European Commission

Results-based Payments for Biodiversity

Guidance Handbook

Designing and implementing results-based agri-environment schemes 2014-2020

Environment

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Front cover image: *Lotus pedunculatus*, French Flowering Meadows Scheme, Tim Hudson ©

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Glossary

BFCP	Burren Farming for Conservation Programme in Ireland
CAP	Common Agricultural Policy
EAFRD	European Agricultural Fund for Rural Development
EC	European Commission
EFA	Ecological Focus Area
EU	European Union
HNV	High Nature Value
IACS	Integrated Administration and Control System
LPIS	Land Parcel Identification System
LU/ha	Livestock unit per hectare
RDP	Rural Development Programme

1 Introduction to the Handbook

This Guidance Handbook and accompanying supplements are part of a package of materials designed to support the development of results-based agri-environment payment schemes across the EU. These have been prepared within the context of a wider study reviewing results-based approaches to biodiversity delivery on farmland in Europe. The main study report and all the materials can be found on the European Commission website.

1.1 What are results-based payments for biodiversity?

There is no single, agreed definition of 'results-based payments' for biodiversity. Schemes of this type may also be described as 'payments for ecosystem services', 'outcome focussed schemes' and 'payment by results'. In practice there exists a continuum of approaches to delivering biodiversity achievements on farmland ranging from the long-established approach of paying land managers to undertake specified management actions, to newer approaches that reward only the results that are achieved, irrespective of the methods used.

In this Handbook we make a clear distinction between agri-environment schemes for farmland where:

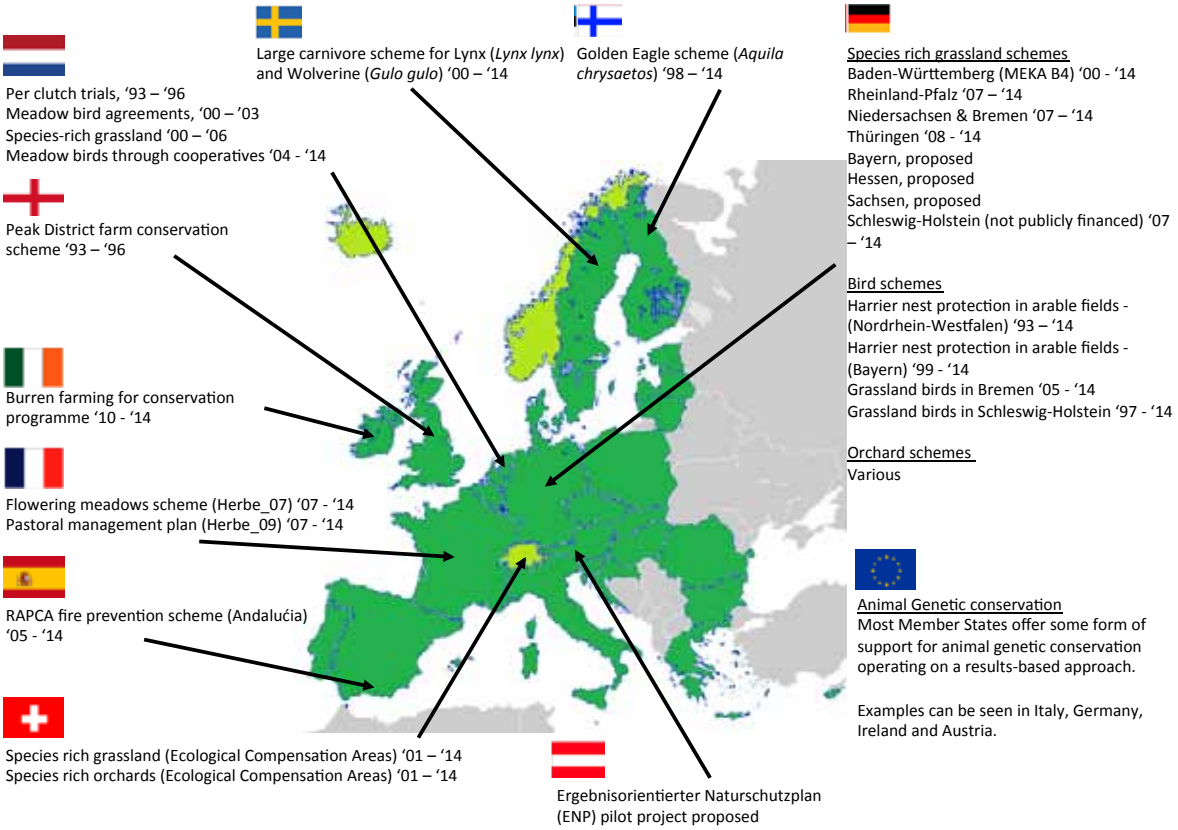
- the payment relates to the achievement of a *defined environmental result*, and the farmer or land manager is allowed the flexibility to choose the most appropriate management to achieve that result; we call these **results-based payment schemes**;
- the payment relates to *defined agricultural management requirements* which must be carried out by the farmer or land manager; we call these **management-based payment schemes**.

Many different types of results-based payment schemes for farmland have been implemented across Europe, as the map below shows. Most of these schemes were supported by the European Agricultural Fund for Rural Development (EAFRD) or other public funds. This guidance is based on the assumption that during the 2014-2020 period most results-based schemes for biodiversity will operate within the context of Member States' Rural Development Programmes (RDP), whether or not the schemes are co-financed by the EAFRD.

1.2 Who is the Handbook for?

This guidance is for public authorities, non-governmental organisations (NGOs) and private organisations interested in developing and implementing results-based payment schemes for farmland biodiversity. It will also be of use to environmental and agricultural specialists who might wish to contribute to such schemes.

It is assumed that readers are already familiar with the operation of agri-environment programmes under the EAFRD. The focus of the Handbook is results-based payment schemes but many of the key principles of good design apply equally to management-based schemes.



1.3 How to use the Handbook and the website

The Handbook starts by explaining what results-based payments for farmland biodiversity are and how they differ from the more familiar management-based agri-environment schemes currently used across the EU.

The structure of the Handbook follows the logical sequence of steps required to put in place a results-based payment scheme, as shown in the diagram below.

Throughout the Handbook you will find:

- examples of good practice from results-based payment schemes in the 2007-13 period and earlier;
- detailed references to Common Agricultural Policy (CAP) legislation and guidance documents in footnotes;
- links to more detailed information accompanying the Handbook, videos and articles about results-based payment scheme on the European Commission's website; and
- key advice displayed like this:

Key advice

Please note that where there are references to EU legislation these were up to date in October 2014, but readers may wish to check on EUR-Lex for subsequent revisions.

Sequence of steps to put in place results-based payments for biodiversity

2 Exploring the options: why consider a results-based approach?

In results-based schemes the contract with the farmer is based on the achievement of specific biodiversity *results* (in contrast to management-based schemes where the farmer is contracted to undertake specific *actions*).

A well-designed results-based scheme can offer several advantages for both the farmer and the managing authority, compared to management-based schemes with similar objectives:

- a much clearer link between payment and biodiversity achievement;
- contracts with farmers simply specify the results required, rather than defining in detail the farm practices that should be carried out;
- the 'production' of biodiversity becomes an integral part of the farming system and farm business, not just another set of land management 'rules' to be followed;
- farmers have the opportunity to use their management skills, professional judgement and knowledge of the farm and are rewarded for achieving the results of these entrepreneurial efforts, rather than just following instructions defined by the authorities;
- farmers are encouraged to take responsibility for and to 'own' the biodiversity results, and this can lead to greater public recognition of farmers' role in supporting biodiversity objectives;
- results-based schemes can more easily meet the strengthened EU requirements for verification of agri-environment-climate payments under the 2014-20 CAP; and
- results-based schemes are more easily targeted and budgets carry less 'deadweight' because there is a built-in incentive for farmers to select only the land where the biodiversity results are achievable.

However, there are also some circumstances where a well-designed and targeted management-based approach or environmental investment may be more appropriate than a results-based payment scheme:

- if it is not possible to design reliable indicators of biodiversity results and methods of measuring them on farms;
- where the managing authority does not have access to the environmental information and expertise needed to set up and run a results-based scheme; and
- if the farming community is unwilling to accept a results-based approach.

3 Biodiversity objectives

The first step in designing any agri-environment scheme is to define clear biodiversity objectives, based on the most accurate and up-to-date information available.

3.1 Information needed

A strong ecological research base and good quality and reasonably up-to-date habitat and species data are required to define biodiversity objectives and choose effective result indicators. Evidence will also be required of a strong relationship between the 'result' to be rewarded and the achievement of the specific biodiversity objectives[1]. Monitoring and evaluating the performance of the scheme requires adequate baseline data.

Effective use of the EAFRD and other public funding to support biodiversity of farmland means focussing support where it is most needed and will be most environmentally cost-effective. This will usually mean focussing first on habitats, species and landscapes that still have high conservation value and are at risk of deterioration or require improved conservation management. These are most often semi-natural habitats and landscapes that have remained for a long time under some form of low-input (but often labour intensive) agricultural land use. The risk is that simplification, intensification or partial abandonment of these management systems and practices will lead to the degradation of valuable ecosystems and the loss of many of the species that they support. In an agricultural context it is more cost-effective to maintain *existing* good management of farmland biodiversity where this occurs, than to wait for these habitats to deteriorate and have to pay for costly restoration.

When EAFRD funded results-based schemes have biodiversity objectives that will best be achieved by the *maintenance* of existing farming practices, it is important for the RDP to be clear about the environmental benefits of these practices and the risks to their continuation in the absence of agri-environment support[2].

To define biodiversity objectives and priorities for a results-based approach it is important to be able to understand:

- how this high conservation value farmland was shaped by past agricultural practices, and what impact contemporary agriculture is having on its biodiversity value;
- the drivers, timescale and expected impact of future changes in agricultural land use and management, and any consequent threats to high conservation value farmland;
- which of these high value habitats, species and ecosystems are at greatest risk of deterioration or degradation, now and over the next five to seven years;

[1] For the 2014-20 period RDPs must explain why an agri-environment-climate scheme can plausibly be expected to deliver environmental benefits, and state if there is evidence to support this (Section 4.5.1 of European Commission (unpublished, 2014) *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.)

[2] Section 3.2.1 of European Commission (unpublished, 2014) *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.

- the dynamic relationship between the target ecosystems and the economics and management choices of the farming systems that support them; and
- external factors beyond the farmer's control that could have an impact on achieving the results (e.g. loss of migratory birds elsewhere).

To understand these factors it will almost certainly be necessary to draw upon ecological expertise, advice and data from other sources, such as environmental agencies, researchers and NGOs. It can also be helpful to check at this exploratory stage the availability (and compatibility) of environmental and agricultural data sets needed for targeting, monitoring and evaluating a results-based scheme. Some Member States already have fully integrated data sets but others do not.

Effective results-based schemes require good habitat and species data and the specialist expertise to interpret it. These may often be found in environmental organisations outside the agricultural managing authority.

3.2 Defining clear biodiversity objectives

It is essential for results-based schemes to have clearly defined biodiversity objectives because the farmer is paid for results that are directly linked to the achievement of the biodiversity objective.

Member States using EAFRD funding for results-based schemes for biodiversity will have chosen, as one of a range of different priorities for their RDP, to focus on '*restoring, preserving and enhancing biodiversity, including in Natura 2000 areas and in areas facing natural or other specific constraints, and high nature value farming, as well as the state of European landscapes*[3].

