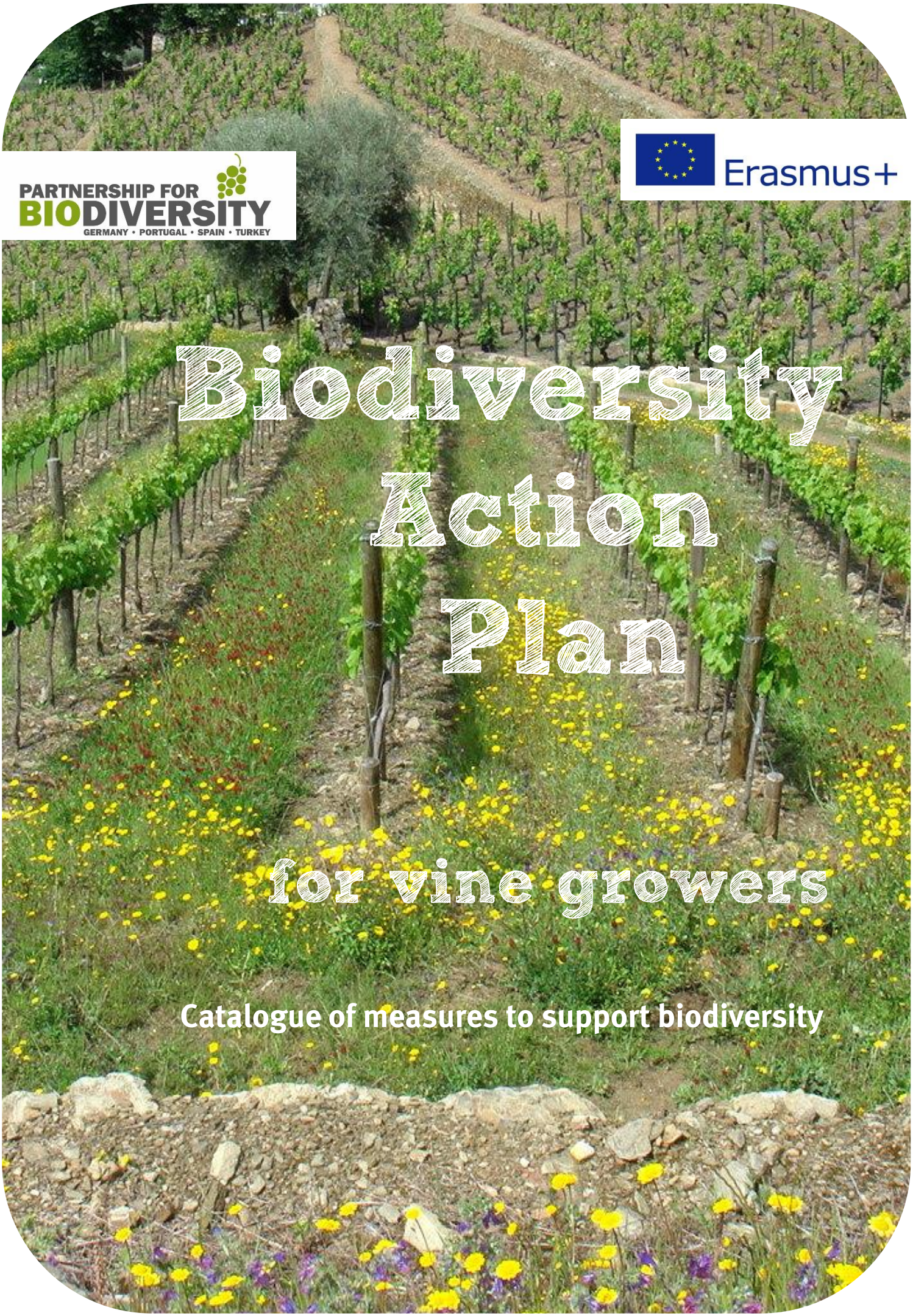


PARTNERSHIP FOR BIODIVERSITY
GERMANY • PORTUGAL • SPAIN • TURKEY

Erasmus+

Biodiversity Action Plan

for vine growers

Catalogue of measures to support biodiversity

Biodiversity Action Plan for Vine Growers

Dear vine growers, dear winemakers,

This brochure is a comprehensive template for the introduction of a Biodiversity Action Plan for viticulture. It is the result of the *„Partnership for biodiversity protection in viticulture in Europe“* project. The brochure compiles the biodiversity knowledge of more than 70 growers and of the project team. The possibility of introducing a Biodiversity Action Plan is available to all vine growers all over Europe as a result of the partnership.

