RESULTS-BASED NATURE CONSERVATION PLAN

Experiences and Conclusions from the Project 2013–2020
IMPRINT

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Dear Reader,

Within the realm of the Austrian Agri-Environmental Programme (ÖPUL), the targeted promotion of nature conservation on farms has been particularly important for the conservation and development of ecologically valuable agricultural areas. As part of the ÖPUL Nature Conservation Measure, tailor-made farming concepts have been successfully implemented over the past decades on agricultural land of almost 80,000 ha. However, in order to test whether the discussion of concrete objectives and technical reasons behind particular farming requirements shall be intensified, or whether other measures might better be employed, the pilot project “Results-based nature conservation plan” was launched. This project puts particular emphasis on raising awareness and focuses on the professional competence and personal responsibility of the farmers. For one, this approach has allowed for more flexibility on the side of the farmers and has led to more goal orientation. On the other hand, a significant gain in knowledge has been observed among farmers, leading to a more profound understanding of the relationship between land management practices and the occurrence of plant and animal species.

The European Commission supports results-based approaches and wants them to be further developed and extended at the Member State level in the future CAP.

This project has demonstrated that the participating farmers have been very satisfied with the results-based model and that it allows for biodiversity targets to be achieved efficiently in certain areas. For the upcoming programme period it is important to draw conclusions from the experience gained over the course of the project, to understand how such a system can be further developed and to see whether it is advisable to extend this approach to other protected habitats such as soils or even to overall farm management concepts.

DI Lukas Weber-Hajszan
Federal Ministry of Sustainability and Tourism, Department Head, Agri-Environment, Mountain Farmers and Less-Favoured Areas, Organic Farming
Historically, contractual nature conservation in Europe has been designed mainly to be measure-oriented. This means that authorities and farmers agree upon concrete management measures for subsidised high nature value farmland, in order to achieve a local or regional conservation objective. In this approach, however, the farmer usually learns very little about the conservation objectives on his or her land and often even less about the concrete results expected from their land management measures. In the past, this measure-oriented approach has often led to situations where it was not clear to farmers why exactly they had to take certain measures on the areas of their land covered by contract.

From the very outset, results-based contractual nature conservation focuses on the concrete conservation objectives to be achieved on the land. During a field visit, the objectives are developed, discussed and agreed upon with the farmers. The concrete measures are not imposed, but can be determined by the farmers themselves.

In Austria, an initial concept for the implementation of a results-based nature conservation measure was developed in 2014 and tested on 16 farms. The design of the approach was based on the Overall farm management nature conservation plan of ÖPUL (Gesamtbetrieblicher Naturschutzplan) and was to become known as “Results-based nature conservation plan” (Ergebnisorientierter Naturschutzplan, ENP). The results-based approach proved to be highly effective for a variety of nature conservation objectives, particularly in the field of animal ecology and on areas with a nature conservation status that is yet to be developed and improved. An initial evaluation also demonstrated that ENP was particularly effective in achieving objectives on valuable agricultural land. Due to the positive results achieved during the test phase, ENP was included in ÖPUL 2015 as a separate subcategory of the ÖPUL Nature Conservation Measure and was offered to a previously defined number of farms (max. 150). The coordination and cooperation with farms as well as the development of accompanying training material was realised within the framework of an EAFRD project (ENP I and ENP II).

The present report provides a summary of all results of ENP to date in ÖPUL 2015.
Every results-based model is confronted with the fundamental question of how the system should deal with situations where farmers have little or no influence on particular objectives and results. ENP solves this issue by using a dual system consisting of area objectives and control criteria.

Area objectives
Tailored objectives were defined for each ENP area in accordance with the ecological baseline. These targets were clear to the farmers and were directly related to cultivation practices, however it was also conceded that in certain years the farmers’ influence on meeting the objectives might be limited. For example, the establishment of a breeding pair of a certain bird species or the occurrence of certain plant species might be defined as an objective for a particular area. Of course, cultivation measures can have a massive impact on whether certain farmland birds breed on cultivated land, however the causes of a reduction in the local population can also be attributed to other factors such as the quality of the winter quarters or climate. The situation is similar for a number of plant species such as orchids, which simply do not occur in some years. For this reason, failure to meet the area objectives does not automatically lead to sanctions for the farmer.