The foremost biodiversity priority will normally be to address the requirements of Natura 2000 habitats and species[4] that depend on or are associated with farmland, especially where habitats are extensive and still support their full complement of species. The European Commission's Farming for Natura 2000 guidance describes these key agricultural habitats and species. It is important to note that the Habitats Directive's aim of achieving favourable conservation status applies to the entire bio-geographical range of each Natura 2000 habitat and species. Because a significant proportion of many key agricultural habitats and species occur outside Natura sites, it will often be necessary to target not just Natura sites but other farmland too, including high nature value (HNV) farmland with significant amounts of key agricultural habitats and species. In setting biodiversity objectives it is important to understand what favourable conservation status actually means.

[3] Article 5(4)a of Regulation (EU) No 1305/2013 of 17 December 2013.

[4] These are habitats and species of Community interest listed in Annexes I and II of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora; and birds listed in Annex I of Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds, and other migratory birds.

What does favourable conservation status mean?

The term **conservation status** is defined in the Habitats Directive (article 1).

- For a natural habitat, conservation status means "*the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species within the territory referred to in Article 2"* (article 1e).
- For a species, the conservation status means "*the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2"* (article 1i).

The conservation status of a **natural habitat** will be taken as 'favourable' when:

- its natural range and areas it covers within that range are stable or increasing, and
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
- the conservation status of its typical species is favourable as defined below.

The conservation status of a **species** will be taken as 'favourable' when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

Key agricultural habitats and landscapes may be at risk of deterioration as a result of intensification or abandonment, especially if they have specific ecological requirements. Agri-environment schemes may be able to address these risks if they are well understood and can be addressed by management actions. Thus, for example, biodiversity objectives might also include the creation of novel biodiversity habitats using agricultural techniques (e.g. growing nectar and pollen strips within agriculturally improved grassland and arable habitats, or winter-feeding crops for seed-eating birds). However, it should be borne in mind that species may be in decline due to causes other than habitat loss or degradation (e.g. predation or human persecution) and normally these cannot be dealt with in agri-environment schemes. Therefore complementary conservation actions may need to be taken to ensure that the scheme's objectives are achievable.

Biodiversity successes of both management-based and results-based schemes have often been associated with a scheme that is clearly focused on a single biodiversity result (which of course may contribute to other environmental objectives). A review of the existing results-based payment schemes across Europe indicates that most of them are focussed in this way, although there are some notable exceptions such as the Burren Farming for Conservation Programme (BFCP) in Ireland, which integrates successfully biodiversity, water and cultural heritage objectives. Focussing on a single biodiversity objective may have risks, if changes made to one aspect of a system (for example to support a key species) lead to cascading (and not always beneficial) effects on other components of the ecosystem or landscape.

Details of the biodiversity objectives defined for existing results-based schemes in Europe can be found in the *Supplement to Guidance Handbook: Result indicators used in Europe*.

Before finalising the biodiversity objective of a results-based scheme it is good practice to consider what effects the achievement of this objective might have on other biodiversity objectives for the target ecosystem or area. Often there are benefits for other biodiversity objectives, but it is worth checking for other, unintended (and possibly negative) effects too.

In setting objectives it is important to bear in mind that the reliability of biodiversity outcomes tends to decline as the difference increases between the current and desired condition of habitat or species. This means that an objective of maintaining or improving the condition of an existing habitat can be much more reliably achieved than restoring a degraded habitat or recreating one that has been destroyed (e.g. recreating heathland on an arable field). This is because restoration and recreation depend greatly on chance events (such as the viability of the seed bank and colonisation by key species).

Therefore results-based schemes are unlikely to be suitable where the achievement of biodiversity objectives is uncertain, especially where considerable ecological knowledge is required to react appropriately to events that affect the desired results. This is especially the case where it may take a number of years to achieve the desired result, as few farmers would be willing to wait for a long and indefinite period before being paid. In cases such as this, a flexible management-based approach with a clear link to the specific biodiversity outcome is likely to be more appropriate.

4 Choosing result indicators

Having defined clear biodiversity objectives, the critical next step is to explore whether it is possible to select indicators of the biodiversity objectives that can be easily and reliably used as the contractual basis of payments to farmers. Only if effective indicators can be found is it worth exploring the feasibility of a results-based approach.

4.1 Why are result indicators important?

Using a results-based approach to achieve a biodiversity objective requires a reliable way of defining and measuring success at a farm or landscape scale. Even the most specific biodiversity conservation objectives are usually complex to describe and may take a long time to achieve in full. This means that only rarely can the biodiversity objectives themselves be used as a direct indicator of success at parcel, farm or landscape level. In most cases simplified or indirect results must be chosen as proxies for achievement of the objective. These are termed as indicators of biodiversity objectives, referred to here as **result indicators**.

The ecological success or failure of schemes ultimately rests on the quality of the result indicators. Well-chosen indicators make it more likely that the farmers will be able consistently to achieve the results and more likely that the scheme will achieve its biodiversity objectives.

4.2 Different types of result indicator

Result indicators can be linked to the biodiversity objective in many different ways. The indicators can relate to:

- Ecosystem or habitat attributes, such as:
  - biophysical attributes e.g. bare soil, soil condition, soil moisture;
  - structure e.g. sward height;
  - impacts of management; or
  - composition e.g. species richness or diversity.
- Species indicators, particularly:
  - flagship species, which are themselves a key focus of conservation concern and which can appeal directly to farmers and to the wider public;
  - easily identifiable species whose presence indicates the likely presence of one or more other species that may be difficult to assess directly (e.g. because they are difficult to identify, or are rare) and whose absence indicates the probable lack of that entire set of species;
  - keystone species, which play a fundamental role in the ecosystem, changes in which would lead to major changes in abundance or occurrence of at least one other species;
  - dominant species that provides much of the biomass or number of individuals; and
  - management indicator species, which are sensitive to agricultural management that is desirable or undesirable for achievement of the biodiversity objectives (e.g. relating to water-levels, nectar sources for pollinators, nutrient status, grazing impacts).

Results-based payment schemes in Europe have mostly used plant or animal species as indicators but a few have used other habitat attributes. Indicators can be direct or indirect, simple or composite. Direct indicators measure the objective e.g. if the objective is an increase in the number of Skylarks (*Alauda arvensis*) then Skylarks are counted. An indirect indicator is where an attribute is measured that has a reliable relationship with the objective e.g. if the objective is an increase in the numbers of butterflies, and the abundance of flowering plants is measured. A simple indicator is where only one variable is measured and a composite indicator is where several variables are measured e.g. to encourage wintering wading birds a field should be damp, should have vegetation above a certain height and few negative indicator plant species.

The existing German results-based schemes for species-rich grassland all use compound lists of indicators, containing species representative of several meadow habitats. It has been found that differences in the species composition of plant communities across Germany mean that the different federal regions of Germany require different lists of indicator species. This aspect of indicator definition is important, and these differences must be taken into account, especially where schemes are available to farmers across a large region or whole Member State.

Good practice - grassland result indicators that take account of regional differences in species richness
A standardised botanical survey in all the biogeographic regions of Germany showed that grassland species richness is lowest in the north-west (12 species per 25m^2) and highest in south-west (21 species per 25m^2), whilst in central-east and central-west Germany it is at an average level (17 species per 25m^2). Some species used as indicators in the north would not be suitable as indicators in the south-west, because they are too common. Notably, the yellow flowering *Ranunculus* species were not considered a suitable indicator in Baden-Württemberg in the south-west, as they occur on around 75% of permanent grasslands. They were excluded in Bayern (south-east) because of the danger of confusion with the ruderal *Ranunculus repens*, and in Rheinland-Pfalz (centre-west), whereas the group is used on the indicator lists of Sachsen (centre-east) and Brandenburg (north-east), while Niedersachsen in the north-west uses two *Ranunculus* species as separate indicators. Only a few of the characteristic hay meadow species are common to most (but not all) of the current German indicator lists, such as *Trifolium pratense*, *Chrysanthemum vulgare agg./leucanthemum, Sanguisorba officinali*s and *S.minor*, and *Lotus corniculatus*. There are some more idiosyncratic differences in the indicator lists, for example *Lathyrus pratensis* is excluded as an indicator in Sachsen whereas it is used in Bayern, Thüringen, Niedersachsen and Brandenburg; *Plantago lanceolata* is an indicator in Sachsen and Niedersachsen whereas in Brandenburg it was excluded as being associated with grassland that has been tilled.

One biodiversity objective for which indicator selection is relatively straightforward is the conservation of rare and endangered breeds of livestock. In Italy most schemes use the number of Livestock Units (LU) as a results indicator, and in Germany many schemes use the number of breeding females or males.

4.3 Choosing effective indicators

Results-based schemes require biodiversity indicators that are quantifiable, reliable and ensure biodiversity outcomes, are sufficiently balanced, context-specific and sensitive to the impacts of agricultural practices, yet are transparent, understandable and measurable at reasonable cost for farmers and others. Selecting result indicators requires both ecological and agricultural expertise and must be done with care. A well-chosen results indicator will meet all of the following criteria:

- be representative of the target habitat or species;

- occur consistently in target farmland habitats in the area;
- be easily identified by farmers and paying agency representatives;
- be measurable using a simple methodology;
- be sensitive to changes in agricultural management but otherwise stable;
- be unlikely to be influenced by external factors beyond the control of the land manager; and
- not be achieved easily by means other than agricultural management.

The example below illustrates that the process of selecting a suite of vegetation indicators requires a detailed understanding of the floristic ecology of each type of plant community and the ways in which they respond to different types of management.

Good practice - selecting a suite of result indicators for species-rich meadows in Brandenburg, Germany
Brandenburg, a large federal state in north-eastern Germany, commissioned the Leibniz Centre for Agricultural Landscape Research to develop an indicator list for species rich meadows. The list was developed in two stages:

Stage 1:

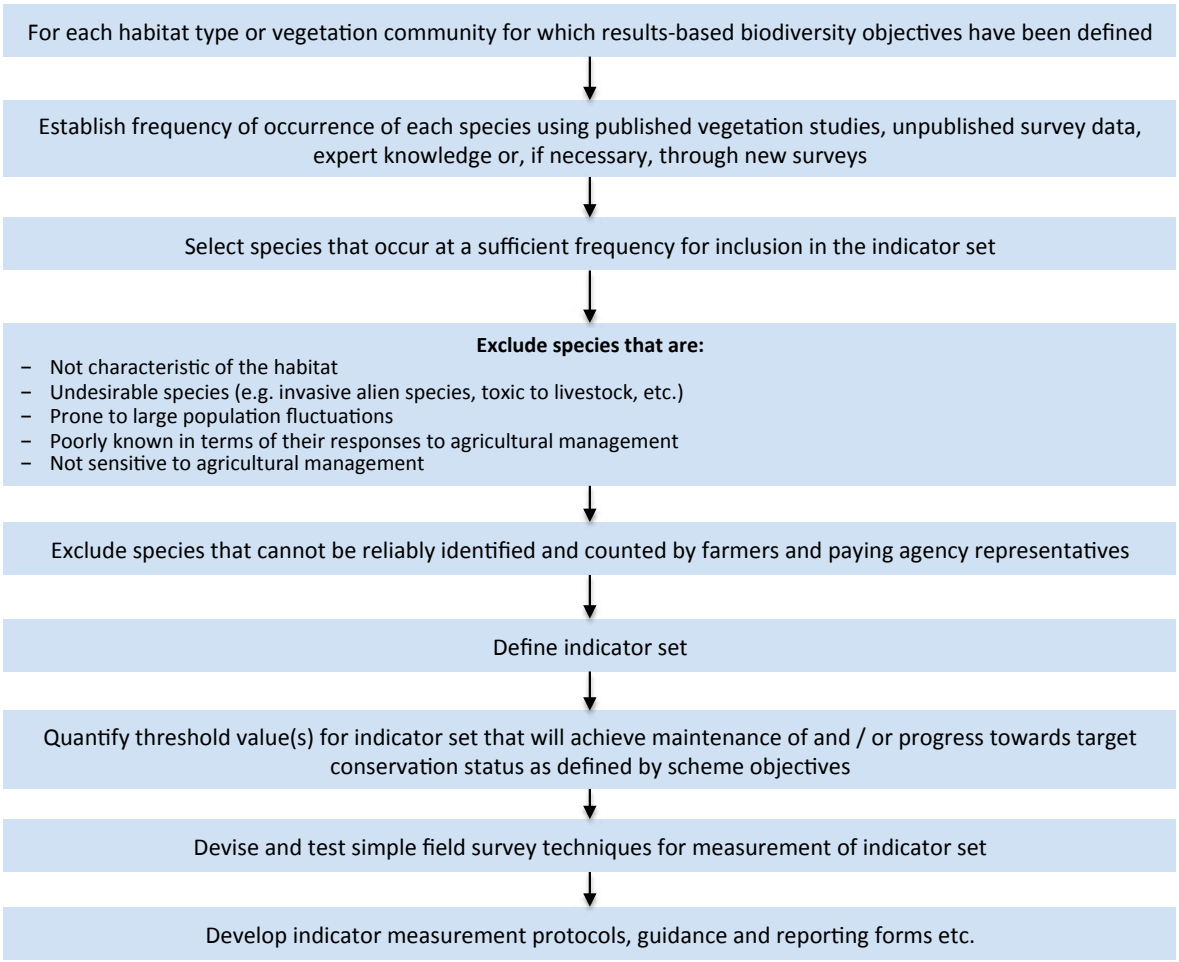
1. A database of existing grassland surveys in Brandenburg was compiled - mainly Habitats Directive Annex I survey data plus some other existing grassland vegetation data (it was not possible to carry out any new surveying). This resulted in a large but heterogeneous data set of 1551 samples with 730 species.
2. The species were grouped according to mean moisture value (dry, mesic, or damp grassland) as the defining environmental characteristic of Brandenburg grasslands (according to the Brandenburg grassland habitat typology). Species records from grassland types with more extreme environmental conditions (very dry or wet) were excluded. It is assumed that these grasslands are maintained only under nature conservation arrangements and not as agriculturally productive grassland.
3. The species list was screened to exclude rare, ubiquitous, highly toxic and ruderal species, including species that indicate nutrient-rich conditions or species that are highly tolerant of cutting, grazing and trampling. Species that occur frequently on abandoned grassland and in tall forb vegetation were removed. Species with higher threat categories on the Brandenburg Red List were not included because they are likely to be too rare to be useful indicators. This resulted in a draft list of 48 species.

Stage 2:

4. The validity of the proposed indicators was tested using targeted vegetation surveys on approximately 120 selected grassland fields outside Natura 2000 areas. This found highly significant correlations between the occurrence of indicator species from the indicator list and overall species richness.
5. Each proposed indicator species was subjected to an aptitude test of how well it was associated with 1) overall species richness, 2) number of plant species indicating extensive use.

The final list of 27 indicators was selected to 1) provide a balanced range of indicators for all moisture levels, and 2) include those with a high suitability weighting as indicators of extensive use. Some species were combined into species groups to facilitate botanical identification. Certain grass species were included, but the difficult to identify sedge (*Carex*) species were included only as two groups (large or small sedges).

The process of selecting vegetation indicators for results-based schemes is summarised in the decision tree below.



4.4 Measuring indicators on the farm

Simple, open, transparent, reliable and unambiguous **methods of indicator measurement** are very important for:

- building confidence in a results-based scheme, especially amongst farmers; and
- ensuring that payments comply with the funding rules whilst keeping the operating costs of these schemes to a reasonable level.

For both these reasons the methods to be used for the assessment of results need to be considered carefully in scheme design. The paying agency must be involved at this stage because it will use this methodology to verify compliance, and it has to be certain that the indicator measurement protocols provide a sound basis for the financial control of the scheme.

The factors involved in choosing good indicators for results-based payment schemes have already been described. **Ease of reliable measurement** is one of the most important factors. This limits the usefulness of many ecological parameters as indicators if measuring them requires specialised techniques and knowledge. Most results-based payment schemes therefore use biophysical characteristics or measures of species occurrence as result indicators.

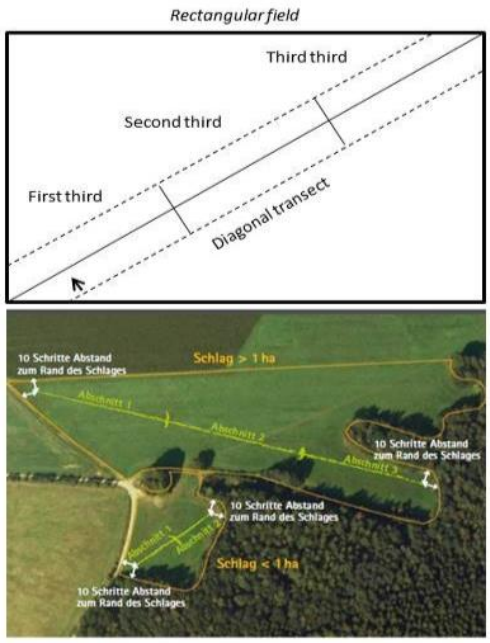
Examples of measurement protocols for result indicators

Schemes aimed at the conservation of animal or bird species tend to use as indicators sightings of the animals themselves or evidence of their breeding activity, such as nest sites, but the indicator measurement methods used will depend largely on the nature of the animal or bird. In the case of the Swedish carnivore scheme the numbers of carnivore offspring is jointly certified by the funding authority and Sami villagers using a very detailed protocol.

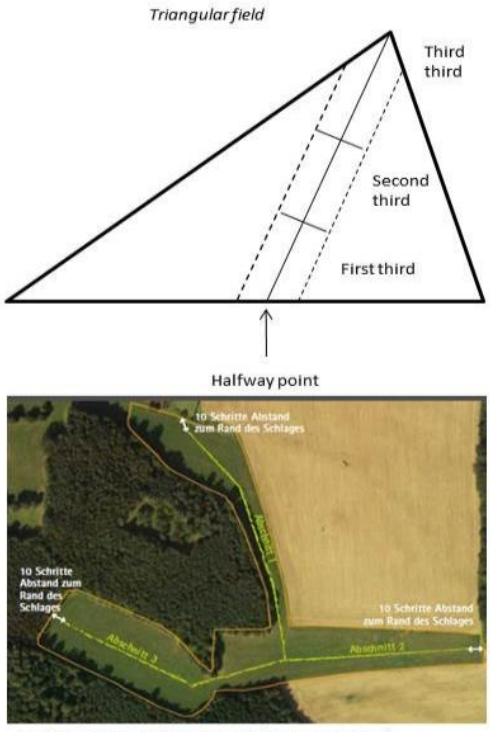
Schemes that use groups of plant species as indicators tend to set the result threshold as a certain number of species (from a longer list) that occur consistently in a given area. The effectiveness of this in biodiversity terms depends both on careful selection of representative indicator species and the threshold set. In Germany many of the grassland schemes set a payment threshold of at least four indicator species from a longer list, based on studies which showed that this is sufficient to ensure a good conservation status of grassland habitats whilst maintaining acceptable agricultural output.

Where the presence of certain species of plants is the indicator, as in most schemes where the objective is to conserve species rich grassland, the key challenge is to define simple but consistent methods for assessing the presence of these indicator plants. Most schemes use some form of field transect, such as a diagonal walk across a field, with presence/absence of species on the indicator list recorded along every segment of the transect. The transect segments are usually around 50 to 100m in length. The field qualifies for payment only if the indicator threshold is achieved on every segment.

As shown below, the transect follows the longest line diagonally or horizontally across the field (or even a slightly curved line), depending on field shape. The presence of indicator species within 2 metres either side of the transect line is recorded for each segment of the transect. For fields less than 1 ha in size the transect is split into two equal segments, and for fields larger than 1 ha it is split into three equal segments. To avoid edge effects, transects exclude areas close to the field boundary A similar monitoring method is used in the French grassland scheme, with different indicator species.



Sachsen, Germany (Freistaat Sachsen LULG, 2014)



Sachsen, Germany (Freistaat Sachsen LULG, 2014)

Several results-based schemes, including those in the Netherlands, Ireland and Germany, use self-assessment, where the annual measurement of result indicators and recording the achievement of thresholds is a contractual responsibility of the farmer. This is seen as having a number of benefits, including building greater involvement in and understanding of the management and its environmental objectives, thereby facilitating adaptive management to achieve the objectives (e.g. adjusting grazing levels in relation to the abundance of the plant indicators). It also allows the managing authority to save costs on verification by removing the need to verify results every year. In the Netherlands the result indicator measurements are verified every three years.

Making sure that contract holders understand the biodiversity objectives of the results-based scheme, and requiring them to measure and report on the result indicators every year is a useful way of engaging farmers in thinking about how their day-to-day management affects biodiversity.

Recognising that many farmers will find the measurement of biological result indicators challenging, some results-based payment schemes use independent assessors to measure indicators and then pass the measurements on to the farmers. In the French grassland scheme the formal measurement of biological results is done by staff of the paying agency, as part of their routine field inspections.

Whether or not farmers are to be given a formal role in the process of measuring result indicators, it is important that they are able to understand the process and have confidence in it. A special effort should be made to ensure this happens.

It is good practice to field test the indicator measurement process with farmers after providing them with the same training and guidance as the formal assessors under the scheme.

More details about the development and use of indicators can be found in the supplement to this Handbook *Result indicators used in Europe*, which presents information, for nine different types of results-based schemes, about:

- the biodiversity objectives;
- the related indicators and thresholds;
- how the indicators were developed and tested;
- how the indicators are measured and verified for payment purposes;
- the advantages and limitations of the indicator; and lists
- the schemes using the indicator, with references to relevant literature.

5 Is a results-based approach is feasible?

Once a decision has been taken that a results-based approach is in principle worth exploring, it is then necessary to consider the principal factors that will determine whether the approach is feasible. The first is to identify the **availability, source and type of funding** and, if this is public funding, to check if the scheme can **comply with funding requirements**. Then the **availability of knowledge, skills and institutional capacity** must be considered, because the requirements are somewhat different from those for management-based schemes. It is important to assess if the expected **response and uptake by the target farmers will** be sufficient to achieve the biodiversity objectives and, if relevant, whether farmers will co-operate with each other to achieve **result indicators that apply at a landscape-scale**.

5.1 Sources of funding

As with all payment schemes, it is important to establish at this stage roughly how much it is likely to cost to design and implement the results-based scheme at the scale needed to achieve the biodiversity objective(s) and to identify potential funding sources.