The Biodiversity Action Plan is a road map for biodiversity improvement on farm level. It is a catalogue of possible measures, divided into the different areas of activities, e.g. cultivation and production in the vineyard, harvest, bottling etc. By indicating already implemented and further possible activities to support biodiversity, every farmer/wine maker can develop its own Biodiversity Action Plan. The 110 measures, most of them tested and applied as best practice for years, have been supplemented by research carried out by the partners, making it the essence of the *Partnership for biodiversity protection in viticulture in Europe*.

This Biodiversity Action Plan and the measures contained therein are applicable to all production systems.

Good luck and enjoy the implementation!

The project *“Partnership for Biodiversity Protection in Viticulture in Europe”*, supported by the **Erasmus+ programme of the European Union**, focuses on organic farmers producing grapes in vineyards. *The aim is to shape winegrowing and the production of sultanas so that biodiversity is protected and promoted.* Partners are nature protection organisations and winegrower/agricultural associations in Germany, Spain and Portugal and an ecological agricultural enterprise in Turkey.

Based on the experience of the partners, information materials and biodiversity training modules for vine growers will be developed, and individual training on the farm site will be realised.

Instruction for the development of the Biodiversity Action Plan (BAP)

The BAP includes 110 small and larger measures. For each measure, a specific goal is determined, the measure described, and an indicator or key figure identified. In some cases the measure is fulfilled if a * yes * can be given, for others it is necessary to reach a certain number or proportion. The latter can be done in three stages.

The BAP is structured into 8 sections. Section 1 is mostly fulfilled when you apply this action plan. For the other sections, such as the cultivation and production in the vineyard, ecological infrastructures etc. the implementation of some of the measures will take more effort – but will also have a greater benefit for biodiversity.

1. Step - Where am I? Mark all actions that are already being implemented in your winery and tick them in the baseline column. There will be a few in each farm. Congratulations, you have already achieved this much.

2. Step - Everything is possible, but nothing has to be: The conditions for implementing the measures differ between wineries and depend on the region, company structure and history. Of the 110 measures, only a number might be applicable and useful for vineries and vinegrowers over Europe. Mark all measures that can additionally be carried out on your farm. This defines your starting position.

3. Step - Determine the measures you want to implement and also the year of implementation. Depending on the extent and baseline, two to five measures per year can be sufficient. With 10 to 15 measures, you can achieve a lot for sustainability and biodiversity in five years.

4. Step - It does not have to hurt! Start with “low hanging grapes”, measures which convince you of their success and impact. Take enough time for more difficult measures, if necessary, go step by step.

5. Step - Review: At the end of a year, check if and which measures have been implemented and which are still in realization. Maybe you have to readjust the schedule or the way the action is implemented. If necessary, measures which cannot be implemented must be replaced by another one.

6. Step - Inform your customers and guests about your biodiversity measures in your annual letter, invoices etc. and thus fulfill some measures in section 8.

→ **The BAP also exists as an exel file and can be downloaded on the homepages of the partners (see last page)**

Biodiversity Action Plan for vine growers

Area of activity		Goal	Measures to promote biodiversity	Indicators Key figure	What must be achieved
1	**Strategy / Management**				
1		Introduce and implement concrete actions to protect biodiversity	Our vinery has introduced an operational plan in which concrete measures for the protection and promotion of biodiversity are named, priorities and time horizons for the implementation are identified.	Yes / No	Yes
2		Improve continuously	With the help of the operational plan, we can show continuous improvement over the years.	Yes / No	Yes
2	**Cultivation and Production in the Vineyard**				
3	Mixed crops/ Diversity of varieties	Preserve and protect genetic diversity of grapes and diversity of grape varieties	We grow several varieties of grapevine.	Number of varieties	› 5 › 10
4			We grow autochthonous varieties of grapevine.	Yes / No	Yes
5			We grow old varieties of grapevine.	Yes / No	Yes
6			We grow rare* varieties of grapevine. * (View the glossary for explanation)	Yes / No	Yes
7			We use disease resistant varieties to reduce the use of pesticides (if registered in your country; except american rootstock/vine fretter resistance).	Yes / No	Yes
8			We grow several clones of the same variety of grapevine.	Yes / No	Yes
9			We are involved and support a research study about "genetic diversity".	Yes / No	Yes
10		Diversify crop cultivation, prevent monoculture	We cultivate other crops on the farm.	Number of crops	1 3 5
11	Ground cover composition	Promote natural dry and semi dry grassland	We keep natural ground cover, with native plants of the region.	% of the vineyard area	30% 50% 100%
12		Diversify ground cover as much as possible	Our seed mixtures contain many different herbaceous plant species with flowering aspects.	Number of species present in ground cover	0-12 12–24 › 24
13		Promote locally adapted plants	We use seed mixtures with regionally produced seeds (autochthonous).	Yes / No	Yes