Technical guidance is provided and evaluations are conducted to help meet area objectives and corresponding indicators, however no sanctions are imposed in the event of non-compliance.

Control criteria
In addition to area objectives, so-called control criteria are developed. These are intended as a kind of early warning system for possible undesirable developments on the land. As such, they are related to the area objectives but conceived differently. Control criteria are indicators that, in good time, draw attention to negative developments regarding nature conservation. They have a highly causal relationship with cultivation measures. Examples for control criteria can be the absence of dock or certain neophytes on the land or the presence of certain vegetation structures. Depending on the severity of the infringement, a failure to comply with the control criteria leads to sanctions, the magnitude of which is determined by the control authority (AMA, Agrarmarkt Austria, the leading Austrian agricultural marketing company).

Control criteria and the corresponding indicators are sanctioned in the event of non-compliance.
3 EXAMPLES FROM DIFFERENT HABITATS

Farm visits

The area objectives and control criteria were defined by ecologists together with the farmers during farm visits. On these visits, ecologists discussed important information about target species with the farmers, including details about their habitats and the types of conditions these species need in order to survive. Between two and five objectives and approximately three control criteria were defined for each area. The choice of objectives was based on the need for nature conservation action on the land. The farmer’s prior knowledge was also taken into consideration. If, for example, a farmer was particularly interested in the grasshopper fauna or bird fauna on his or her land, this was taken into account when defining the objectives and indicators.

The farm visits also included discussions on which management measures might be most suitable to meet the objectives. After the visit, each farmer was provided with an individually tailored “ENP Logbook.” This logbook included all the objectives and control criteria previously defined, as well as additional information relevant to the ENP areas on the farmer’s land. Care was taken to present all this information clearly and to illustrate it using drawings and photos. The farmer also uses this document write down the measures implemented on the areas as well as any relevant observations made. All ENP objectives, which involve a large number of different protected species and habitats, were compiled in a database by the project team.

A sketch from the ENP logbook further illustrates area objectives

“Working with goals in mind is different from having to fulfill mandatory measures. It allows you to learn. When you observe the objectives in an area and make a note of what you are doing, then you really start thinking about it.”

a farmer from Lower Austria


**Calcareous grassland in the Pinzgau region**

The objectives for this calcareous grassland habitat involve plant and animal species that are typical for the habitat and that should be preserved or developed. This is an example of calcareous grassland in a nature conservation condition that is comparatively good. Some rare, protected species are observed, such as the martagon lily, the heath spotted-orchid and the silver thistle. The targets on this area describe the desired conservation status.

**OBJECTIVES:**

- The silver thistle should occur sparsely over a large area (see drawing).
- The heath spotted-orchid should occur sparsely over a large area (see photo).
- The martagon lily should occur scattered locally.

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**Wet meadow in the region of Traunviertel**

Wet meadows are notable for their good water supply. The ENP objectives involve certain animal and plant species that are typical for this habitat and that should be preserved or developed. This ENP area consists of several contiguous litter meadows characterised by the presence of the curlew, the harvest mouse and the large marsh grasshopper.

**OBJECTIVES:**

- The litter meadows are to be preserved and developed as a potential habitat for the curlew, harvest mouse (see photo) and marsh grasshopper.
- The great burnet should occur at least sporadically in more humid subareas (field units: 23, 116, 118 und 121, see photo).
- There should be 3 – 7 standing bodies of water in the ENP area.
- 97 % of the entire ENP area should be free of woody plants (except for prostrate shrubs).
Valley meadow in the region of Mostviertel

Valley meadows are often more affected by intensification than mountain grassland and therefore tend to have a greater need for action. This is reflected in the ENP objectives, which are often designed to achieve land development directed towards extensification. This ENP area consists of several subareas that are to be further extensified. There are both dry and wet sections. The objective is to achieve a highly biodiverse nutrient-rich pasture which, due to its abundance of flowers, shall serve as a habitat for a variety of insects.