The EAFRD remains by far the largest source of funding for environmental land management schemes in the EU. It is important to consider at an early stage if a results-based scheme will comply with the rules governing the use of EAFRD funds, set out in the Regulations[5] and in the relevant guidance issued to managing authorities[6]. However, if a results-based agri-environment-climate scheme is to be funded entirely by additional Member State financing (i.e. not co-financed by the EAFRD), it must still be included in the RDP[7].

The legislation makes clear that Member States have the flexibility to use the EAFRD to implement agri-environment-climate schemes on land which is valuable for the environment even if it is not 'agricultural area' for the purpose of CAP direct payments[8]. For example, this could include abandoned agricultural land[9].

Publicly funded results-based payment agri-environment-climate schemes in the EU must be included within the RDP, whether they are co-financed by the EAFRD or funded entirely by the Member State or regional government.

Results-based schemes run under the agri-environment-climate measure of an RDP can normally offer contracts of no more than seven years' duration, which means that the indicators of biodiversity results must be achieved and measured within this timescale. If more time is needed to achieve the expected results, the EAFRD rules allow longer contract

[5] Regulation (EU) No 1305/2013 of 17 December 2013; Commission Implementing Regulation (EU) No 808/2014 of 17 July 2014; and Commission Delegated Regulation (EU) No 807/2014 of 11 March 2014.
[6] European Commission (unpublished, 2014) *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.
[7] Article 82 of Regulation (EU) No 1305/2013 of 17 December 2013.
[8] Article 28(2) of Regulation (EU) No 1305/2013 of 17 December 2013.
[9] Section 4.3 of European Commission (unpublished, 2014) *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.

periods but only when this is justified on environmental grounds. For the types of project that require habitat restoration or recreation, management-based payments and the EAFRD non-productive investment measure may be more appropriate.

If a proposed scheme cannot comply with EU requirements for public funding it might still be feasible to run it using non-governmental funding sources, but this could restrict the scale of operation. For example, several water companies in England and France have reduced their costs of water treatment by helping to fund environmental land management schemes to improve water quality in key catchments. These have additional benefits for biodiversity on farmland in parts of the catchment, for example through rewetting of drained peatland pastures. However, commercial funding is likely to be offered only where the results are expected to bring direct economic or reputational benefits for the company concerned.

5.2 Finding the expertise

Compared to management-based schemes, the design and implementation of a successful results-based payment scheme will usually require a wider set of skills and closer co-ordination of the work of agricultural, ecological and sociological experts. High levels of ecological expertise plus experience of working with farmers are likely to be needed for selecting biodiversity objectives and result indicators, establishing measurement protocols, targeting and evaluating schemes, and training managing authority and paying agency staff, advisers and farmers. For example, ecologists may need to work together with agronomists to develop guidance for farmers. Sociological expertise may be required to understand the dynamics of farming communities, to advise on how a scheme can best be designed to be accepted by farmers and to work with ecologists to ensure that staff working directly with the farmers have the skills to explain the underlying biodiversity objectives of a results-based payment scheme.

Assembling a team with the right set of skills is the key to successful design and implementation of a results-based scheme. This can mean drawing upon expertise and experience that already exists outside the managing authority, particularly for environmental, sociological and communication skills.

Paying agency staff may not have the skills or training to measure biological results and may need considerable support before they can take on this role. Alternatively, this and other tasks may be delegated to trained ecologists. A number of managing authorities have used outside experts for some scheme design and training functions, and also to verify result indicators on farms (the EAFRD Regulations permit paying agencies to contract out elements of the verification process to other bodies with the appropriate expertise[10]).

Successful introduction of a results-based payment scheme is likely to require the provision of up front facilitation for farmers as well as continuing advice, communication and training for farmers and for key intermediaries working with them, such as extension services and private advisers. This requires a wider range of skills and much better understanding of biodiversity than is necessary for management-based schemes, but it is critical for building

[10] Article 33(2) of Commission Implementing Regulation (EU) No 809/2014 of 17 July 2014

the necessary trust, knowledge and understanding between the farmer and the different organisations implementing a results-based scheme.

Where there are gaps in the expertise required a plan needs to be put in place to develop the skills and resources required, for example through training, recruitment or contracting out. This may require increased investment in the short term, which can be justified if the introduction of results-based schemes will be more environmentally cost-effective in the longer term.

5.3 Staff training and development

Managing authorities, paying agencies and advisers are used to delivering management-based agri-environment schemes, but for most of their staff, results-based schemes will be a completely new and unfamiliar approach. It is therefore particularly important to be able to secure the necessary resources for training staff before the scheme is launched. A variety of different techniques may be needed for staff training and development, including written guidance materials as well as face to face training seminars and workshops. It may also be worth giving more intensive training to a network of 'expert users' who can provide continuing, locally based, support to their colleagues.

Staff of the managing authority and the paying agency will need careful training to ensure that they understand:

- the biodiversity objectives and the dynamic relationship between these objectives, the result indicators and the farming system, and the advantages of a results-based approach; and
- how a results-based payment scheme differs from management-based payment schemes with similar objectives, especially the measurement and verification of result indicators and the farmer's freedom to choose the most appropriate farming practices to use.

To deliver results-based schemes successfully the farmers, their advisers, scheme administrators and paying agency inspectors all have to:

- learn a number of new skills (for example, the staff working directly with farmers must be able to build a successful and convincing dialogue with them about the biodiversity objectives and how to achieve these within their farming system); and
- become familiar with new processes, including the measurement of result indicators in the field.

It is vital that investment is made in providing skills development and training for farm advisers working in the target area, to ensure they have sufficient levels of both ecological and agronomic expertise. Continuity of advice provision is highly desirable, because farmers take time to get to know and trust an adviser who will influence the management choices made by the farmer and therefore the achievement of the biodiversity objectives. An example of good practice was shown by the BFCP scheme in Ireland, where a team of farm advisers/consultants underwent an intensive training course on farming for conservation.

Managing authorities must be assured of the capacity and competence of organisations and independent environmental experts to whom they delegate specialist functions such as farm advisory services and measuring result indicators for farmers or on behalf of the paying agency. These 'third party' staff will require training, clear guidance materials, ongoing support and possibly a formal process of certification.

5.4 How will the farming community respond?

The introduction of results-based elements to existing schemes has been welcomed by farmers in Germany and France, who view positively the management flexibility that this gives them, in contrast to problems or frustrations they encountered with previous schemes that were entirely management-based. Several of the results-based schemes reviewed reported that adopting a results-based approach had transformed farmer attitudes to environmental management. Where management for biodiversity was previously seen as an externally imposed constraint on their farming it is now seen as a business opportunity, an additional 'crop' or simply a reward for good work. Many farmers, including those participating in the BFCP in Ireland, say that a results-based approach respects and uses their expertise and gives them greater freedom to farm. A results-based approach may therefore be desirable where negative attitudes to environmental management have been found to be an obstacle to effective action.

One of the main concerns that farmers have about the results-based approach is the risk that the result will not be achievable. If the result indicators are well chosen this risk should be very low. If a results-based approach is subject to a high degree of uncertainty, especially as a consequence of factors beyond the farmer's control, it is unlikely to be feasible.

Successful results-based payment schemes require a considerable level of mutual trust between the parties involved, particularly the managing authority and the potential contract holders and their representatives. The non-prescriptive nature of the contract and the need for farmers to have confidence that the results will be judged in ways that are fair and objective means that trust is particularly important for results-based payment schemes.

For a results-based payment scheme to achieve its biodiversity objectives it is important to gain the trust and active support of the farming community from the outset, and to maintain and develop this throughout the life of the scheme. Effective two-way communication and the provision of farmer training are key to achieving this.

Culture and history can influence both individual and institutional behaviour, and the levels of trust between farmers and managing authorities vary considerably across Europe. In some places a far greater degree of support may be needed to enable both farmers and authorities to feel comfortable with the division of responsibility that characterises results-based schemes. Offering a nationally or regionally balanced mix of results-based and management-based schemes may also help to overcome cultural differences.

5.5 Farm or landscape scale?

Some biodiversity objectives may not be achievable without landscape scale action. The conservation of large carnivores and raptors are two obvious cases where large tracts of habitat are required to support viable populations, but these are not the only examples. In

many parts of the EU, habitats are now so fragmented that many other species of mammals, birds, reptiles, amphibians, invertebrates and plants occur in small, isolated populations, which are at risk of chance events such as disease, fire and predation. A results-based approach to farmland habitat management at a landscape scale could help to reduce the isolation of these fragments, allow re-colonisation and the re-establishment of viable populations.

Where the biodiversity objective of a results-based approach is to conserve populations of highly mobile or migratory species, success is likely to depend on the cooperative efforts of many farmers over a wide area. In the case of the Golden Eagle (*Aquila chrysaetos*) in Finland or the Swedish Lynx (*Lynx lynx*) and Wolverine (*Gulo gulo*), the results-based schemes apply at a scale large enough to match the range of these predators. In the Netherlands it was found that the migratory birds appear to select more or less the same spots for breeding every year. In other circumstances, where it is not appropriate to base the results-based approach on the presence of the species itself, it may still be possible to base it on the successful creation and management of key habitats for the species on farms in close proximity.

Results-based schemes at landscape scale

The Swedish carnivore scheme, the Finnish Golden Eagle Scheme and the Meadow Birds Scheme in the Netherlands are all designed to ensure landscape-scale action. Both the Finnish Golden Eagle Scheme and the Swedish carnivore scheme work through the participation of the Sami reindeer herding communities. The Meadow Birds scheme in the Netherlands was only open to farmer cooperatives and the minimum area that could be entered was 100 ha. From 2016, the Dutch government plan to introduce a new scheme for all farmland biodiversity payments that will be available only to cooperatives, not to individual farmers.

In the *Vernetzungsprojekte* (ecological networking projects) in Switzerland, if specified proportions of particular habitat types are maintained in good quality within a defined landscape area the farmers can qualify for a 'top-up' *Vernetzungsbeitrag* payment, which is additional to other habitat management payments.

6 Designing a results-based scheme

6.1 Securing stakeholder support

Giving stakeholders the opportunity of a meaningful level of engagement in scheme design and development is a particularly important part of setting up an effective results-based scheme. This allows questions and concerns to be discussed and resolved at an early stage, before uncertainty and lack of information leads to suspicion and negative opinions about the scheme ahead of its launch. A well-chosen stakeholder group will provide the managing authority with a range of different perspectives and experiences to be taken into account, and participation in the work of the group helps to build and retain joint 'ownership' of the scheme. Systems of stakeholder engagement may need to be adjusted to the different institutional and cultural contexts across Europe, but experience has shown that effective stakeholder engagement is critical to the success of results-based schemes.

Skilled leadership is needed to keep the biodiversity objectives on track whilst being sufficiently flexible to making good use of local knowledge about farming systems and biodiversity. There are two risks to be guarded against:

- it is essential that schemes remain based on good evidence and that pressures are resisted to adopt a scheme design that is popular with farmers but unlikely to be environmentally effective; and
- it is important to keep sight of the issues of cost and simplicity of operation when considering whether to adopt suggestions for very detailed ecological refinements.

Involving a suitably broad range of stakeholders is in itself a considerable safeguard against these two dangers.

Effective use of a broad-based stakeholder group to provide advice and act as a 'sounding board' can both improve the design of a results-based payment scheme and provide the managing authority with influential support among both farmers and conservationists when the scheme is launched.