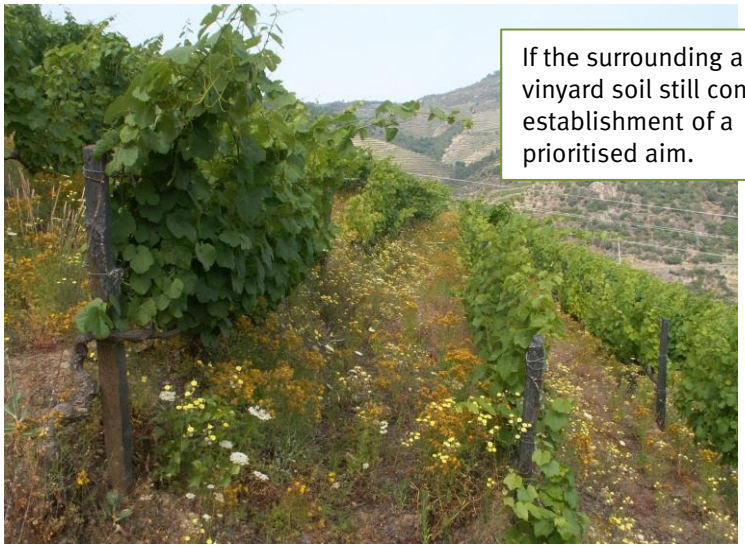
Baseline - already implemented measures	Additional possible measures	Implementation year 1		Implementation year 2		Implementation in year 3	
		planned	achieved	planned	achieved	planned	achieved

Area of activity		Goal	Measures to promote biodiversity	Indicators Key figure	What must be achieved
14	Ground cover composition	Promote rare, endemic and endangered plant species	Our ground cover mixture promotes rare plant species from the Red List of endangered species - either by including in the seed mixture, by transferring of seeds from other sites or by sowing the mixture loosely, leaving space for natural wild flowers.	Number	1 2 › 3
15		Foster long flowering periods as a food resource for insects etc.	Our ground cover mixture has a long flowering period.	Length of flowering period in months	2 - 4 5 - 8 › 8
16		Promotion of individual species: species-rich grassland, semi/dry grass-lands or open ground areas	We cultivate and use borders and headland in a way that supports species. E.g. leave margins and headland untreated	% of the border / headland	30% 50% 100%
17	Ground cover manage-ment	Conservation of small animals living on the ground	The ground cover in our vineyard area in only rolled or mowed.	% of vineyard area	30% 50% 100%
18		Maintain refuge areas during cultivation	The ground cover between the vines is managed in an alternating way, i.e. only in every second row.	Yes / No	Yes
19		Promote natural ground cover and typical vineyard plant species	On our farm, we do not manage ground cover before blooming and production of seeds.	Yes / No	Yes
20		Avoid to damage insects and beneficials by mowing /rolling	We reduce the number of ground cover treatment (mowing / rolling).	Yes / No	Yes
21			We roll or mow our ground cover when insects, such as beneficials are less active (morning, evening, clammy weather).	Yes / No	Yes
22			We leave small plots unmowed or unrolled by lifting the mower for e.g. 10 meters within the rows.	Yes / No	Yes
23			When mulching or mowing we make sure that a minimum height of 10 cm is left.	Yes / No	Yes
24		Develop habitats below vines	On our farm, flora below the vine is not managed.	Yes / No	Yes
25	Tillage	Allow undisturbed life in the soil	Tillage is only performed superficially. Ploughing with turning the soil is not performed.	Yes / No	Yes
26	Fertilisation manage-ment	Improve and control soil and water quality	We carry out an annual "farm-gate" related nutrient balance.	Yes / No	Yes
27			We reduce nitrogen intake to a minimum and apply a limit of...	kg N per ha	max. 70 max. 50 max. 40

Baseline - already implemented measures	Additional possible measures	Implementation year 1		Implementation year 2		Implementation in year 3	
		planned	achieved	planned	achieved	planned	achieved