OBJECTIVES:
- The mowed pastures should be preserved and developed in the form of calcareous nutrient-rich pastures with typical species such as the brown knapweed, bristly hawkbit, field scabious, etc. as well as indicator species such as quaking grass, sweet vernal grass or yellow rattle (see photo).
- Mowed pastures tend to be a very good habitat for insects (especially butterflies and grasshoppers) as well as other small animals (see photo).
- At periodically to permanently wet sites, plant communities typical for the location are to emerge including characteristic species such as meadowsweet, betony or cabbage thistle and various sedge and rush species.

Fallow land in the Vienna Basin

Defining objectives for fallow land is particularly difficult, because due to the highly dynamic nature of this type of habitat ecologists find it difficult to make land development predictions. In cases involving fallow land, bird species such as the corn crake or the curlew were often also taken into account. On this particular very species-rich wet fallow land, rare plant species such as the short-headed thistle can be found, as well as protected bird species like the corn crake and the curlew. The area objectives aimed at preserving the botanical biodiversity and to enable the ground breeding birds to breed successfully.

OBJECTIVES:
- The short-headed thistle should occur at least sporadically.
- A diverse wet fallow land is to be preserved as a habitat for the corn crake and curlew.
- A species-rich wet fallow land with meadow fleabanes, bulrushes and other species typical for wetlands should be preserved and developed.
**Pastures in the region of Mostviertel**
Pastures are very important habitats for a variety of insects, small mammals, reptiles and birds. The high structural diversity of extensively grazed areas is both unique and very important. This ENP area includes a species-rich, semi-arid pasture that is being kept from becoming overgrown by extensive grazing. Old junipers and cornelian cherry bushes provide shelter for numerous insects and small mammals. The south-facing slope with its short-grass areas and large abundance of insects is an ideal habitat for the emerald lizard, that often seeks warm places.

**Whinchat breeding habitat in the Upper Inn Valley**
In some ENP areas, targets have concentrated on certain animal species, such as the whinchat. This bird species breeds on the ground in hay meadows and is highly endangered due to the ever earlier mowing. In such areas, the aim of ENP is to prevent mowing in those sections where breeding activities are observed by the farmer. In conventional measure-oriented contractual nature conservation, a delay of the cutting would have to be assigned for the entire meadow. In ENP, however, the farmer only needs to avoid those areas of the meadow where breeding activities take place. While this does increase the effort on the part of the farmer in the specific area, only that amount of forage grass remains unused that is necessary for the protection of the breeding sites. This way farmers see the way his or her land is being used by certain valuable species and is empowered to design protection measures efficiently with an economic rationale. This ENP area is a former breeding site of the whinchat.

The aim is to reestablish the necessary conditions for the whinchat to return. The farmer is in close contact with the supervising ornithologist and is professionally advised with an emphasis on the identification of species. The objective is to see the successful breeding of two pairs of whinchats.

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**OBJECTIVES:**
- The species-rich semi-arid pasture with indicative grass species such as the erect brome and furrowed fescue and other typical species like the silver thistle, greater knapweed, wall gamander and lilac sage should be preserved.
- The south-facing slope is to be kept from becoming overgrown by extensive grazing.
- The pasture should be preserved as a habitat for insects (especially butterflies and grasshoppers) as well as bird species.
- Woody plants such as junipers and cornelian cherry bushes that are typical for this landscape and particularly valuable from an ecological perspective are to be preserved.