6.2 Targeting for environmental cost-effectiveness

The process of targeting is simplified because most results-based schemes have a clear focus on achieving a biodiversity objective for specific habitats, species and locations, whether these are in Natura sites, on other HNV farmland or within improved and intensively managed farmland in the wider environment. In addition, applicants are largely self-selecting depending on whether they think they have the potential to achieve the required result on their land. This means that a well-designed results-based scheme can be targeted very cost-effectively, with little risk of funds being spent in locations where the scheme would have no potential benefit. Such targeting requires good up-to-date data on the distribution of the targeted species and habitats, but the cost of obtaining such data is often small compared to the costs of applying the measure, and a carefully targeted approach can result in considerable net savings. Member States are encouraged to use a more targeted approach for their 2014-20 agri-environment-climate programmes and, where there are

particular important environmental benefits in certain areas, to give preferential access to the and managers most likely to provide these benefits[11].

If the biodiversity objectives of a scheme require landscape-scale action this may involve individual farmers working together in a coordinated way to achieve the results, or simply require a high level of uptake within a given area. Landscape scale targeting may simply involve restricting scheme entry to communities or farmer cooperatives that manage sufficient land across the required geographical area, as in Sweden and the Netherlands. In Switzerland, individual farmers can claim an additional payment if their independent actions have a collective effect of maintaining enough key habitats in the landscape to support stable populations of particular species.

Where farmers are unable, or unwilling, to enter a scheme as part of a cooperative, there are several other ways of targeting schemes at landscape scale and which avoid putting farmers in the position where they are committed to achieving a result that depends in large part on the actions of others. Group applications for agri-environment-climate schemes provide a useful mechanism to share the risks, rewards and management effort across a group of farmers, and for the 2014-20 period schemes are eligible for a higher rate of transaction costs, up to 30 per cent. Member States are encouraged to use the agri-environment-climate measure to support group applications and the guidance to managing authorities emphasises the important role that these can play in achieving environmental objectives. Groups can be made up of farmers, other land managers or a mixture of the two, and do not have to have joint legal status, they can be formed on a more '*ad hoc*' basis[12]. It is also worth noting that the guidance for on-the-spot control checks by paying agencies explains how these can be simplified for group contracts[13].

6.3 Relationship with management-based schemes

Results-based schemes focussed on particular biodiversity objectives in a closely defined geographical area, may operate in parallel with management-based schemes that have a broader environmental and geographical focus. The two types of schemes may be mutually exclusive, so that a parcel of land receiving payment under the results-based payment scheme becomes ineligible for any management-based scheme. An alternative is to make the two complementary, with a targeted results-based scheme aimed at more demanding biodiversity objectives available on the same land as a basic, less-demanding and widely available management-based scheme. This is similar to many of the results-based, meadow/grassland schemes used in Germany, France, Austria and Switzerland where the management-based scheme has very basic requirements on restricting fertiliser use and cutting the grass, and the results-based scheme pays for flowering species-rich meadows.

[11] Sections 4.1 and 8.1 of European Commission (unpublished, 2014) *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels

[12] Section 4.2.1 of DG AGRI *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.

[13] Section 5.2.9 of the (draft) Guidance document on control and penalty rules in rural development: version January 2015. (European Commission, Directorate-General for Agriculture and Rural Development)

Other combinations are also possible, for example a management-based payment to maintain low livestock density on the whole farm could support a results-based scheme for grassland birds within an extensive HNV livestock system.

Both approaches have advantages – simplicity in the case of mutually exclusive schemes, while the complementary schemes give the farmer the option to build up a package of payments that reward more demanding biodiversity outcomes but also provide some security of income from basic environmental management.

There are several factors to consider in deciding on the relationship between the two types of scheme. At a policy level, the objectives of different schemes should be consistent and not give conflicting messages to farmers about the priorities for a particular locality. CAP rules on avoidance of double funding[14] must be respected and the differences in the contractual requirements of the two types of scheme must be clear to the farmers, paying agency inspectors and auditors. At a scheme level it is important to assess the options from the viewpoint of the target farmers for the results-based scheme. If they perceive that a less demanding management-based scheme is more attractive in terms of effort, payment and avoidance of risks, there may be few takers for the results-based scheme.

The aim of a complementary model must be to design combinations where the management-based scheme underpins the results-based scheme, not competes with it on price. To be successful this requires very careful consideration of the balance of management effort (and hence payment rates) between the two schemes, how this balance will be perceived by the farmer in the context of potential income to the farm business as a whole and the level of risk.

One side-effect of the strengthened requirements for verification of RDP agri-environment-climate and other payments in the 2014-20 RDPs is that some existing management-based schemes may have to be modified, by altering or removing 'difficult to verify' management actions (for example, specific grazing regimes or levels of fertiliser application)[15]. Where this has the effect of simplifying existing management-based schemes targeted at specific biodiversity objectives it may be desirable to replace these with a combination of a simple management-based scheme and a targeted results-based scheme.

Where complementary results-based and management-based payments apply to the same parcel of land it is recommended to use two separate agri-environment-climate contracts. This is because the contractual differences between the two approaches make it extremely difficult for paying agencies to control both management-based and results-based payments within a single contract, under the requirements for verification of 2014-20 RDP payments.

[14] Double funding occurs if two different environmental payments relate to exactly the same requirements on a particular parcel of land.

[15] Section 4.5.2 of DG AGRI *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.

The decision on whether to link a targeted results-based scheme with a separate and less-demanding management-based scheme will be informed by the answers to the following five questions:

- **Do suitable result indicators exist for all of the biodiversity objectives in an area, or only for some of them?** Where there are several different biodiversity objectives that need to be pursued in parallel, the availability of suitable indicators for some objectives but not others could mean retaining some management-based payments.
- **Are basic management prescriptions required?** Results-based payment schemes dispense with contractual management requirements. The flexibility this offers to adapt land management to biodiversity objectives is one of the attractions of results-based payments for both farmers and managing authorities. However, it may be known that certain basic land management practices are always associated with achieving the desired biodiversity objective, either underpinning more targeted management or conversely preventing or conflicting with it. It may be necessary or desirable to retain a basic management-based scheme to make sure that beneficial basic management is in place. Alternatively, the guidance accompanying a results-based scheme can explain clearly to farmers that poor basic management will reduce the success of their contract.
- **What level of risk and issues of uncertainty exist in relation to achieving results?** A results-based scheme that farmers perceive as risky (for example, if habitat improvement requires the use of unfamiliar farming practices) may be more attractive if they know that it is linked to a separate basic level management-based scheme which they are confident they can achieve.
- **How far towards a results-based scheme are stakeholders willing to go?** Farmers who have not had previous experience of results-based payment schemes may be more comfortable starting with a results-based scheme that is additional to a management-based basic scheme. Environmental stakeholders may be concerned if all restrictions on management are withdrawn.
- **Would a combination of results-based and management-based schemes be too complex?** Offering only a results-based scheme eliminates the risk of farmers or field inspectors confusing the two types of contractual requirements.

In a results-based scheme under EAFRD rules, guidance on habitat or species management should not be part of the legal agri-environment-climate contract, to make it clear that there are no contractual requirements for specific management and hence no need for management actions to be verified and subject to payment controls.

6.4 A pilot scheme or full implementation?

Piloting a results-based scheme can be a useful way of engaging farmers and stakeholders, demonstrating what is feasible and allaying their understandable concerns. Evidence suggests that farmers' attitudes to results-based payment schemes are more positive once they have had experience of them. A pilot scheme provides an opportunity to test the details of scheme design and implementation before full implementation.

Designing a pilot scheme involves addressing all the tasks involved in delivering a full scheme, then 'live' testing the implementation on farms that are representative of the areas

it is intended to cover. Because pilot schemes are comparatively small they can be more intensively monitored and provide detailed feedback on all aspects of the scheme.

If it is decided to run a pilot first, before launching the full scheme, this will require additional time. However it will often prove to be worthwhile in terms of the effectiveness and acceptability of the results-based scheme when it is implemented more widely. Developing pilot schemes is also a good way of developing greater staff expertise over time, using the available experts to train others in the required skills.

Experience suggests that a one year pilot is sufficient to test scheme operation and farmers' reaction. If time and/or resources do not allow for an operational pilot, a simulated pilot (where key aspects of the results-based approach are tested with a group of farmers and/or staff implementing the scheme) can still produce valuable feedback. In addition, the first year of full implementation could be evaluated to allow swift implementation of necessary changes.

It is good practice to pilot a results-based payment scheme wherever possible. The long-term benefit of more effective implementation outweighs the delay in introducing a full-scale scheme.

When scaling up from a pilot to full implementation it is important that the level of farmer support provided in the pilot is replicated in the main scheme. There may be more pressure to economise on support costs for a large-scale scheme than for a pilot but this could prejudice its effectiveness. This is an important factor to guard against.

6.5 Monitoring and evaluating the achievement of scheme objectives

Monitoring and evaluation is particularly important for results-based schemes, which are already being carefully scrutinised by policy makers. If a results-based approach is to be used more widely, managing authorities will be looking for robust evaluation evidence of the successful implementation and cost-effectiveness of results-based schemes for biodiversity.

If the evaluation methodology is supported by a broad range of stakeholders and allocated sufficient funding there will be less risk of disagreement later about the effectiveness of the results-based scheme.

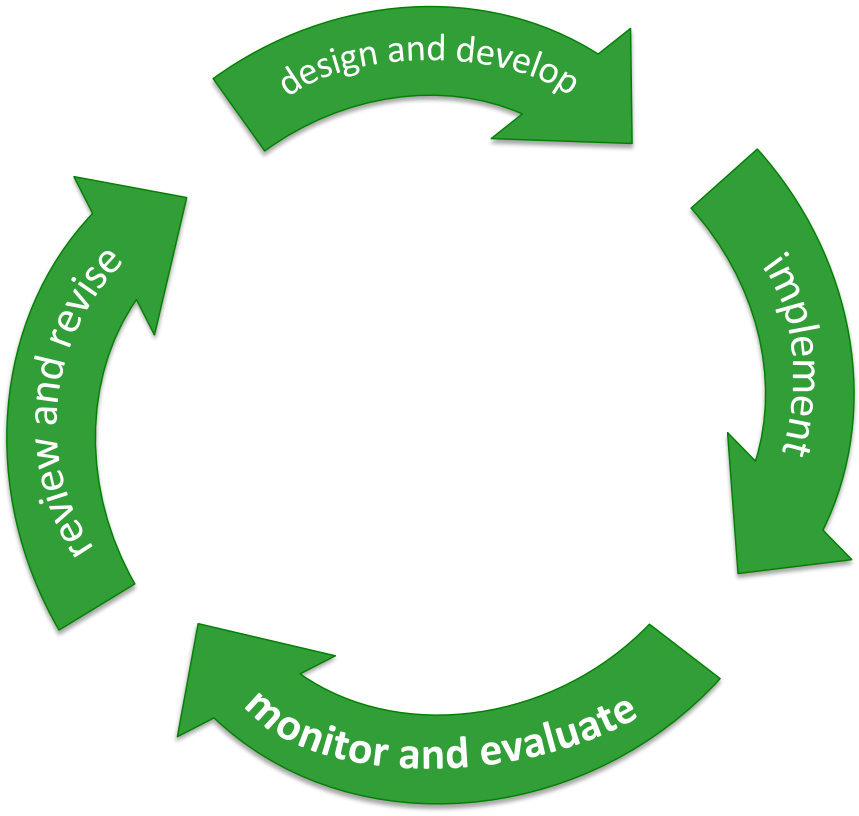
It is therefore very important that schemes are subject to review and evaluation and that the need for revisions is acted upon promptly. Evaluation needs a baseline assessment and takes some time to complete, which means that the review process must start as soon as the scheme is launched.

