Institute for European Environmental Policy

Study on identifying the drivers of successful implementation of the Birds and Habitats Directives

under contract
ENV.F.1/FRA/2014/0063

Summary Report

1 March 2019

eco logic

ICF

Deloitte.

denkstatt
create sustainable value

PBL Netherlands Environmental
Assessment Agency

BirdLife
INTERNATIONAL

EXECUTIVE SUMMARY

Objectives and methods

The EU Birds Directive and Habitats Directive (i.e. the Nature Directives) form the cornerstone of the EU's biodiversity conservation policy framework. The Birds Directive aims to achieve the good conservation status of all wild bird species naturally occurring in the EU territory of the Member States. This concept is further developed and defined in the overall objective of the Habitats Directive, which is to maintain or restore habitats and species of community interest to Favourable Conservation Status (FCS).

Despite the actions being taken to implement the Nature Directives, and the broader EU Biodiversity Strategy to 2020, the Member States' most recent reports under Article 12 of the Birds Directive (for 2008-2012) and Article 17 of the Habitats Directive (for 2007 to 2012), indicate that substantial proportions of species and habitats remain threatened or have an unfavourable conservation status. Although the situation has stabilised for a number of habitats and species, little progress has been made in improving the status of most habitats and species (as required under Target 1 of the EU Biodiversity Strategy). Whilst there have been many local successes that demonstrate that actions can deliver positive outcomes, these need to be scaled up to have wider impacts that can reverse negative trends and achieve overall improvements in status.

This study has been undertaken to help scale up and more widely implement successful conservation measures, thereby supporting follow up to the Nature Directives Fitness Check, including the European Commission's Action Plan on Nature, People and the Economy. In particular, it aimed to achieve this by:

1. providing a compilation of all Genuine Improvements that Member States have reported with regard to positive trends of individual habitat types or species (covered by both Nature Directives), and, furthermore, to identify the main success factors explaining these improvements (the "drivers of success").

2. on the basis of the above findings in relation to the key drivers of success, providing a series of 'lessons learnt' and recommendations for the Commission and for Member State authorities, on how the above finding should be followed up with a view to enhance and up-scale implementation, as well as to improve the accompanying reporting and monitoring processes.

For the purposes of this study **Genuine Improvements** were considered to be any improvements that are real rather than due to better data or improved knowledge, irrespective of the cause of the improvement.

The specific tasks that were carried out under this study and led to this report were:
1. The establishment of a database list of Genuine Improvements and associated main drivers explaining the successes:
    a. Establishment of a list of identified Genuine Improvements (status improvements or positive trends) in the conservation status of species and habitat types.
    b. Identification of the main drivers explaining these Genuine Improvements.
2. Carrying out an in depth assessment of the drivers of success in a representative sub-set of examples – which led to the preparation of 53 case studies.
3. Drawing strategic lessons and technical recommendations.

Tasks 1b, 2, 3 and 4 focussed on **Measure Driven Improvements (MDI)**, which are cases of Genuine Improvement that are considered to have been the result of intentional environmental measures, whether or not they were targeted at the habitat or species in question, or other habitats and species, or were more general environmental measures (e.g. to reduce pollution).

The study was carried out by firstly examining the wealth of detailed information on the implementation of the Nature Directives from the results of the Article 12 and Article 17 reporting by Member States, including on the status of species and habitats, and the trends of habitats and species with an unfavourable status (as Member States are required to report on them). The reporting data also provides standardised information on pressures and threats affecting habitats and species, and the measures taken to address them and their impacts. This provided an opportunity for an objective and quantifiable analysis of the drivers of successful implementation of the Nature Directives and their ability to lead to positive improvements in habitats and species. Secondly, drivers of success were also identified by investigating particularly effective examples of actions that have improved the status of habitats and species, through some focussed literature reviews and the preparation of the case studies, which also involved consultations with nature conservation authorities, NGOs and other stakeholders.