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**Examples from different habitats**

**Pastures**

A very old cornelian cherry bush that should be preserved

**Whinchat breeding habitat**

The whinchat uses fencing posts and high plant stems to sit on

Examples for nesting sites of the whinchat are ditch slopes, depressions on slopes and among ground vegetation in an extensively used meadow or pasture

**OBJECTIVES:**
- Two pairs of whinchats should rear their young successfully. The presence of whinchat nests in the meadow is indicated by adult birds using nearby perches and periodically disappearing in the grass with insects in their beaks. The warning signals the emit when one approaches are a further indication.
- Structurally diverse vegetation and soil irregularities such as depressions and ditches should be preserved.
- Protected potential nesting sites distributed over 15% of the area are to be maintained until mid-July.
- Perches shall be available at regular intervals of around 50m from May to mid-July.
4 THE FARMS

Currently, 143 farms throughout Austria participate in ENP. The nine federal provinces are represented to varying degrees; about one third of the farms are Styrian and about 20% are in Tyrol and Lower Austria, respectively. Both part-time and full-time farms, as well as a wide variety of farm types and sizes are represented. About 85% of the ENP farms had previously participated in the ÖPUL Nature Conservation Measure (WF, Wertvolle Fläche, i.e. “High nature value farmland”) and have switched to ENP.

“It is important that the responsibility remains with the farmer. I can feel it on my shoulders, but it’s a good feeling.”

—a farmer from Lower Austria
When selecting farms for ENP, an effort was made to choose farmers with prior knowledge of nature conservation issues or with an above-average interest in conservation, in order not to overwhelm them with an unprecedented level of freedom regarding what measures to take.

One main reason why farmers participate is the increased flexibility they are granted in their cultivation practices. This is reflected in the high level of agreement to the statements “I participate because I do not have to adhere to strict requirements as to when and how to cultivate my land” and “I participate because I can adapt my farming to weather conditions”. Another important motive is the opportunity to receive training in ecology. This is reflected in the high level of agreement with the following statements:

“... because I can learn more about animals and plants,” “I participate because I want to better understand how my farming practices affect plants and animals” and “I participate because it allows me to receive individual ecological advice for my nature-conservation areas”. The third important factor leading to participation is that in ENP they “feel valued as farmers,” especially because they are given the competence to manage their nature-conservation areas themselves.

The online survey of ENP farms demonstrated that there are three main motivations for farmers to participate in the ENP, which are of equal importance to them.

As the results of the evaluation visits indicate, this target group was indeed reached successfully. According to the findings, 44% of the participating farmers have very good ecological knowledge and a further 53% have basic knowledge.

Reasons for participating in ENP

- because I don’t face strict provisions how and when I must cultivate my area.
- because I learn more about plants and animals by participating.
- because I feel valued as a farmer by ENP.
- because I want to understand how cultivation affects plants and animals.
- because I can tailor cultivation to the weather.
- because I receive tailored ecological advice for my nature conservation areas.
- because I can combat problematic plants very well in the ENP.
- because I receive higher premiums than in other measures.
- because my nature conservation areas were made worse by other measures.

How much ecological knowledge do ENP farmers possess?

- no ecological knowledge 3%
- basic ecological knowledge (able to recognize some plant and animal species from their area) 53%
- very good ecological knowledge (able to recognize most plant and animal species from their area and know about their ecological requirements) 44%

The online survey of ENP farms demonstrated that there are three main motivations for farmers to participate in the ENP, which are of equal importance to them.
Karl Friesenbichler

On the meadows of Karl Friesenbichler, a farmer from Mönichwald, there are over 30 different species of grasshoppers. By now, Mr. Friesenbichler knows all of them. Many of the objectives on his ENP areas relate to the protection of insect diversity.

“On my ENP areas there are wart biters, field crickets and also the lesser-known long-horned grasshoppers. Once you get interested in these animals, you cannot let go. It is fascinating to observe which habitats they populate and how the populations develop. I deliberately mow some areas later or leave them untouched over the winter. Grasshoppers need the stalks in which their eggs can pass the winter. I also have old fruit trees on my land, which I leave standing as breeding trees for the hoopoe. And in the surrounding hedges I support the red-backed shrike, which now has several territories on my farm. I find it important for nature to be given sufficient space on my agricultural land.”

