you if your land is located in or close to a protected area. They will make you aware of any relevant legislation and the management plan of the protected area which will define if and what economic activities are permitted and the legal permits required. It is important your activities do not have a negative impact upon the ecosystem. In the European context and elsewhere, financial support is provided for farms located in protected areas and with biodiversity friendly farming practices in place.





# Protecting Biodiversity

CLOSE

11

## How to answer YES

### Legal compliance:

- Have copies of legal land titles and permits to demonstrate entitlement for any land-conversion happening on the certified area is obligatory.
- Provision of a map comparing time series of aerial imagery is the most transparent way to prove there has been no

### Monitoring to prove no negative impact:

- Keep a regular exchange with legal authorities responsible for protected areas on updated information on biodiversity and its current threats.
- Monitor negative impacts (especially relating to the use of pesticides, fertilizers, genetically modified organisms) and proof of continuous improvement.
- Monitor the development of ecological structures on and around the farm: semi-natural habitats, buffer zones along aquatic ecosystems.
- Monitor special measures to support (endangered) wildlife, e.g. nest boxes, piles of dead wood or stones.
- Monitor selected indicator species (every 3 – 5 years) to demonstrate development of biodiversity on-farm.

Provision of historic and current aerial or satellite imagery that illustrates no protected areas and/or native ecosystems have been destroyed within the last 5 years (FSA65).

If no aerial or satellite imagery is available, the provision of a map or other documentation that delineates the area of the farm and any protected areas, as well as primary and secondary eco-systems on or adjacent to the certified farm, is mandatory (FSA65).

Ensure valid and uncontested legal land titles for the certified farm area are available and provision of legal evidence that the planned or past land-conversion into agricultural land is officially approved (FSA66).

Hold the relevant legal permits to conduct any agricultural activity within or next to a protected area are available (FSA68).

If the farm is identified as being in or adjacent to protected areas (as defined under international, national, regional or local laws) you should be able to:

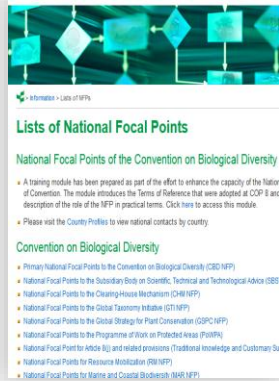
- Confirm you are aware and informed of the requirements of the relevant protected areas
- Be in active contact with the relevant authorities responsible for the management of the protected area
- Explain how possible negative impacts on protected areas are avoided and the potential created for biodiversity (FSA68).