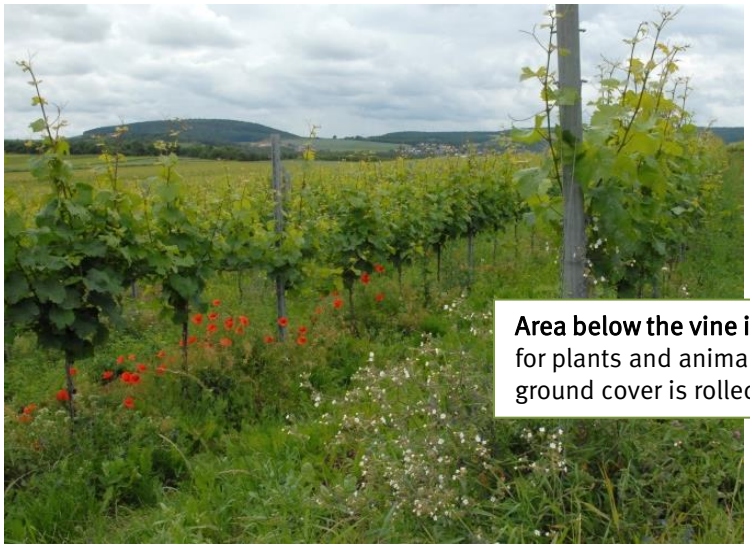
Examples of ground cover composition and management

Ground cover consisting of only grass helps to protect the soil but has less additional effect on soil loosening, humus formation and above ground biodiversity.



If the surrounding area is rich in **natural plant diversity** or if the vinyard soil still contains seeds of natural plants, then the establishment of a diversified natural ground cover should be the prioritised aim.

In areas where the occurence of natural plants is reduced, **seed mixtures** should be sown. They should be as diversified as possible: leguminous plants or other fertilisng plants, different herbaceaous plant species with flowering aspects etc. Special attention should be laid on the use of locally adapted plants.



Area below the vine is not managed. This creates additional habitats for plants and animals and refugees for animals in times where ground cover is rolled or mowed.

The ground cover between the vines is **managed in an alternating way,** i.e. only in every second row.

Headland is not managed and provides additional room for natural plants

Area of activity		Goal	Measures to promote biodiversity	Indicators Key figure	What mus be achieved
28	Fertilisation manage-ment	Improve and control soil and water quality Please note: ground cover and minimum management of ground cover also improve soil quality	We do only use organic fertilizers.	Yes / No	Yes
29			We use compost.	Yes / No	Yes
30			Wood and leafs from pruning remain in the vineyard.	Yes / No	Yes
31			We carry out soil analysis on representative plots every 3 years.	Yes / No	Yes
32			We check the soil organic matter content on representative plots every 5 years.	Yes / No	Yes
33			We perform assessments on soil biodiversity organisms to document positive developments.	Yes / No	yes
34	Plant protection, pest and disease manage-ment	Reduce the undesired impact of pesticides and disease management on biodiversity	We can prove through registers that the use of pesticides per ha was reduced (reduction of treatment index).	Yes / No	Yes
35			We use mating disruption to control the grape berry moth.	Yes / No	Yes
36			We do not use herbicides.	Yes / No	Yes
37			We do not use very harmful substances (e.g. Glyphosat, neonicotionoids)	Yes / No	Yes
38		Prevent impact on semi natural habitats	We do not treat non-cultivated areas (slopes, margins, buffer stripes etc.) with pesticides in general.	Yes / No	Yes
3	**Ecological infrastructures in the vineyard / ecological compensation areas**				
39	Compen-sation of adverse impacts on bio-diversity	Compensate negative effects of monoculture vineyards, create habitats for animal and plant species	We promote ecological infrastructures (EI) which are composed of at least one element of the linear, punctual and areal structural elements.	% of ecological infra-structures in relation to total farm area	5% 9% 12% 15% and more
40			On our farm, ecological infrastructures are not managed during sensitive seasons (e.g. vegetation period, nesting period).	Yes / No	Yes
41			We document the areas of ecological infrastructures in plans/maps.	Yes / No	Yes
42		Create habitats for animals and plant species.in the vineyard	When planting new vineyards, we consider the creation of ecological infrastructures in the planting design.	Yes / No	Yes

Baseline - already implemented measures	Additional possible measures	Implementation year 1		Implementation year 2		Implementation in year 3	
		planned	achieved	planned	achieved	planned	achieved