Birgit Schwaiger

Some farmers working with ENP take advantage of their freedom to determine measures and try to achieve a reduction in certain problematic plants on their farmland. One example is the farm Schwaiger in Fieberbrunn in the province of Tyrol.

“Because of the late cutting time in September, which in the past we had to respect to make sure we would comply with the nature conservation measure, the white veratrum multiplied significantly on several of my plots. Since we have begun participating in the results-based nature conservation plan and have become more aware of the rare plant and animal species on our land, we have reclaimed the responsibility for our nature-conservation areas. In May, we proceed with a maintenance cut in those areas heavily affected by the white veratrum. Hans, my husband, adjusts the height of the motor mower so that it does not damage the orchids, but it does cut the veratrum. We have been doing this since 2016 and you can clearly see how the veratrum population is in decline while the orchid population is recovering. What is important is that once again you feel responsible for the area and can act if it develops in the wrong direction.”
Margit and Karl Wolf’s farm

The farm of the family Wolf is located in Tyrol, in the mountain village of Nauders. The 3.5 ha ENP areas are mountain meadows with altitudes between 1600 and 1900 m. Margit Wolf points out that it is mainly the “minor flexibilities” that are important.

“We are a pure hay farm and the weather plays a very important role here. We start mowing on the valley meadows and reach the upper meadows only towards the end. In a hot summer like that of 2018 we had to mow a week earlier, otherwise everything would have burned. It is the small freedoms that make our work easier. Since we’ve been involved in ENP, we have become more aware of the plant populations and have been especially surprised by the large number of different orchid species. It makes me proud to have so many gems in my meadows. The hard work becomes easier when you understand why preserving these meadows is so important. I would like to pass this knowledge on to my children so that they too can take responsibility for our land.”

Wilhelm Klaffl’s farm

Even particularly sensitive areas can be optimally managed with ENP. One example is Mr. Klaffl’s farm in Lower Austria. Bee-eaters, ground squirrels and white-tailed eagles use its extensive pastures as a habitat. This example shows how important the flexibility of ENP can be for pasture farms.

“My grassland stretches from the Wachau, over the Gobelsburger Heide and into the Kamptal. I mainly have pastures with lots of different grazing animals, including animal species that have become rare in Austria. For us the free choice of measures is very important, because we need this flexibility in our decisions on when and where to graze how many animals. Depending on the year and the amount of rainfall, this can change very quickly on the pastures. Especially in the past years the summers have been very dry and we observed that the total pasture area fed fewer animals. Also in spring it really depends when we can release the animals in the different areas. In wet and cold conditions we wait longer. ENP allows us the flexibility to react quickly to changes in weather conditions and adapt our farming practices to the nature conservation objectives.”
5 ADDED VALUE

The evaluation results demonstrated that the added value of ENP lies especially in its targeted nature, in its flexibility regarding cultivation practices and in the knowledge gain among participating farmers.

Goal orientation

By defining tailored and detailed objectives, farmers come to understand what exactly nature-conservation specialists would like to see achieved on their land. This became evident through the survey carried out as part of the ENP evaluation. According to the results, 94% of the ENP farmers surveyed had a clear understanding of the objectives defined for their ENP sites.

Die Ziele sind generell klar. 94%

The online survey showed that 94% of its participants understood their objectives clearly.

How clear are the area objectives for farmers?

- Objectives are mostly unclear. 4%
- Objectives are somewhat unclear. 2%
- Objectives are generally clear. 94%

During the evaluation visits, one of the ecologists’ main tasks was to check whether the objectives had actually been met. It was found that 77% of the objectives had been fulfilled, 17% had been partially fulfilled and 4% had not yet been met. For 3% of the objectives, it was not possible to assess the achievement at the time of the evaluation. Some objectives were not met because, for example, not enough time had passed since the beginning of the contract period, the target species did not (or ceased to) occur due to external factors or because an animal species, as of yet, simply failed to occur in the area despite the measures taken.

77% der Ziele erfüllt

Were the objectives met by ENP participants?

