

AUSTRIA

Biodiversity's restoration, preservation & enhancement

Location

Tyrol and Salzburg

Programming period

2014 – 2020

Priority

P4 – Ecosystems
Management

Measure

M10 – Agri environment-
climate

Funding (EUR)

Total budget ≈ 261 mil
EAFRD ≈ 133 mil
National/Regional ≈ 128 mil

Project duration

2015 – 2020

Project promoter

19 157 Austrian farms
(2018)

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Operation M10.1.19 focuses on result-oriented and focused Rural Development Programme (RDP) interventions to stabilise endangered habitats, species and plants and thus reverse the decline of biodiversity in Austria's agricultural regions.

Summary

To fight the ongoing decline of biodiversity in Austria, it is necessary to adopt result oriented, focused and specific interventions in targeted regions that are habitats for endangered species. Operation M10.1.19 - Nature conservation provides targeted solutions to achieve this.



The primary objective of Operation M10.1.19 is the conservation and enhancement of endangered habitats, species and plants. It supports activities like the implementation of specific combinations of nature protection commitments, which are decided by farmers, ecologists and the nature conservation departments of the federal provinces.

Results

Evaluation studies show that the abundance of the Whinchat (a small, perching migratory bird), which is an indicator species for traditionally cultivated hay meadows, increased in accordance with the type of interventions adopted. Nature conservation commitments had positive effects on a high proportion of arable land.

About 31% of the breeding areas for the Great Grey Shrike (a large songbird) had adopted nature conservation commitments.

Lessons & Recommendations

- ❑ ? The use of highly specialised and regional nature protection measures could mitigate and stop the decline of targeted plants and species in affected agricultural areas in Austria. In order to achieve this, it is essential that the appropriate commitments cover a high proportion of agricultural land.
- ❑ ? In the case of ground breeding birds, the decline in the number of species was halted in SPAs (Strategic Priority Areas) when the proportion of nature protection measures ranged between 20% and to 30% of the total agricultural area.
- ❑ ? Highly specialised and regionally targeted measures are always financially and labour intensive. To ensure the biodiversity effects are achieved not only regionally, but also nationally, measures should not be implemented in isolation. They must be supplemented by simple, broad, and widely accepted measures that also support biodiversity.

Context

Over the last decades, a decline in habitat and species diversity has been recorded in Austria's agricultural regions. This development is also reflected in the Farmland Bird Index (FBI) for Austria. Between 1998 and 2018, the FBI showed a 40% loss of the farmland bird population. This decrease appears to have stabilised between 2014 and 2018. As a result of this development, the populations of many ground breeding birds are now highly endangered.

Rare bird species, like the Ortolan and the Quail breed on small scale corn fields and sometimes also on grassland with several cuttings. The Whinchat and the highly endangered corncrake benefit from extensively utilised, semi natural grassland, or fallows. In the early springtime, the birds visit these habitats to raise their brood and then leave in autumn. Breeding on the ground can be very risky. Nevertheless, the successful rearing of the young is essential for the survival of these bird species. If these semi natural habitats are cut, or ploughed during the time of breeding, eggs or young birds are endangered.

For all these reasons, result-oriented, focused interventions (particularly political ones) were needed to stabilise these populations (at least in targeted areas) and to secure agricultural habitats extensively utilised by ground breeding birds. Therefore, a programme was created by the Federal Provinces of Tyrol and Salzburg, through Operation M10.1.19, to specifically adapt the management of agricultural land to the needs of ground breeding birds.

Objectives

The objectives of Operation M10.1.19 include:

- Conserving and enhancing semi natural habitats and species protected by the Fauna, Flora and Habitat (FFH) directive;
- Contributing to the extension of biotope networks;
- Extensively managing agricultural habitats and structures to preserve natural resources (soil, water, biodiversity and climate); and
- Introducing innovative farm-based concepts like the result-oriented nature conservation plans.

The objective of the regional programme for ground breeding birds is to:

- Adapt the management of agricultural areas to meet the needs of ground breeding birds in areas where breeding takes place.

Activities

Operation M10.1.19 provides the most effective and targeted commitments for the conservation, restoration and enhancement of biodiversity. Throughout Austria, the operation covers about 3% of the agricultural area and 22% of the cultural landscapes important for birds.

To achieve its objectives, in 2017, M10.1.19 provided 330 different commitments with different premia levels to reach 55 separate development goals. Popular development goals include for example: 'Conservation and enhancement of habitats, plants and animal species', or 'conservation and enhancement of the landscape scenery'.

For grassland, the commitments mainly concern the cutting times, fertilisation, and limitations on the number of livestock units per hectare. For arable land, the commitments relate to fertilisation, the use of pesticides, sowing density, undergrowth, as well as temporal or seasonal management limitations..

Helped by a professional ecological consultant, farmers participating in M10.1.19 can choose predefined combinations of the commitments, depending on the region, the specific objective and the cultivation methods of the agricultural area in question. The chosen specific combination of commitments must then be approved by the nature conservation departments of the Federal Provinces.