Identification of Genuine Improvements and Measure Driven Improvements

The first task established a Genuine Improvements Database (GID), which includes all national and sub-national cases for Habitats Directive Annex I habitats and Annex II, IV and V species (hereafter HD species), as well as species listed under Annex I or II of the Birds Directive that are also Special Protection Area (SPA) trigger species (hereafter BD birds) that were considered to show Genuine Improvements in status and/or positive trends in one or more assessment parameters (i.e. area and structure and functions for habitats, and range and population size for species).

Habitats and HD species that have shown Genuine Improvements in their conservation status were identified using Article 17 reporting data as Member States are required to indicate reasons for changes in their assessments of conservation status. The identification of Genuine Improvements in birds used Article 12 Member State reporting data, but had to use different criteria due to differences in the reporting approach and data, most importantly a lack of information on whether observed changes are genuine. To be consistent with the approach taken by the EEA in the *State of Nature Report*, BD birds were considered to have shown a Genuine Improvement if they had increasing EU populations over the short-term (2001-2012), irrespective of their long-term trend (i.e. 1980-2012); or stable and fluctuating short-term EU populations, in the face of long-term declining trends. In order to attempt to screen out unreliable changes, genuine improvements in birds were only identified if the Member State report categorised the species' long-term monitoring data quality as good or moderate; and the short-term monitoring data quality as good. In addition, to attempt to overcome the lack of information on reasons for change, BirdLife International experts were asked to carry out an initial validation. The identification of 'sub-reporting' unit improvements was carried out by national experts and via the LIFE project database.

Member State experts within the competent nature conservation authorities were asked to validate the identified Genuine Improvements and offered the opportunity to fill data gaps. Eighteen Member States responded to this request.

Overall, 91 Genuine Improvement cases for habitats (including 20 sub-reporting level), 195 cases for HD species (including 24 sub-reporting level) and 638 cases for BD birds species (including 1 sub-reporting level) were identified. It is important to note that the number of cases of Genuine Improvements in habitats and HD species was significantly limited by data gaps, with none being

identified for Bulgaria and Romania (and Greece and Croatia due to the lack of Article 17 data), and less than ten Genuine Improvements were identified in each of ten other Member States. This had a significant constraint on the rest of the study. Due to the relatively limited numbers and to avoid further gaps in Member State coverage, non-validated Genuine Improvements were retained in the GID and subject to further analysis in the study.

The subsequent analysis focussed on MDI, which were initially identified using the Member State Article 12 and 17 data. Specifically species and habitats that have shown Genuine Improvements and have one or more listed conservation measures that were evaluated by the Member State as 'Maintain' or 'Enhance' are considered to be examples of MDI. However, as information on conservation measures was not supplied by the Member States for the explicit purpose of identifying MDI, Member States authorities were asked to validate these MDI, as well as provide further detailed information on the type of measures taken and their impacts, in order to help identify drivers of success. Thirteen Member States responded to this request.

Overall, 80 MDI were identified for habitats, 133 for HD species and 455 for BD birds. In part as a result of data gaps in the Art 12 and 17 reports, and incomplete responses to validation requests, the representation of MDI was very uneven across biogeographical regions, Member States, broad habitats and species groups. Most notably, a high proportion of MDI arise from the continental and Atlantic biogeographical regions, and to a lesser extent the boreal region for habitats, and the Alpine region for species. The largest group of MDI cases relate to coastal habitats, with most others from five other habitat types: freshwater, forests, grasslands, bogs and dunes. No MDI for any marine habitats were identified.

Analysis of the information in the GID on factors that may affect the success of conservation measures was carried out, e.g. the role of protected areas, action plans, site management plans, funding sources (LIFE, CAP etc.), enforcement actions, and stakeholder's engagement. The results of this and their representivity and reliability was constrained by the relatively low number of responses received from Member States to the request for information on these factors. Nevertheless, it provided some indicative evidence that was taken into account in the identification of drivers.