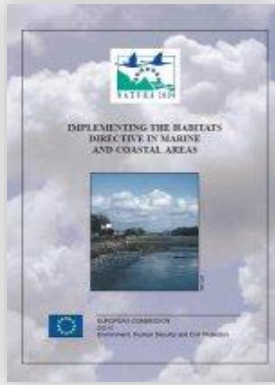
# Protecting Biodiversity



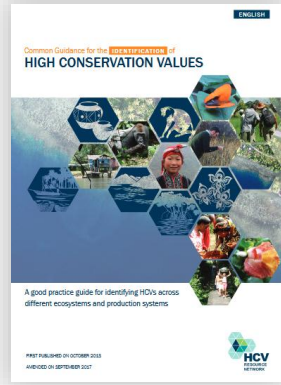
IUCN World Map of Protected Areas



National Focal Points of the CBD



Natura 2000 Data and maps



Common guidance for identification of HCV areas



## Further reading and examples:

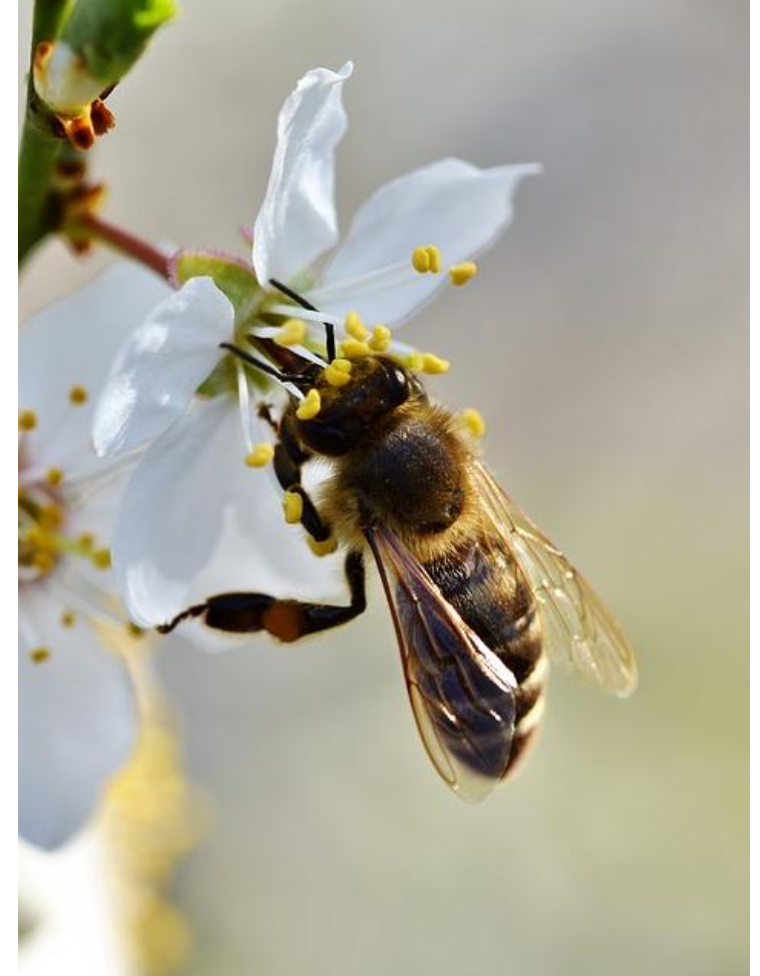
- [The EU Habitats Directive](#)
- [HCV Network's Library](#)
- [Biodiversity and Nature's Contributions Continue Dangerous Decline \(IPBES 2018\)](#)
- [FAO: Global Forest Resources Assessment 2015](#)
- [Convention on Biological Diversity: Biodiversity and Agriculture](#)
- [Food and Biodiversity Knowledge Pool](#)
- Biodiversity Performance Tool to support the implementation and monitoring of a BAP
- Biodiversity Monitoring Tool for the Food Sector
- Guideline on the Protection of Primary Ecosystems and Semi-Natural Habitats



# Protecting Biodiversity

## Background facts on Forests, Ecosystems and Biodiversity

- 129 million ha global net loss of forest (1990-2015).
- Primary forests account for 33% of the world's forests (1.3 billion ha), half of which are located in the tropics.
- 80% of the world's documented species can be found in tropical primary forests
- Forest area designated primarily for biodiversity conservation accounts for 13% or 524 million ha.
- 17% (651 million ha) of the world's forests are located within legally established protected areas.
- Per capita forest decline is still highest in the tropics and subtropics (25% between 1990-2015) but occurs globally due to conversion to agriculture and other land uses.
- Native ecosystems provide valuable ecosystem services such as (clean) water and air, food, a net carbon sink, medicine, recreation, wildlife habitat and biodiversity.
- Primary ecosystems have been lost completely in some regions, which is why secondary forests and semi-natural habitats play a major role there for providing ecosystem services.





# Agro-ecological Practices

Besides the management of ecological structures (Biodiversity Management), successful biodiversity protection also depends on the reduction of negative impacts of agricultural activities on biodiversity. Agro-ecological practices (also known as VERY good agricultural practises) contribute to the creation of potential for biodiversity on the farm.



## Soil and Fertilisation

Soil organisms act as the primary driving agents of nutrient cycling, regulating the dynamics of soil organic matter, soil carbon sequestration and greenhouse gas emission. They modify soil physical structure and water regimes, enhancing the amount and efficiency of nutrient acquisition by the vegetation and enhancing plant health (FAO).

## Agro-Biodiversity

Traditional varieties and breeds represent a very important element of genetic diversity – but are in dramatic decline. They have the potential to thrive in the original territories and are key to food sovereignty and local development. Farmers /suppliers should be incentivized to cultivate traditional varieties and products should have better market access.

## Pest Management

Chemical treatments are the most common pest management tools worldwide. Many of the chemicals are highly toxic. Several have already been banned in northern hemisphere countries for their toxic impact on ecosystems and humans.

Pesticides have a major effect on biological diversity and habitat loss. They reduce biodiversity and with this environments ability to regulate itself. Farmers should reduce the amount of pesticides used and exclude very harmful substances as the main strategies to reduce the negative impacts on biodiversity.

## Irrigation

Water is crucial to agriculture but also to biodiversity. Farming accounts for around 70% of water used in the world today and contributes to water pollution from nutrients run-off, pesticides and other pollutants. Overexploitation of water sources by agriculture is the main driver for the destruction of aquatic ecosystems such as rivers and wetlands.

Sustainable management of water in agriculture is critical to secure the sustainability of the agricultural production as well as intact ecosystems.