Area of activity		Goal	Measures to promote biodiversity	Indicators Key figure	What must be achieved
3	**Ecological infrastructures in the vineyard / ecological compensation areas**				
43	Compen-sation of adverse impacts on bio-diversity	Integrate habitats into existing planning's, get support from specialists (biotope network concept)	When identifying and designing ecological infrastructure we work together with local nature protection groups and/or local authorities.	Yes / No	Yes
44	Contri-bution to biotope network	Preserve and promote linear structural elements	We promote linear structural elements at the ends of rows, edges or in the middle of area planted with vine.	Meter pro ha vineyard area	3 9 15
			This indicator can be accomplished by implementing one or all of the following measures: — *Inside or at the border of the vineyard we have hedgerows/bushes planted with native vegetation.*		
45		Preserve and promote punctual structural elements	We promote punctual structural elements at the edge regions or in the middle of the vineyard area.	30m² area up to 5 ha vineyard area	1 3 5
			This indicator can be reached by implementing one or all of the following measures: — *Isolated native tall trees* — *Isolated, small bosks suitable for breeding*		
46		Preserve and promote areal structural elements	Our winery preserves long-term fallow/set-aside areas.	% of the total areas of the farm	5% 10%
47			To the winery belong extensively used areas (extensive meadows, orchards….).	% of the total areas of the farm	5% 10%
48		Connect habitats to allow movements of animals	We establish new structural elements in order to connect existing elements of the biotop network in and around our vineyards.	Yes / No	Yes
49		Protect sensitive areas or habitats adjacent to vineyards	We work carefully in vineyard areas adjacent to protected areas or to streams, rivers etc. For example by carrying out plant protection and fertilisation measures only at a minimum distance of 5 meters or by using special application machines ("Überzeilentechnik").	Yes / No	Yes
50	Measures to support / protect species	Preserve and promote bats	We preserve artificial water mines + natural caves in our farm, as they are preferential places for shelter/nesting of bats.	Yes / No	Yes
51			Inside or near vineyards we have installed bat boxes.	Number per ha	1 2 3
52			On our farm, we perfom an assessment of bat population with local experts or nature conservation groups.	Yes / No	Yes

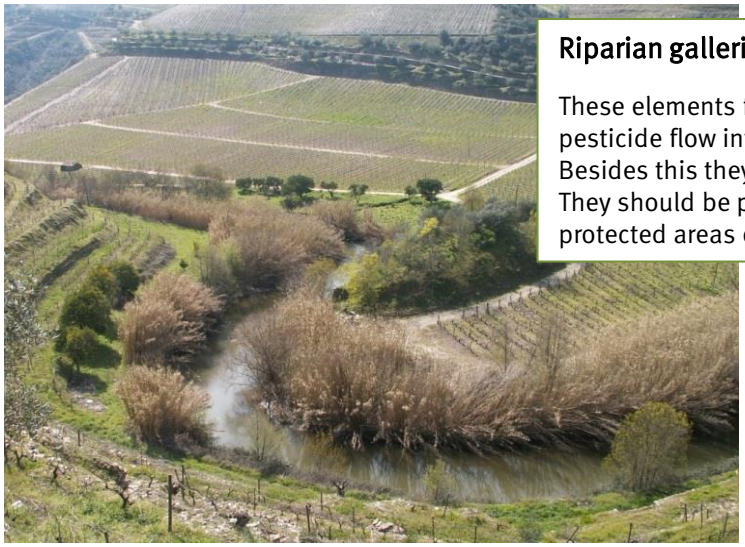
Baseline - already implemented measures	Additional possible measures	Implementation year 1		Implementation year 2		Implementation in year 3	
		planned	achieved	planned	achieved	planned	achieved
— *We preserve the vegetation of riparian galleries/ water lines (vegetation with wild bushes/scrubs that are very important for birds nesting)* — *Buffer stripes Flower stripes* — *We conserve and promote the presence of dry stone walls in the vineyards.* — *Slope, balk, embankments with natural vegetation*							
— *Patches with wide structural diversity. The wild flora is promoted, but native trees, hedges, herbs or shrubs can also be planted. The diversity is increased by additional installing clearance cairns, deadwood piles*							

Examples of ecological infrastructures

- Linear structural elements

Hedgerows

They can be planted next to the vineyard area or in the middle of large plots. Hedgerows have many positive effects, such as providing food and shelter, acting as a windbreaker and as barrier to avoid pesticide drift.



Riparian galleries/Buffer strips /Buffer zones

These elements function as barriers to avoid that nitrate and pesticide flow into adjacent non-agricultural areas or water bodies. Besides this they, provide additional nesting places and food. They should be preserved or newly created next to water bodies, protected areas or other ecological infrastructures.

Embankment with native vegetation

Vineyard areas often border on embankments or contain balks through the terraced arrangement of the vineyard areas. On these areas, natural vegetation should be promoted and if at all, mulched or rolled only once per year.