Examples of popular and most favoured commitments within M10.1.19 include:

- Grazing at the earliest from (...) until (...) at the latest;
- Forbidding additional fertilisation and application of pesticides;
- Allowing at maximum of one livestock unit per hectare per year, ensuring pasture maintenance and keeping a grazing diary; and
- Carrying out two cuttings per year and removing the mowed material.

Under Operation M10.1.19, farmers in the Federal Provinces of Tyrol and Salzburg may apply for commitments that are appropriate to fulfil the needs of ground breeding birds on single fields (or only on part of these fields) while the rest of the farm is managed according to agricultural or economic requirements.

The Whinchat for example, needs late cutting dates on grasslands, like moist litter meadows, or meadows in higher altitudes with only one or two cuttings. In addition, small meadow stripes with later mowing dates, or field margins, can serve as breeding grounds. They also provide food due to richer occurrence of insects. Arable fields with maize or vegetables, on the other hand, are not used as breeding grounds because of their vegetation structure. Corn fields can provide better shelter and are favoured by birds breeding on arable land.

According to the needs of the different ground breeding bird species, different commitments / management options are suggested (on grassland for example):

- Delaying the cutting dates, if required, in combination with the reduction, or completely abandoning of the use fertiliser;
- Leaving between 5% to 10% of the agricultural area as fallow land, over the winter and until the second cutting date of the following year;
- Providing a stripe of fallow land without grazing on permanent pastures;
- Extensively used pastures should not be abandoned;
- Fencing pastures;
- Maintaining landscape elements;
- Providing raised hide standpoints (M10.1.19 in combination with nature conservation projects for example).

Examples of specific commitments within the programme for ground nesting birds and related premium levels are:

- Meadows with two cutting dates, including stripes of fallow land and raised hide standpoints - Premium level: 410 to 530 euros.
- The prohibition of the use of big machines in corn fields (no driving on corn fields) between 1 May and 10 July - Premium level: 370 to 440 euros.



Main results

Expert-based, contractual nature conservation measures, based on the cooperation between farmers, ecologists and the departments of nature conservation of the Federal Provinces, provide accurate solutions towards the conservation, restoration and enhancement of biodiversity. The application of expert knowledge results in a high degree of transparency, efficiency and impact orientation of nature conservation measures.

This approach further enhanced the development of biotope networks in important areas for birds of cultural landscapes (strategic priority areas).

Nevertheless, compared to the last RDP period (2007 – 2013), the present period (2014 – 2020) has witnessed a general decline in the number of species in the most important areas for grassland birds. This decline was mainly caused by the further intensification of grassland, and the decrease in extensively used grassland. Due to the positive effects of M10.1.19 this general development in grassland could be mitigated, but only in agricultural areas which have a high proportion of habitats complying with nature conservation commitments.

Austrian evaluation studies show that the number of Whinchats (an indicator species for traditionally used hay meadows) increased according to the proportion of meadows with two cuttings. Meanwhile, the success of breeding only increased as a result of a high proportion of meadows with just one cutting, or delaying the cutting dates by three to six weeks. On arable land, having a high proportion of land under nature conservation commitments (M10.1.19) had a positive impact. About 31% of the breeding areas of the Great Grey Shrike adopted nature conservation commitments. In areas where there were no Great Grey Shrikes the proportion of area under nature conservation commitments was only about 9%.

Key lessons

Highly targeted and regional nature protection measures were able to mitigate and stop the decline of specific plants and species in the affected agricultural areas in Austria. To achieve this, appropriate commitments had to cover a high proportion of the land used for agriculture. This is necessary, because not all commitments and their combinations are effective for certain species.

In the case of ground breeding birds, the decline of species was halted in SPAs (Strategic Priority Areas) when the proportion of nature protection measures ranged between 20% and 30% of the total agricultural area.

According to a national evaluation study on indicator species, the way to stop the decline in the abundance and diversity of species and to enhance biodiversity is to cover some 40% of agricultural land with the appropriate commitments, in targeted areas. Intensified personal

counselling services will be needed to achieve this and Salzburg (Lungau) and Tyrol have already started doing this. Additionally, the selection and combination of commitments for nature protection needs to focus on highly effective commitments (for example delay of the cutting dates by 28 days and establishment of fallows).

Highly specialised and regionally targeted measures are always financially and labour intensive (as is the case with M10.1.19). To ensure the biodiversity effects are achieved not only regionally, but also nationally, measures should not be implemented in isolation. They must be supplemented by simple, applicable, broad-ranging and widely accepted measures that also support biodiversity (similar to two other Operations in Austria: M10.1.1 - Environmentally sound and biodiversity promoting management and M11 - Organic agriculture).

Additional sources of information

National evaluation report (only available in German language: download: Nationaler_Datailbericht_2019_OePUL): www.bmnt.gv.at/land/laendl_entwicklung/evaluierung/evaluierungsberichte/Evaluierungsbericht-fuer-den-Duchfuehrungszeitraum-2019.html

Special directive concerning the implementation of the Austrian agri-environmental-climate scheme (only available in German language): www.bmnt.gv.at/land/laendl_entwicklung/foerderinfo/sonderrichtlinien_auswahlkriterien/srl_oepul.html

Nature conservation department of the federal province of the Tyrol www.tirol.gv.at/umwelt/