It is vital that results-based scheme evaluation considers whether the biodiversity objectives have been achieved, not just the result indicators. For example, in the Netherlands it was found that some results-based schemes were not achieving their objective of increasing the density and populations of meadow birds despite an observed increase in the number of nests (the results indicator). In this case, other factors, including chick survival seem to be critical to maintaining populations.

Results-based schemes may also have other important objectives, such as changing farmer attitudes to biodiversity. These can be monitored through focus group discussions, stakeholder meetings, and interviews with a range of farmers and stakeholders.

A consensus emerged from a recent conference on results-based payment schemes[16] that collecting evidence of the longer-term impacts of results-based scheme on their underlying biodiversity objectives should be a high priority, to enable like-for-like comparison of results-based and management-based approaches.

Planning for monitoring and evaluation of the environmental and socio-economic impacts of any agri-environment scheme should be started at a very early stage in the design process, to make sure that there are systems in place to collect the information needed (especially baseline data at the start of the scheme, which can easily be overlooked).



[16] Results-based Agri-environment Schemes: Payments for biodiversity achievements in agriculture. Conference held in Brussels, 23 -24 September 2014

7 How to pay for biodiversity results

7.1 Verifying results

This guidance is based on the assumption that most results-based payments for biodiversity will operate within the RDP whether or not they are co-financed by the EAFRD. If other sources of public funding are used or if results-based payments are privately funded, then different rules may apply.

Payment verification and control of results-based scheme **is completely different** from that for management-based schemes.

The legal requirements for verification by paying agencies have been strengthened for the 2014-20 RDPs, with the aim of reducing the frequency of compliance errors in agri-environment-climate contracts. For schemes run under EAFRD rules for 2014-20 the basic principle is that:

- for management-based schemes the payment controls verify that the management actions which are specified in the contract have been carried out;
- for results-based schemes the payment controls verify that the result indicators have been achieved, using the indicator measurement protocols specified in the contract.

The guidance to Member States on the use of the agri-environment-climate measure makes clear that **the monitoring and control checks for results-based payment schemes '*should concern delivery of the expected results and not the practices undertaken by the beneficiary to achieve these results*'** (our emphasis)[17].

This strong steer, in the case of results-based payments, towards controls based only on results, reflects the difficulties underlined by the European Court of Auditors[18] in the verification of widely used commitments in many management-based schemes (these include fertiliser application rates and grazing regimes). The underlying rationale is that biodiversity results will be easier to verify than compliance with management requirements.

In a results-based scheme the methodology for measuring the result indicators must be described clearly within the legal agri-environment-climate contract, to enable verification by farmers and control agencies, using the same methods.

The ability to verify results is therefore a major factor in selecting result indicators, designing measurement protocols and setting payment thresholds. Paying agencies will prefer result indicators that are stable over a reasonable time period that fits in with the timescale of other field inspections to control CAP payments.

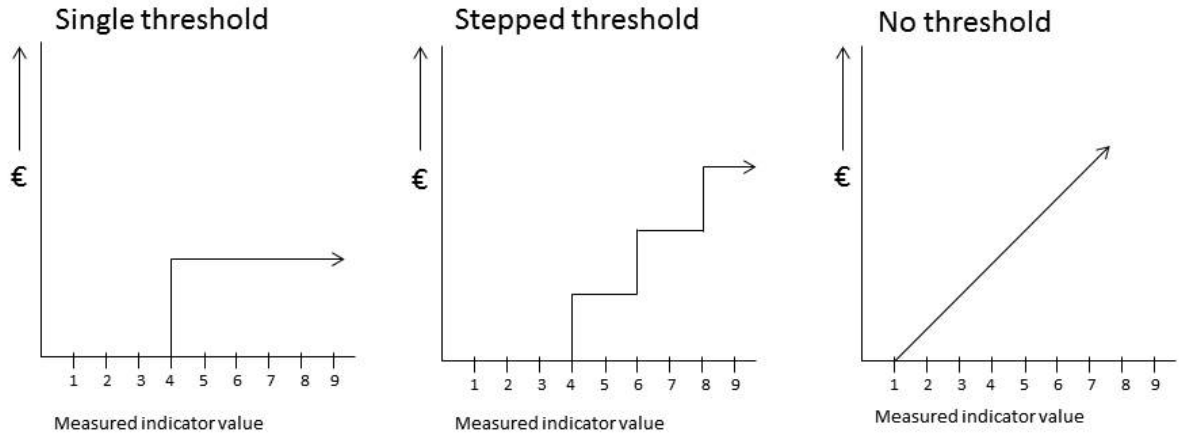
[17] Section 4.5.2 of DG AGRI *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.
[18] European Court of Auditors (2011) Is agri-environment support well designed and managed? Special Report No 7/2011.

7.2 Setting indicator thresholds

A key question for effective scheme design is where to set **the threshold indicator value** for payment. Is there an optimum indicator score reflecting the biodiversity objective, or is more always better? This is sometimes known as 'tuning' the scheme.

For schemes to be implemented on species-rich grassland, where **groups of plant species are the indicator of habitat quality**, concern has been expressed that if the indicator threshold is set too low (in a scheme with a single threshold), there is a risk that the farmers could allow high quality habitats to deteriorate without losing payment. This illustrates that, even in a scheme tightly focused on particular types of grassland, it is inherently difficult to 'tune' a single threshold to avoid deterioration of the best grassland habitats, whilst at the same time ensuring that the threshold is achievable for the majority of farmers. This problem can be overcome by using more than one threshold, in a series of steps reflecting better quality habitat as illustrated below.

This approach is used in the new scheme being planned for Sachsen in Germany, which will have stepped indicators and payment rates, designed to reward higher quality habitat management. Farmers are encouraged to move up to a more demanding indicator level during their contract (but will be penalised if they move down). In some cases additional precautions may be necessary to avoid the risk of deterioration in areas of habitat already in good conservation status, because the indicator threshold is inappropriately low. For example, this could mean using higher thresholds or a different suite of indicator species for Natura 2000 grasslands habitats.



Proposed use of stepped indicator thresholds in Sachsen, Germany

The new results-based grassland scheme is designed to prevent species rich meadows deteriorating and to incentivise improvements in habitat condition. It is proposed to use three results indicator thresholds – the presence of 4, 6 or 8 indicator species – with correspondingly higher payment rates. It is estimated that around 75 to 85 per cent of permanent grassland currently in agri-environment contracts will qualify for the new scheme by having at least 4 indicator species, but only very few areas of high quality habitat will qualify at the 8 indicator species level. Contract holders will not be able to move down the indicator steps during their contract (i.e. those dropping from 8 indicator species to 6 or from 6 to 4, will be penalised), but they are encouraged to manage their meadows with the aim of moving up the indicator steps during their contract and thus qualify for the higher payment.

Where **animals are the indicator** the payment rate are usually linked directly to the number of animals present and no thresholds are necessary as the total payment increases linearly in proportion to the total indicator score.

If schemes are successful in achieving their objective of increasing animal populations some limits may be required. The Swedish Government, for example, has target population figures for the species that the Swedish carnivore scheme is intended to conserve. In contrast to this, results-based schemes for migratory birds in the Netherlands set no target ceiling for the population but there are examples of payments per bird being capped or reduced in years when numbers of birds are high.

7.3 Calculating the payment

Payment calculations for results-based schemes are made in **exactly the same way as for comparable management-based schemes**, but for results-based schemes the calculation is based on the income foregone and additional costs incurred in implementing **the typical farming practices required to achieve the result indicators.** The managing authority should also provide supporting evidence that these practices can indeed be expected to lead to the desired result[19]. The legal basis for calculating results-based agri-environment payments on farmland in the 2014-20 RDPs is summarised below.

Legal basis for results-based agri-environment-climate payments under the EAFRD

The rules governing how payments to beneficiaries must be calculated are set out in the EAFRD Regulations[20]. Current guidance from DG Agriculture to Member States is that '*premiums for result-oriented commitments should be based on the additional costs incurred and income foregone as a result of the farming practices which are in general necessary to achieve the results expected from these commitments.*'[21] This is the approach that has been taken by most of the results-based schemes already implemented in the EU.

Additionally the farmers' transaction costs may be covered where justified, up to 20% of the calculated premium (30% for group applications).

There is a requirement for all agri-environment-climate payments from 2015 to avoid double funding with the greening component of CAP direct payments, but it is important to note that any greening reduction of an agri-environment-climate payment does not apply to beneficiaries who are not entitled to CAP direct payments (or those who claim under the Small Farmers Scheme).

There are broadly three types of cost to be considered for this calculation:

- the **opportunity cost of maintaining current management where this already provides the biodiversity results** and there is a demonstrable risk of the management being changed in the area concerned during the next five to seven years (e.g. through abandonment of remote pastures, cessation of livestock farming to take up alternative rural employment, changing from low-intensity production of hay on species-rich meadows to intensive grassland management for fodder or biogas, with fertiliser and multiple cuts per year), or the land use changed (e.g. by afforestation). Opportunity cost is calculated by comparing the income offered by the alternative land management with the income provided by the ongoing

[19] Section 4.5.2.4 of DG AGRI *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.
[20] Article 28(6) of Regulation (EU) No 1305/2013.
[21] Section 4.5.2 of DG AGRI *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.

beneficial management. The guidance to managing authorities on the use of opportunity costs makes clear that 'in exceptional cases when nature conservation objectives are at stake, the costs calculation - based on the opportunity cost concept - could include the total costs (and value) of the production linked to the farming practices which are at risk of being abandoned. However, such cases must be based on very solid evidence demonstrating the risk of the total abandonment of the environmentally sound farming activities necessary for nature conservation[22]'; this could be particularly important where there is risk is of agricultural abandonment or intensification;

- the **income foregone** by modifying management (e.g. reducing fertiliser levels or stocking rates) that reduces the agricultural production from the land; and
- the **additional cost** of specific biodiversity management (extra shepherding, moving temporary fencing to control grazing, cutting different parts of the parcel at different times or to different sward heights).

Results-based schemes generally have higher **transaction costs** than management-based schemes, reflecting the additional responsibility of achieving biodiversity results (rather than simply implementing prescribed management). Using the option of adding transaction costs to the payment calculation for results-based schemes is an acknowledgement of this additional responsibility and can also help to make a results-based scheme more attractive to farmers. The legislation allows a managing authority to add transaction costs to the payment calculation, up to an extra 20 per cent for schemes open to individuals, and 30 per cent for group schemes. These costs have, of course, to be justifiable but it has been indicated that it is *not* necessary for managing authorities to provide a detailed calculation of the transaction costs, as it is for the main payment calculation. For transaction costs it should be sufficient to provide an explanation of the *types of* transaction costs to be covered and the *percentage* to be applied[23].

Transaction costs typically cover the time and effort of the contract holder in activities essential to fulfilling the contract but which are not covered by the main payment calculation. These activities can include, for example:

- attending information and advisory meetings for contract holders, meeting advisers on the farm, and talking to helpline staff;
- reading advisory publications and online information;
- learning to use the techniques for measuring result indicators;
- checking weather, vegetation growth, grazing pressure and other information needed to make the day to day farm management decisions that will determine whether or not the result indicator is achieved; and
- measuring the result indicator each year (in self-assessment schemes).