Case studies of Measure Driven Improvements

To supplement the analysis of the Article 12 and 17 data, and additional information provided by Member States on MDI, representative case studies were carried out to ascertain who, when and by whom the MDI had been achieved, giving particular attention to how the improvements are to be maintained in the long-term. An important aim of this was to ensure that they are as representative as possible of the range of Member States, biogeographic regions, habitat and species groups that had shown MDI, and to provide insights of wide relevance. Case study selection criteria were therefore agreed, and an initial list of possible case studies identified drawing on information in the GID, recommendations made by Member States during the MDI consultation process and consultations with DG Environment desk officers and the LIFE monitoring team.

Following the screening and consultations, 71 apparently suitable case studies were identified and contacts made with key practitioners and other experts involved in the case to check their suitable and the availability. As a result of this some case studies were dropped due to doubt over whether they were indeed a reliable or good example of MDI, or because insufficient information was available to prepare a sufficiently insightful case study report. As a result the final number of case studies that were taken forward and completed was 53. Many of the case studies relate to MDI in the Atlantic Biogeographical region (14) and there is a relatively high proportion covering coastal habitats (4), mammals (9) or birds (17). In contrast, primarily due to their limited identification as MDI, there are no or very few case studies for Macronesian, Steppic, Marine Baltic and Marine Mediterranean

biogeographical regions, inland and Mediterranean sand dunes, Mediterranean scrubland habitats, rocky habitats and marine species (other than birds).

Therefore, although every effort was made to provide a coherent and representative sample of case studies as possible, their findings should also be interpreted with their limited representivity in mind, and therefore treated as illustrative. It is also important to note that the case studies do not necessarily represent the best examples of conservation measures for the habitats and species that were covered, or of the approaches and methods that they illustrate, and they may not have resulted in the most significant improvements. Nevertheless they provide a valuable body of information that provides numerous insights on many of the drivers of the MDI.

Identification of drivers of success and key lessons

The identification of drivers of success and key lessons in this study was primarily based on a combined analysis of the collated evidence from the results of the analysis of the GID (i.e. Article 12 and 17 data and additional information from Member States on factors affecting conservation actions) and, in particular the lessons drawn from the case studies. In addition, key selected literature sources were referred to, in particular relating to the factors that influence the long-term impacts of nature conservation interventions (most of the information collated in this study was on relatively short-term interventions) and marine conservation measures (due to the lack of identified marine MDI).

The analysis of key drivers focussed on a set of key questions of particular interest identified by the European Commission in this study's terms of reference, and the most important conclusions from these in relation to their broad themes are summarised below.

The role of political support, governance, institutions and their staff

There is wide evidence that strong and coherent governance, with effective supporting institutions, (especially nature conservation authorities, but also others involved in land and sea management) is a pre-requisite for effective implementation of the Nature Directives and broader conservation actions. This requires political support, as the coherence and enforcement of environmental policies and legislation is essential, because little can be gained from implementing effective measures that support habitats and species if other actions are taking place that undermine them.

Another common driver of success is the strong motivation and commitment of particular individuals. What kind of organisation they work for is less important, though teams involving different sectors are perhaps best placed to address the multi-faceted dimensions of the work involved. Nevertheless, no matter how dedicated an individual or team, conservationists need the opportunity to operate (i.e. political/administrative permission) and the funding necessary to create the critical mass and continuity of expertise to drive and achieve large-scale impacts.

The role of land owners and other stakeholders

In most Member States many sites of high nature conservation importance consist of, or incorporate large areas of private land, and state owned land may also often be used for other purposes, such as forestry. Therefore, in almost all cases nature conservation needs to involve landowners, and other stakeholders (e.g. farming organisations, foresters, hunters, fishers, industry, local communities). Thus, adequate and effective stakeholder consultation and engagement would appear to be essential, and there is evidence to support this from the implementation of the Nature Directives. Where inadequate consultation with stakeholders occurred, this has often led to, or exacerbated, conflicts that held up conservation actions such as those concerning the designation of Natura 2000 sites and the establishment of conservation measures for them. Moreover, the case studies provide more positive evidence that good stakeholder involvement can go beyond the avoidance of conflicts, to

provide a basis for developing joint positive nature conservation goals and carrying out substantial collaborative actions.