- Punctual structural element

Patch with a wide structural diversity

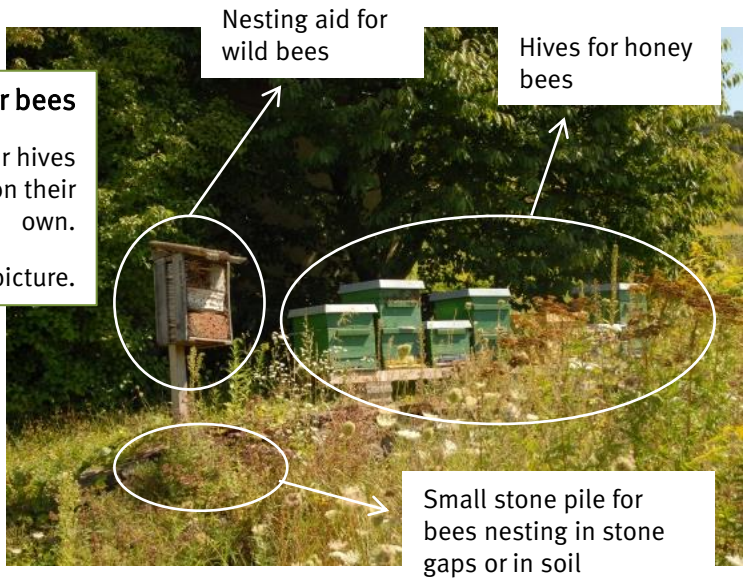
In this example, a stone pile is combined with flowering plants and a perch for birds. This offers food and nesting sites in close distance for several species.

- Measures to support/protect species

Nest boxes/nesting aids for bees

Vine growers can allow beekeepers to place their hives adjacent to their vineyard areas or help bees on their own.

Three different possibilities are shown in this picture.



Providing water for birds and mammals

A small jar is placed under the closure of the water irrigation pipe to collect water that exits when opening or closing.

Area of activity		Goal	Measures to promote biodiversity	Indicators Key figure	What must be achieved
53	Measures to support / protect species	Facilitate vineyards as foraging habitats for raptors and owls and provide perches for birds	We preserve structures suitable for breedings sites of birds of prey and owls (e.g. abandoned vineyard cottages, dead trees).	Yes / No	Yes
54			We have set up perches for birds.	Number per ha	1 2 3
55		Complement measures to support beneficials by providing nesting sites or shelter near vineyards	On our farm we install nesting facilities for various beneficial insects and control yearly.	Number per ha	1 to 2 3 to 5 › 5
56		Support fauna during dry seasons with extra water / feeding points	We promote the presence/survival of birds and mammals a supply of water/feeding points.	Yes / No	Yes
57			We provide access ramps to/from the water spots / containers, to avoid that some animals drown.	Yes / No	Yes
58		Promote specific birds species locally	On our farm, we set up nesting boxes to protect characteristic bird species (kestrel, owls, hippoe, tits, redstart, flycathcher, sparrow).	Number per ha	2 4 6
59		Promote other species locally	On our farm, we implement specific measures to promote protected or characteristic species.	Number of species	1 2 3
60	Monitoring	Gather information on fauna and flora in the vineyards	Our farm has carried out a species assessment, ideally in cooperation with a technician of a farmers association or local nature conservation groups, with an emphasis on beneficials, protected species and local characteristic species.	Yes / No	Yes
61		Target promotion of rare or endangered species, allow to measure conservation success	We designate a "species of responsibility“, which is typical for the region and classified by the law as worthy for protection or is listed on the Red List, and implement measures for their protection.	Yes / No	Yes
62	Invasive, alien species	Protect and preserve habitats for endemic and endangered species	We inform ourselfs about invasive alien species in our vineyards and the surroundings.	Yes / No	Yes
63			We do not promote alien species in the garden areas around the farm /cellar to prevent them from spreading in nature.	Yes / No	Yes
64			If invasive alien species are present on the vineyards, we carry out suitable measures	Yes / No	Yes
65			If invasive alien species appear in the vineyards we inform the relevant authority.	Yes / No	Yes

Baseline - already implemented measures	Additional possible measures	Implementation year 1		Implementation year 2		Implementation in year 3	
		planned	achieved	planned	achieved	planned	achieved