[22] Section 4.7.5 of DG AGRI *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.
[23] Section 4.7.4 of DG AGRI *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.

The form of the payment depends on the type of results-based scheme. Results-based payments for *habitats* are normally area-based, in the form of € per hectare (e.g. of species–rich grassland) where the threshold value of indicator species has been checked by a standard measurement protocol. If stepped thresholds are used the payment calculations will take into account the higher costs associated with the increased species-richness of the grassland. Higher species-richness tends to be reflected in lower agricultural productivity (in terms of total forage and energy content) because the soil fertility management and grazing/mowing regimes favour native flowering plants rather than agriculturally improved grasses.

Where the results-based payments are for *species* (for example breeding migratory birds, carnivores or raptors) payment will be in the form of € per each occurrence of the result indicator (e.g. if there is just one nest or breeding pair of the target species the payment will be € y but if there are five it will be € 5y). The payment calculation is made on the basis of the management and costs associated with achieving the indicator (for example the loss of young livestock taken by each pair of Golden Eagles or the area of farmland that has to be left undisturbed to protect each nest site).

When a results-based scheme is submitted for European Commission approval in the RDP, it is essential to label the scheme clearly as results-based, and to describe the results. The managing authority should also inform paying agency control staff and provide information for auditors to make clear which agri-environment-climate schemes are results-based and which are management-based. This avoids the risk of confusion and using the wrong verification methodologies.

7.4 Administrative systems and data

Administrative systems for results-based schemes may be integrated with (or linked to) systems for management-based schemes but there are some very important issues to be considered at the design stage, because the data system **must** be able to:

- distinguish results-based payments from management-based payments, because they not only have quite different contract requirements and verification methods, but there will also be differences in the information, advice and training for staff and farmers and in scheme evaluation;
- identify the contract holders and land parcels where results-based and management-based contracts overlap (this may require access to LPIS and IACS databases); and
- communicate this information very clearly to the paying agency, so that farm inspectors use the appropriate verification protocols for the two different types of contracts.

Other issues to consider specifically for results-based payments include:

- how to record indicator measurements made by the farmers themselves or by recognised environmental experts;
- designing indicator record forms for farmers and field inspectors and providing both with clear instructions on how to measure the indicators; and

- striking the right balance between the functions performed by computers and by human beings, especially at the start of a new and unfamiliar scheme, when the farmers will want to be able to talk to someone with the expertise to answer their specific questions.

Although the data system is part of the results-based scheme design process, the system itself cannot be fully set up until all the details concerning the operation, monitoring and evaluation of the scheme, have been agreed and tested (perhaps in a pilot scheme). Sufficient time should then be allowed for finalisation, user acceptance testing, fixing problems, training staff in its use and system roll-out.

8 Implementation

Implementation of any new scheme is preceded by user-testing and finalising operational procedures, IT systems, information materials and advisory support for farmers, and collection of baseline data (including biological data for evaluation). Two elements are of particular importance for results-based schemes:

- clear guidance for operators and administrators, regularly and consistently updated and accompanied by staff training is an essential component of a successful scheme; and
- a robust system of dispute resolution, seen to be fair to both sides, which is an important part of building farmers' confidence in results-based payment schemes. For example, in the BFCP, farmers are not only given training in the indicator measurement procedures used to determine payment levels but are also encouraged to challenge the scores given by the independent assessors.

It is good practice to continue consulting regularly an informal stakeholder advisory group of staff, farmers and environmental experts who are actively involved in the implementation of the scheme. This helps to identify and address problems quickly, to minimise adverse reaction and ensure delivery of biodiversity results.

8.1 Resource requirements

Few empirical studies have attempted to assess the cost-effectiveness of results-based payment schemes, but the schemes that have been reviewed seem to support the theoretical argument that a well-designed results-based scheme is cost-effective because the payments to farmers 'follow the biodiversity outcome' and are not wasted on management of farmland that cannot achieve the biodiversity objectives. In some cases results-based payment schemes are seen as a way to save money as well as being more cost-effective. This was so in Finland, where a results-based payment for the number of Golden Eagle nests was found to be much easier and cheaper than compensating farmers for the young livestock that the Eagles killed.

Management-based schemes have existed for 25 years or more in some Member States and although there is no doubt that these can be designed more simply and run with lower levels of farmer and staff support than is required for results-based schemes, experience shows that the environmental outcomes from simpler schemes may sometimes be disappointing.

Achieving biodiversity outcomes in a cost-effective way through results-based schemes requires a broad range of expertise, scientific understanding and well-trained staff who can communicate the objectives of the results-based approach to farmers effectively and provide them with detailed advice and support. This Handbook has described and illustrated how these resources are used in results-based schemes and the investment required should not be underestimated. However, it should be recognised that, although a greater proportion of the scheme budget may be allocated to staff resources, the total budget for a results-based scheme may be smaller than for a comparable management-based scheme with the same biodiversity objectives.

8.2 Budget management

The data needed to model the expenditure profile over the life of a results-based payment scheme will depend on the structure and type of the result indicators and thresholds used. There may also be greater uncertainty about how many participant farmers will be eligible for payment than there would be in a management-based scheme. Where payment is linked to the achievement of one or more indicator thresholds, it will be important to have data on the percentage of farmers likely to achieve each of the thresholds, initially and over the life of the scheme. Where payment is linked to a continuously variable parameter, such as the number of birds or predators, data will be needed on the expected breeding performance and how this is likely to change with time. If results-based schemes over-achieve the expected results and additional funding is not available, ways of limiting 'demand' to match the budget may have to be considered (e.g. capping payments per farm or raising indicator thresholds). However, these must be used very cautiously and only after discussion with the stakeholder advisory group, to avoid the risk of damaging the farmers' trust in the scheme or the biodiversity outcomes.

For schemes financed under the EAFRD, the legislation requires expenditure to be profiled in advance over the whole period of an RDP[24]. Uncertainty over what proportion of farmers will achieve indicator thresholds and when they will do so may make this task more complex for results-based schemes, but conversely the setting of scheme targets may be considerably simpler, since this will have already been a central part of scheme design.

When a results-based payment scheme is being introduced for the first time, it will be difficult to obtain the data necessary to model the expenditure profile and hence set a budget. If the scheme is based on research or controlled trials, these may be a useful source of data, but the results achieved under these conditions do not always reflect those achieved on commercial farms. Similar schemes operated in other countries or regions may be another useful source of data, but there are likely to be location-specific variables that mean data obtained in this way would need to be used with caution. The ideal way of gathering the data needed to construct a financial profile would be to run a pilot scheme of sufficient size and for a sufficient period of time to gather the necessary data under operational conditions.

8.3 Publicity

Publicity is an important part of scheme implementation and includes launch events, awareness raising workshops, use of social media, press releases and other forms of publicity. Although farmers will be influenced by what their neighbours say and do about a scheme, it is important to get key messages across to them at first hand.

If at all possible, farmers and farmer organisations should be seen to fully support the scheme and participate in the scheme publicity, because they are a trusted source of information for other farmers.

[24] Article 8(5)(h) of Regulation (EU) No 1305/2013.

Formal launch events, both local and national, are useful for raising awareness, but must be followed up with opportunities for farmers to explore issues and ask questions in a more in-depth and interactive fashion.

One of the most interesting examples of highly effective publicity are the competitions in, German and, France that reward farmers for managing their hay meadows and pastures to produce both high levels of species diversity and useful fodder. These competitions have been well received by participating farmers, who appreciate the attention paid to their grasslands, and have increased local interest in the scheme not just from other farmers, but also from a wide range of institutions including Chambers of Agriculture, environmental NGOs, research bodies, ministries and public agencies.

8.4 Training and support for farmers

It is vital that farmers fully understand the rules of the scheme, the results on which payments are to be based and the broader environmental objectives of the scheme. It is also important that they feel ownership of and commitment to their contracts.

Experience across all types of environmental management schemes has been that, whilst written guidance is essential, it is not enough on its own. Both contract holders and those operating the scheme will benefit from training events to raise their awareness of what is in the guidance and from opportunities to raise questions and test their understanding of the guidance.

Results-based advice and training for farmers
Advice and training for results-based schemes should focus on:

- explaining the rationale of the scheme;
- explaining the biodiversity objectives and the reason for using result indicators;
- identifying the result indicator species on the farm;
- advice on types of management that will help to achieve the intended results;
- the importance of timing of particular actions for optimum impacts for biodiversity;
- best practices for different types of activities; and
- methodology and protocols for measuring indicators on the farm.

In some results-based agri-environment-climate schemes farmers must undertake training as a condition of their contract, in others free training is offered to participants. Such training can be tailored to the needs of the results-based scheme and co-financed by the EAFRD under the RDP measure for knowledge transfer and information provision[25].

It is not safe to assume that continuing or adopting current 'traditional' management will be appropriate in all situations without reviewing relevant scientific evidence. Management regarded by farmers as 'traditional' may have already changed in ways that adversely affect the habitat or species. Some species may be very sensitive to even small changes in environmental conditions and management practices (such as stock type, grazing rates, dates when grazing stops in spring, cutting dates for meadows or the nature and quantity of

[25] See Articles 14 and 15 of Regulation (EU) No 1305/2013 of 17 December 2013; and section 5 of DG AGRI *Guidance document: technical elements of agri-environment-climate measure in the programming period 2014-20 (version November 2014).* Brussels.

organic manure being applied to grassland). Such relationships should be understood as much as possible in order to underpin advice to farmers where it is necessary and to explain why they may need to vary their existing practices.

It is good practice to provide farmers with regular feedback on the yearly results of the scheme. This is a simple but really useful way of helping them to improve their knowledge and skills.

Using self-assessment, where farmers measure and report on the biodiversity result indicators themselves, can not only reduce costs, but can increase farmer interest in and engagement with the results and facilitate adaptive management that helps achieve them, but farmers should have the opportunity of training for this task, as illustrated below.

Farmer and adviser training for measuring result indicators

In the Niedersachsen pilot meadow scheme, farmers were trained by experienced botanists, and then their measurements of result indicators were checked by members of the project group. These practical tests demonstrated that farmers were able to recognise the defined indicators and misidentifications were rare.

Farmers participating in the Burren Farm Conservation Programme (BFCP) can select from a panel of approved advisers and consultants, previously trained by scheme staff. The farmers pay for this but the cost is allowed for in the scheme payment calculation. The farm adviser works closely with the farmer and advises on priority tasks, where, how and when they should be done. The farm adviser also inspects the grasslands on the farm and awards each a score under the results-based part of the scheme. The adviser works closely with the BFCP team and a proportion of farm plans, actions and scores is cross-checked by the BFCP team and the Department of Agriculture.

Training and advice can be provided by suitably qualified external advisers but farmer-led peer to peer advice can also be valuable. The advisers themselves understand the merits of results-based approaches and are able to explain the advantages to farmers without disregarding the risks and potential problems. During the implementation of the first results-based schemes for species-rich meadows in Baden-Württemberg, Germany, the personal conviction of individual advisers was variable and this was reflected in the acceptance and subsequent uptake of the scheme by farmers.