- 3% objectives not evaluable.
- 4% objectives not met.
- 17% objectives partially met.
- 77% objectives met.
The farmers often followed innovative approaches to land management and experimented with different measures to meet the objectives. This allowed for the collection of valuable information, for example on methods to control problem species. One farmer might dig up a broad-leaved dock by hand and report that the population is already in decline. Another one might distribute green dock beetles from infested plants to those not yet infested.

Lots of feedback from farmers suggested that as a result of participating in ENP, they became more concerned with their nature-conservation areas and that they began observing them more frequently. When asked whether they could identify ecological changes on the areas, 78% responded that they had seen positive changes. 24% could not detect any changes and 17% observed negative developments.

The online survey showed that 91% of farmers knew what measures they could take to achieve the objectives while 9% of respondents wanted to receive more support to find suitable measures.

Have farmers observed changes in the ecology of their ENP areas?

<table>
<thead>
<tr>
<th></th>
<th>agree</th>
<th>disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have observed positive changes.</td>
<td>78%</td>
<td>22%</td>
</tr>
<tr>
<td>I have observed no changes.</td>
<td>24%</td>
<td>76%</td>
</tr>
<tr>
<td>I have observed negative changes.</td>
<td>17%</td>
<td>83%</td>
</tr>
</tbody>
</table>

"My awareness has sharpened as to how we can support nature through ecological measures."

a farmer from Lower Austria
Flexibility

The majority of farmers take advantage of the flexibility offered by ENP regarding their farming practices. Compared to before, farmers have changed their farming practices especially in terms of mowing dates. In the online survey, only 6% stated that they had not taken advantage of the flexibility granted for mowing dates. On the other hand, only 26% changed their practices in the use of fertilisers. Most respondents (59%) fertilise their land the same way they did before participating in ENP. Also with respect to grazing, farmers find it easier to work with ENP because they can decide for themselves when, where and how many animals they want to graze.

A closer analysis of how farmers adapted the cutting time shows that the majority (19 respondents) mowed a few days earlier. Another 11 respondents mowed one to two weeks earlier. 10 respondents did indeed mow later than before ENP participation. One farmer had completely changed her approach to mowing since participating in ENP. She used to mow everything at once. Now she starts earlier, but mows in small sections because she can take her time. She begins with the more nutrient-rich meadows and cuts the more calcareous ones towards the end. Many farmers report that when mowing they look out for flowering orchids or nests of meadow breeders and mow around them.

How much earlier/later do ENP farmers mow their areas?

“Since I have begun participating in ENP, I have been able to choose the best time for mowing myself based on my observations and every year when I walk across my meadows I see that I am doing the right thing.”

a farmer from Lower Austria
Knowledge gain

The ENP objectives were tailored to the individual farms and defined in close consultation with the farmers. Although this requires corresponding guidance and training work, it contributes significantly to the farmer’s identification with the plant and animal species on his or her nature-conservation areas. By inspecting their land together with an ecologist, a personal connection to the nature conservation objectives is created. A knowledge transfer takes place in both directions. The farmer receives ecological training and at the same time is given the responsibility to manage the land in a self-determined manner. The farmer’s observations and successfully implemented methods provide valuable feedback for the future development of the subsidy system. The results of the online survey have shown that the farm visits are very important to the farmers. 93% of the respondents found the farm visit both interesting and important. Almost one third of those surveyed would like to receive more intensive support in the future.

The farmers were very interested in the ecological information they were provided with and accordingly they were very appreciative of the training received. The evaluation showed that the vast majority of the farmers (84%) have an interest in ecological interrelationships that is “fairly strong” to “very strong.” It is fair to say that the farmers are very keen on receiving further ecological training.