Area of activity		Goal	Measures to promote biodiversity	Indicators Key figure	What must be achieved
4	**Harvest / Cellar / Vinification**				
66	Supply chain manage-ment of products used in the cellar	Reduce impact on natural and semi natural forests	In our winery, wooden barrels origin from sustainably managed forests (e.g. FSC, PEFC), preferably from the region.	Yes / No	Yes
67		Reduce impact on habitats and species in countries of origin	In our winery, the list of processing ingredients is revised regularly to exclude substances harmful for biodiversity.	Yes / No	Yes
5	**Bottling / Packaging**				
68	Bottles	Minimize resource extraction for bottle production to preserve habitats; improve CO2-balance	We use light wine bottles (‹450 grams) in our company.	% of total bottle number per year	30% 50% 100%
69			Our bottles are made of glass with a high recycling ratio.	% of total bottle number per year	50% 75% 100%
70			We have a high return rate of bottles.	% of total bottle number per year	30% 50% 70%
71			We buy used bottles in addition.	% of total bottle number per year	15% 30% 45%
72			We also use other type of packaging than glass e.g. bag-in-box.	Yes / No	Yes
73	Closures	Minimize adverse effects of aluminium production, protect valuable cork oak forests in Spain and Portugal	We use natural corks (not of granulate or two slices).	% of total number of bottles per year	30% 50% 100%
74			For every cap which is not cork, we donate to a project which promotes cork oaks (e.g. Greencork project, Portugal, Centro de Dehesa, FGN).	Yes / No	Yes
75			We reduce the use of capsules (plastic/metal).	% of bottle without capsules on the total number of bottles per year	30% 50% 100%
76			We take back cork and bring it to a collection point.	Yes / No	Yes

Baseline - already implemented measures	Additional possible measures	Implementation year 1		Implementation year 2		Implementation in year 3	
		planned	achieved	planned	achieved	planned	achieved

Area of activity		Goal	Measures to promote biodiversity	Indicators Key figure	What must be achieved
77	Paper	Protect forests by minimizing the use of fresh fiber and by promoting sustainable forestry; improve CO2-balance	We use recycled paper (e.g. Blue Angel, EU Ecolabel) or paper produced in a sustainable way (e.g. FSC, PEFC) in the office (office paper, printed material, toilet paper..).	Yes / No	Yes
78			Our customers are made aware of the use of recycled or FSC paper/card (e.g. on the printed materials).	Yes / No	Yes
79			We re-use cardboards, print paper on both sides and print as little as possible.	Yes / No	Yes
80	Supplier and service provider	Reduce indirect effects on biodiversity by sustainable procurement and preferring sustainable services	Our suppliers and service providers act sustainably. They have either an Environmental Management System and are certified accordingly and/or minimize negative effects on biodiversity by measures.	% of companies operating sustainable on the total number of cooperating companies	25% 50% 75%
81			Products that we buy are either sustainable and / or biologically produced and if possible have an appropriate certification (e.g. organic, Demeter, Fairtrade, Leaf etc.).	% of biological/sustainable produced products on the total number of products.	25% 50% 75%
82		Form networks to support the conservation of biodiversity by creation of regional added value and long-term supplier relationships	We purchase products in the region (100-150 km radius) and work with service providers from the region.	% of products and service that come from the region in the total number of products and service providers	25% 50%
6	**Sales / Logistics**				
83	Transport	Minimize impact on biodiversity by reducing green-house gases through efficient logistics. E.g. less traffic reduces the need for new roads and the corresponding land usages.	On our farm, we incentivize clients who order larger quantities together with friends, family, neighbours etc.	Yes / No	Yes
84			When delivering by ourselfs, we optimize the transport load of our vehicles and optimize routes.	Yes / No	Yes
85			For large-scale orders, we contract logisticians.	Yes / No	Yes
86			Smaller orders we send by post.	Yes / No	Yes

Baseline - already implemented measures	Additional possible measures	Implementation year 1		Implementation year 2		Implementation in year 3	
		planned	achieved	planned	achieved	planned	achieved

Area of activity		Goal	Measures to promote biodiversity	Indicators Key figure	What must be achieved
7	Energy / Water management				
87	Energy / Water	Reduce the negative impact of mining operations and burning of fossil fuel by using renewable energies	We use electricity from renewable sources (e.g. solar, wind, etc...).	Yes / No	Yes
88			We use renewable energy.	Yes / No	Yes
89		Reduce the consumption of energy and water and related impacts on biodiversity	Our facilities have green roofs to reduce energy consumption needed for climatization in the buildings.	Yes / No	Yes
90			We check the energy and water consumption systematically and use existing potentials for the reduction.	Yes / No	Yes
91		The natural water balance is not affected so that wetland habitats are not disturbed	On our farm, water withdrawal is managened sustainably and does not impact open water and ground water levels.	Yes / No	Yes
92			On our farm, we use the most appropriate irrigation system regionally available.	Yes / No	Yes
93			On our farm, we use decision support tools to minimize irrigation and adjust timing to minimize evaporation.	Yes / No	Yes
94			On our farm, we frequently check the irrigation system to detect and avoid water spillage.	Yes / No	Yes
8	Marketing / Communication				
95	Public relation	Inform customers about biodiversity activities, call attention to the topic "Conservation of Biodiversity" and create unique selling points	Our customers are informed about the topic biodiversity (Newsletter, blogs, magazines, invoices...).	Yes / No	Yes
96			We incorporated flagship species into the marketing (Wine names, special editions, stationery, labels, icon....).	Yes / No	Yes
97			We integrate biodiversity issues in guided tours through the vineyards.	Yes / No	Yes
98			In our vineyards, we placed information boards about one or more biodiversity issues such as old varieties, PiWis, ecological compensation areas, beneficial organisms, species protection...	Yes / No	Yes