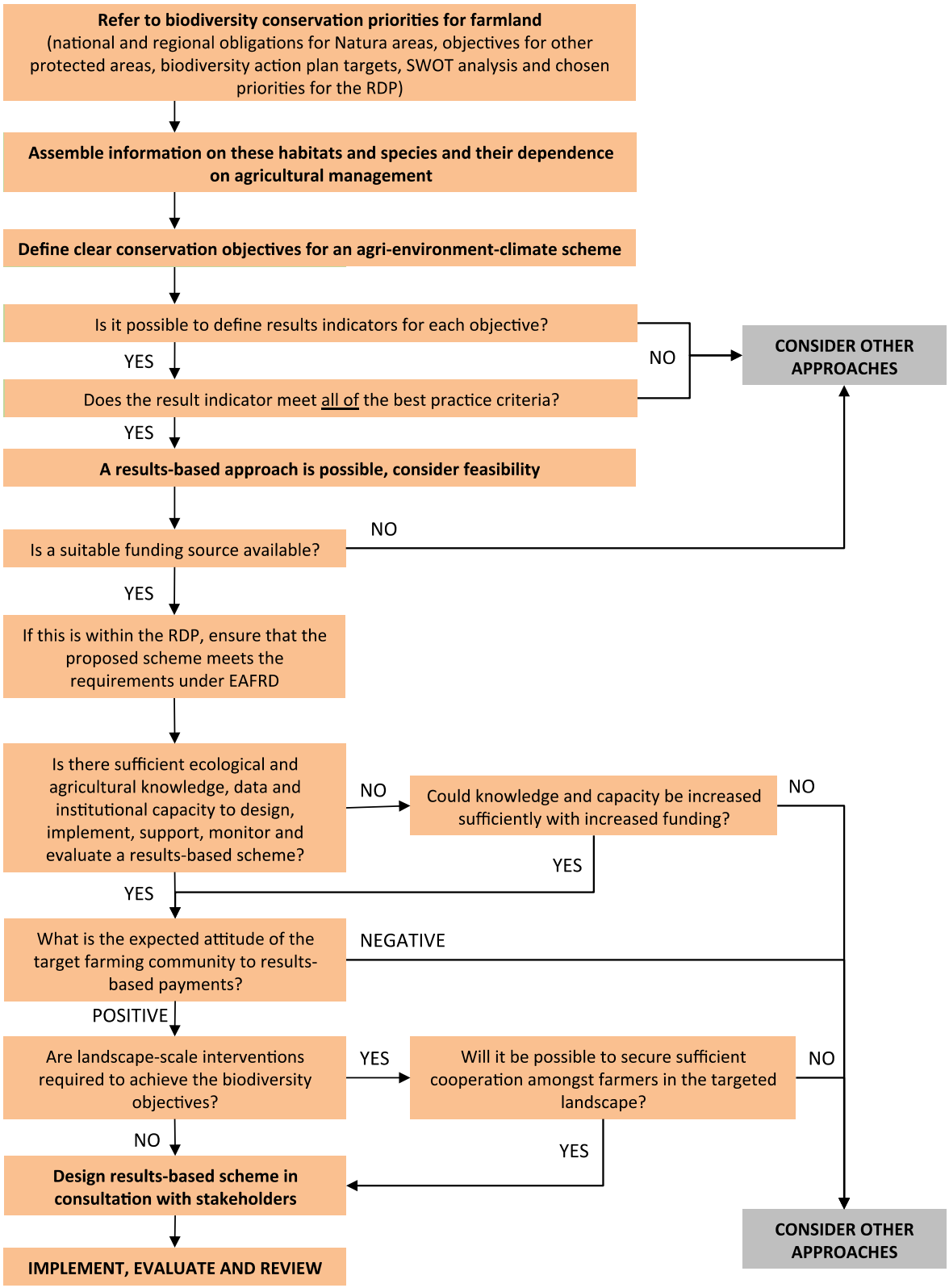
It is important that advice to farmers covers the biodiversity objective as well as the technicalities of the results indicator. In a survey of farmers participating in a results-based scheme in one region of Germany in 2006, 74 per cent of them could explain why the occurrence of indicator species is rewarded, but only eight per cent could explain that the presence of these species is an indicator of extensive management of species-rich grassland, rather than itself being the primary objective.

Training should specifically build on farmer knowledge, and avoid being seen as patronising or irrelevant and therefore be ineffective.

Good practice examples of advisory materials designed specifically for farmer participating in existing results-based schemes are illustrated in the *Supplement to the Guidance Handbook: examples of field guidance for farmers*, available on the website. This includes plant identification guides (to be kept for reference in the tractor cab) and other materials well received by farmers.

9 Keys to successful results-based payment schemes

Decision tree



Success factors

The following factors have been identified as critical for the effective design of results-based payment schemes:

- Building on scientific knowledge of the causal relationship between farming systems or practices and habitats, species and ecosystems within the area of the proposed scheme.
- Ensuring the scheme focuses on biodiversity priorities for farmland where agricultural management is the key factor in ensuring the conservation of that biodiversity.
- Setting an environmental objective that farmers can understand and achieve with a reasonable level of certainty.
- Choosing result indicators that are well correlated with the biodiversity objective, are relatively stable and respond to management but are not unduly influenced by factors beyond the farmer's control and are easy to measure.
- Providing high levels of facilitation, advice and support to farmers, especially where they need to alter their normal farming practices to achieve the biodiversity results.
- 'Tuning' the scheme, so that indicator thresholds are set at the right level to encourage participation and to maintain or improve conservation condition.
- Securing the positive engagement of farmers and other key stakeholders in scheme development, without diluting the environmental focus of the scheme.
- Using the 'freedom to farm' that results-based schemes allow to build farmers' acceptance, understanding of and interest in environmental land management.
- Designing an effective payment structure that is tailored to the biodiversity objectives and indicators, their ecological importance and desired uptake, and in compliance with EU rules.
- Helping farmers to make the transition to results-based payments by offering them a simple management-based scheme that complements the results-based scheme on the same land.
- Developing a system of verifying results (not management) and controlling results-based payments that meets EU requirements, and training paying agency staff in its use.
- Developing a simple, objective, repeatable and unambiguous method of measuring result indicators that farmers can understand and use to assess their own performance and to facilitate adaptive management.
- Testing scheme design and operation in a pilot that offers farmers experience of a results-based approach and allows staff and farmers to develop expertise in and enthusiasm for results-based schemes, who will then train others and act as advocates for a results-based approach.
- Encouraging innovation, self-help and mutual learning, and finding positive ways of harnessing the power of peer group pressure and support from the local community.
- Implementing a robust system of evaluating the achievement of the biodiversity and other objectives, linked to a timely review process to ensure lessons are learnt and acted upon.

Risk factors and how to manage them

A number of risks often associated with results-based schemes are set out below alongside suggestions on how these can be addressed

- The scheme design is rejected on grounds of non-compliance with EU regulations and guidance, or because the risk of disallowance is too great. This risk can be minimised by early involvement of the paying agency and direct contact with the European Commission.
- Rejection of the scheme design due to high operating costs. The use of indicator thresholds avoids paying farmers for contracts that are unlikely to achieve desired outcomes. Although results-based payment schemes may have higher costs per unit area of coverage, their overall costs may be lower than less targeted management-based schemes.
- Failure of uptake or outcome due to lack of engagement of farmers or other key stakeholder groups. This risk can be managed by ensuring that farmers and other stakeholders are engaged throughout the design and implementation process in ways that build trust, understanding and confidence, and reduce farmers' risk aversion.
- Failure of the scheme due to poor choice of result indicators or inadequate information and advice exposing farmers to unnecessary levels of risk. The risk can be managed by using expert advice to select indicators and ensuring that sufficient resources are available to provide farmers the required standard of support.
- Biodiversity results indicator thresholds are achieved, but the desired overall environmental objective is not. This risk can be reduced by using evidence of the relationship between the indicator and the objective at the design stage, and if possible testing the indicator too.
- The scheme has perverse effects, for example it results in habitat deterioration because farmers are managing to achieve an indicator threshold too low for their situation or because the biodiversity objective has been too narrowly defined and does not reflect the overall biodiversity quality. These risks can be managed by using multiple indicator thresholds and, at the design stage, considering the possible effect on other biodiversity objectives.
- Failure to monitor and evaluate the biodiversity outcomes prevents any evidence-based assessment of scheme performance and prevents lessons being learned for future schemes. This risk can addressed by setting up independent biodiversity monitoring to find out if the scheme is making progress towards achieving its *biodiversity objectives*, not just its result indicators. This is particularly important where indirect indicators are used, for example in habitat schemes.
- Introduction of a new scheme disrupts continuity of biodiversity management of farmland. This is only a major risk where existing schemes are proving to be effective and, for schemes run under the EAFRD, have control and verification regimes that are still acceptable to the European Commission and avoid the risk of disallowance. Such schemes should probably not be a priority for moving to a results-based approach.

10 Where to find more detailed information

10.1 Information and guidance on results-based payments for biodiversity in Europe

More information about results-based payments for biodiversity achievements in agriculture is available on the European Commission website:

- Guidance on designing and implementing results-based schemes 2014-20:
  - Summary of this Guidance Handbook (in 24 official languages of the EU)
  - This Guidance Handbook
  - Examples of field guidance for farmers (supplement to the Guidance Handbook)
  - Result indicators used in Europe (supplement to the Guidance Handbook)

- Videos from the field showing examples of results-based schemes that were implemented before 2014

- A searchable inventory of results-based schemes that were implemented in Europe before 2014

- Expert articles on the policies that have supported results- based schemes and the practices that have worked.

- Conference on results-based agri-environment schemes, Brussels 23-24 September 2014: documents and presentations from this conference at which participants from 25 countries shared their knowledge about biodiversity achievements of results-based agri-environment schemes.

10.2 The EU Regulations governing the use of the EAFRD for results-based payments for biodiversity

EAFRD Regulations:

Regulation (EU) No 1305/2013 of the European Parliament and of the Council of 17 December 2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Council Regulation (EC) No 1698/2005 (2013) OJ L347/487, 20.12.2013.

Commission Delegated Regulation (EU) No 807/2014 of 11 March 2014 supplementing Regulation (EU) No 1305/2013 of the European Parliament and of the Council on support for rural development by the European Agricultural Fund for Rural Development (EAFRD) and introducing transitional provisions. OJ L227, 31 July 2014.

Commission Implementing Regulation (EU) No 808/2014 of 17 July 2014 laying down rules for the application of Regulation (EU) No 1305/2013 of the European Parliament and of the Council on support for rural development by the European Agricultural Fund for Rural Development (EAFRD). OJ L227, 31 July 2014.

Horizontal Regulations:

Regulation (EU) No 1306/2013 of the European Parliament and of the Council of 17 December 2013 on the financing, management and monitoring of the common agricultural policy and repealing Council Regulations (EEC) No 352/78, (EC) No 165/94, (EC) No 2799/98, (EC) No 814/2000, (EC) No 1290/2005 and (EC) No 485/2008 (2013) OJ L347/549, 20.12.2013.

Commission Delegated Regulation (EU) No 640/2014 of 11 March 2014 supplementing Regulation (EU) No 1306/2013 of the European Parliament and of the Council with regard to the integrated administration and control system and conditions for refusal or withdrawal of payments and administrative penalties applicable to direct payments, rural development support and cross compliance (2014) OJ L181/48, 20.06.2014

Commission Implementing Regulation (EU) No 809/2014 of 17 July 2014 laying down rules for the application of Regulation (EU) No 1306/2013 of the European Parliament and of the Council with regard to the integrated administration and control system, rural development measures and cross compliance. OJ L227, 31 July 2014.