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**How important is the farm visit for ENP farmers?**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Agree</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The farm visit was interesting and important.</td>
<td>93%</td>
<td>7%</td>
</tr>
<tr>
<td>I would prefer more support through the visiting biologist.</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>I would be willing to pay a fee for further farm visits.</td>
<td>17%</td>
<td>83%</td>
</tr>
<tr>
<td>Not all questions were answered during the farm visit.</td>
<td>4%</td>
<td>96%</td>
</tr>
<tr>
<td>The farm visit had no value to me.</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

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**Are ENP farmers interested in ecological relationships?**

- not at all interested: 0%
- no comment: 1%
- minimally interested: 15%
- somewhat interested: 33%
- very interested: 51%
Looking at the reasons behind the farmer’s participation in ENP reveals that a major motivating factor was the opportunity to develop their knowledge about the plant and animal species on their land. Motives that emphasise training are very high on the list. 96% of farmers state they participate in ENP because it allows them to learn more about animals and plants. 94% state that one reason for participating is that they want to better understand how their farming affects plants and animals. 85% consider it important that by participating in ENP they obtain individual ecological advice for their nature-conservation areas.

Eight networking meetings were held as part of the project to facilitate a knowledge exchange among the farmers, as well as to provide those farmers with an opportunity to discuss questions, on whose land an evaluation visit could not take place. A total of 73% of the farmers took part in the networking sessions. This high number of participants as well as the feedback given by the farmers during these meetings, along with the results of the online survey show the importance of events to facilitate a mutual exchange of opinions and experiences. Two thirds of the respondents to the online survey would like to see a networking meeting take place in their region every one or two years.

“I used to know hardly anything about grasshoppers. Now I know them and I have learned that there are many different species that all have their own special needs.”

a farmer from Lower Austria
ENP is particularly suitable for the following situations:

- **In contrast to many other results-based approaches in Europe, ENP encompasses both plants and animals.** ENP allows for the successful achievement of specific ecological objectives for animal species (birds and insects). It was found that farmers are very interested in what kinds of structures and habitat specifics certain animal species need. Applying this kind of knowledge, farmers can implement suitable measures effectively, in accordance with local conditions. Examples can be seen in the creation of habitats for grasshoppers (mosaics of old grass areas and low-growing areas as well as isolated patches of open ground) or the creation of habitats for skylarks (skylark windows) or lapwings (short-grass areas during the breeding season).

- **When it comes to the reduction of problem species** such as the bluntleaf dock, white veratrum or eagle fern, ENP enables a flexible approach. Farmers are granted the freedom to try out different management measures to achieve a reduction in such species. On the test farms visited to verify the fulfillment of the objectives, it became clear that problem species could be successfully reduced after only one or two years. The same applies to areas with neophytes such as the Himalayan balsam and Canada goldenrod.

- **Very dynamic nature-conservation areas,** such as fallow arable land with many mobile rudder species, can be managed successfully with ENP because it allows for flexible adaptations to changing weather conditions. Depending on the circumstances, the farmer is free to decide whether to start mowing earlier or later, to mow in strips, to chop or, in some years, to grub the land.

- **Endangered habitats can be restored effectively under ENP,** because the unique development of an area from year to year can be addressed individually. Examples include the recultivation of dry grasslands overgrown by bushes back into species-rich dry grasslands or the recultivation of mega-phorbs into moist meadows. The evaluation revealed that farmers are very creative in their approaches and tend to experiment with a wide variety of measures.

- **Participation in ENP is favourable for livestock holdings** with hay meadows, pastures and mowed pastures. The management of nature-conservation areas is closely linked to general farming practices. For example, due to changing weather conditions, the extent to which meadows and mowing pastures are grazed and fertiliser is applied varies from year to year. Under ENP, livestock farmers can manage their activities in nature-conservation areas in a relatively flexible manner.

- **Two different objectives can be realised in one area.** For example, if the corn crake occurs in an ENP area, it can be supported by delayed mowing. In subareas, where the corn crake does not occur (where no calls are audible), indicator species for land abandonment can, on the other hand, be pushed back by mowing earlier.

- **Due to the increased flexibility in land management, nature conservation objectives can also be implemented well in more intensively cultivated areas.** Thus, whinchat populations can be supported in valley meadows for example.