Baseline - already implemented measures	Additional possible measures	Implementation year 1		Implementation year 2		Implementation in year 3	
		planned	achieved	planned	achieved	planned	achieved

Area of activity		Goal	Measures to promote biodiversity	Indicators Key figure	What must be achieved
99	Stake-holder	Inform stakeholders about biodiversity activities, call attention to the topic "Conservation of Biodiversity" and create unique selling points	We promote communication on biodiversity for the local community.	Yes / No	Yes
100			We have cooperation's with local nature protection groups, administrations, scientific institutes etc. to work on biodiversity aspects on regional level.	Yes / No	Yes
101			Together with neighbouring winegrowers, local nature protection groups or the local municipalities, we organize events for families or other stakeholders highlighting biodiversity and biodiversity friendly production.	Yes / No	Yes
102	Emplo-yees	Promote sustainable mobility	We support that our business trips are carried out by public transport.	Yes / No	Yes
103			We forster actively that staff come to work by public transport, e-bikes, bike or by foot.	Yes / No	Yes
104			We promote carsharing / carpooling.	Yes / No	Yes
105		Integrate biodiversity as a topic in training and further education	Our employees are trained on the subject of biodiversity at least annually.	Yes / No	Yes
106			Our employees are involved in species assessments.	Yes / No	Yes
107			A biodiversity officer is appointed and trained specifically.	Yes / No	Yes
108			We compile and continually supplement a folder of all biodiversity related activities, which is available for inspection and supplementation by the staff.	Yes / No	Yes
109			As part of the operational optimization, we incentivate employees to submit practical ideas to promote biodiversity.	Yes / No	Yes

Additional information / notes:

Baseline - already implemented measures	Additional possible measures	Implementation year 1		Implementation year 2		Implementation in year 3	
		planned	achieved	planned	achieved	planned	achieved

Examples for bottling/packaging and marketing

Bag in box

An ecological alternative to bottles. Compared to a bottle, a bag in box produces 66% less energy throughout the packaging cycle, 78% less CO2 emissions and 73% less water consumption.

Information boards placed at popular footpaths in the vineyards can inform about the wineries biodiversity activities as well as about species already occuring in the vineyards.

Labels of wine bottles can also be used for communication purposes. In this case, the vinery took measures to promote a special species in the vineyard and then used the animal as a flagship species on the wine bottles.

Glossary

Rare variety	Variety is stocked on less than 0,5% of vineyards within a country
"Farm-gate" nutrient balance	The farm-gate nutrient balance compares the applied amounts of nutrients (Nitrogen (N), phosphate (P2O5) and potash (K2)) on a farm with the amounts of nutrients, which are exported from the farm within the framework of one year.
Flagship species	A species used for marketing. Targeting the audience on the one side, but also being protected/promoted by the activities of the farm on the other side.
PiWis	Fungus resistant grape varieties.
Long-term fallow/set-aside areas	A piece of land that is set aside either completely or for periods of up to ten years or more, with the aim of improving soil fertility and controlling pests and diseases.
Autochthonous	Originating from the respective place of observation, down-to-earth (for example, rocks in geology, animal and plant species in nature conservation, or woody individuals in forestry); indigenous.
Red List of endangered species	The IUCN Red List of Threatened Species™ provides taxonomic information, conservation status and distribution information on plants, fungi and animals that have been globally evaluated using the IUCN Red List Categories and Criteria. This system is designed to determine the relative risk of extinction, and the main purpose of the IUCN Red List is to catalogue and highlight those plants and animals that are facing a higher risk of global extinction (i.e. those listed as Critically Endangered, Endangered and Vulnerable). www.iucnredlist.org
Invasive, alien species	Invasive alien species are non-native species causing damage to the environment that potentially cause species extinction, modify ecosystem processes and act as disease vectors. The problems caused by invasive, alien species have potentially large economic consequences. It is also one of the drivers of biodiversity loss.

Picture credit:

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