- **Due to the greater flexibility and freedom in the design of management approaches, farmers identify with the protected species and habitats** more readily, which in turn facilitates the conservation of sensitive habitats. This has been demonstrated in areas within Natura 2000 sites in Carinthia, for example, where the Jersey tiger occurs.
SUMMARY AND CONCLUSIONS

Results-based contractual nature conservation measures are implemented in different ways in some of the European countries, e.g. Ireland, Germany, Switzerland and the Netherlands. In Ireland for example, farm visits and direct guidance for farmers are high on the agenda, in contrast to the models applied in Germany, Sweden and Switzerland, where there is little or no direct consultation for farmers. In Ireland and Sweden, a nature-conservation value is factored into the premium calculation. In the Netherlands, there is a cooperative results-based approach in which several farmers implement the nature-conservation objectives as cooperatives. Most models work with selected indicator plants; ecological aspects relating to animal species are implemented only in Austria, the Netherlands and indirectly (via structures) in Switzerland.

In Austria, ENP was implemented as a pilot project with a defined, small number of participants as part of the ÖPUL Nature Conservation Measure. Based on the positive experiences, an extension of the number of participants to up to 2000 farmers is recommended for the coming subsidy period for rural development (LE-Förderperiode) in Austria. The dual system of ENP – consisting of objectives and control criteria – is highly functional. It ensures that farmers understand and implement even those nature conservation objectives that pose challenges, and that ecological objectives for animal species are also incorporated. Farmers can take responsibility for meeting the objectives without being unjustifiably sanctioned if some of them are not achieved due to technical reasons or external factors. The control criteria ensure that any deterioration in the area resulting from cultivation practices can be detected quickly and sanctioned accordingly.

The target group for ENP consists of ecologically interested farmers prepared to engage intensively with nature conservation objectives on their land. If ENP is extended in the next subsidy period for rural development, this target group should be addressed. ENP is not suitable for a large-scale programme aimed to involve all Austrian farmers. To reach the target group effectively, a tendering system is recommended whereby farmers can apply for participation in ENP. An online questionnaire with a combination of open and closed questions could be used to assess the suitability of the farmers and their land. A call for tender system would ensure that participants have an above-average interest in nature conservation and/or have basic knowledge of ecology and can manage the implementation of the area objectives.

The ENP evaluation has shown that farmers understand the objectives and know through what measures they can be achieved. We recommend that a catalogue of proposed objectives, for example for selected biotope types, be prepared based on the evaluation results. Furthermore, concrete methods for verifying the achievement of the objectives should be described and appropriate additional information included. This can provide valuable input for other ÖPUL measures or subsidy projects, e.g. training aspects for improving the ÖPUL measure UBB (Umweltgerechte und biodiversitätsfördernde Bewirtschaftung, i.e. “Environmentally friendly management to enhance biodiversity”) or methods for neophyte control as a requirement of the ÖPUL Measure WF (see above).

It was found that field visits, on which objectives were defined and evaluated and farmers received individual guidance, were of primary importance to the success of ENP. While this does require corresponding efforts put into consultation and training, the knowledge gained by farmers creates a sustainable impact and is applied to future farming practices – in part regardless of potential subsidies. Thus, the consultants are particularly important for a future expansion of the project. We recommend the establishment of a permanent team of consultants with sufficient resources to conduct lots of field visits.
The advantage of a permanent team is that, due to continuous training and repeated rounds of feedback, the members become experienced experts with the capacity to offer high-level technical consultations to farmers in line with standardised best practices.

Farmers have expressed the wish that while the documentation should continue to be done analogously using the ENP logbook, options for digital documentation should also be available. Regarding a continuation with the analog form using the logbook, we recommend an increased automation of the production, for example by using prepared text modules extracted from the ENP database. As for possibilities of digital documentation, a mobile phone app could be developed including the option of uploading photos.

Some objectives, especially relative to birds or amphibians, are difficult to achieve on individual sites because these species need larger habitats to establish stable populations. For this reason, we recommend providing a regional supplement to ENP for the upcoming subsidy period. For instance, based on criteria to be determined, project regions could be defined in which several farmers work towards meeting the same nature conservation objectives.