The role of the Natura 2000 network and other protected areas

Information provided by the Member States on the MDI shows the importance of the Natura 2000 and wider protected area network in two ways. Firstly, it is clear that the protected area networks across the EU contain a large proportion of the habitat area, and populations of species for which MDI were observed, particularly for habitats and HD species. Secondly, a large proportion of the most important actions that contributed to MDI occurred within the Natura 2000 network, especially for habitats. Thus, there is evidence that protected area designation, not only gave basic protection (e.g. from habitat destruction), but also stimulated the required conservation measures for the habitats and species that are present, such as through access to funding, the development of management plans, establishment of conservation measures, enforcement actions, and stakeholder engagement etc.

In conclusion, whilst it is not possible to quantify the added impact that the designation, protection and management of the Natura 2000 and wider protected area network is having, it is obvious that it is often a key driver, whether directly or indirectly, of the observed MDI in habitats, HD bird species and birds. This is especially the case for habitats and species that tend to be concentrated within Natura 2000 network, but conservation measures within the network also play an important role for more widespread species as the sites often comprise high quality habitats/species' habitats that are key core areas in wider ecological networks.

The role of broad conservation measures

Whilst this study has shown the importance of protected areas in driving many of the MDI, it is widely accepted that conservation measures are also needed in the wider environment, for two primary reasons. Firstly protected areas are not isolated from the wider environment, and therefore conservation measures are needed to address wide scale pressures and threats such as related to water and air pollution. Secondly, many habitats and species have dispersed distributions, and therefore their protection and conservation cannot be efficiently achieved just through the designation and management of protected areas for them. However, it was particularly difficult to draw reliable conclusions on the role of wide-scale conservation actions in driving MDI from the evidence collated in this study. On the face of it relatively few observed MDI appear to have involved important wide-scale actions, especially amongst habitats and HD species, but it is also likely that difficulties with achieving some wide-scale actions (in particular reducing deposition of Nitrogen on sensitive habitats), have been, and continue to be, barriers to achieving MDI. There are, however, some clear examples in the case studies of where broad-scale actions (e.g. water quality improvements, have undoubtedly been major drivers of the MDI concerned, including for some dispersed species.

The approaches to tackling pressures in agricultural and wetland ecosystems.

The Article 12/17 reports also show that a high proportion of the habitats and species associated with agricultural and wetland ecosystems are subject to high-level pressures, and have deteriorating trends and therefore, it is clearly a major challenge to achieve MDI for such habitats and species, even if it is only halting a decline. Furthermore, there are considerable obstacles to conserving and restoring agricultural habitats and species due to the large areas involved and the high per unit costs of conservation measures (especially on intensive farmland). Despite the challenges, a number of MDI have been achieved in agricultural systems and wetlands. However, most on agricultural land have related to habitats and species that are relatively scarce and have a high proportion within Natura 2000 sites. This has enabled target interventions to be carried out, such as intensive nature conservation authority and/or NGO led engagement with farmers and the establishment of carefully

designed tailored management and restoration actions supported through LIFE projects and sometimes CAP agri-environment climate measures. It appears to be difficult to achieve MDI for other more dispersed agricultural species without increased implementation of the Nature Directives (e.g. to protect grasslands from agricultural conversion), both within and outside the Natura 2000 network, strengthened environmental components of the CAP and a considerable increase in targeted funding through the Natura 2000 measure and agri-environment climate schemes. The situation for rivers, lakes and wetlands is more supportive for the achievement of MDI, but further implementation of the WFD is necessary as the poor condition of some water bodies may be a barrier to improving the conservation status of some habitats and species.

Funding and resources requirements

There is strong evidence from a number of studies, that there is a major gap between biodiversity conservation funding requirements and available funds, and the Nature Directive Fitness Check study concluded that this has been a major constraint on implementation of the Directives. It is therefore evident that access to funding is likely to be a major driver of MDI, and there is strong support for this from the Member States' information on the factors affecting the MDI and numerous case studies. However, this study was not able to objectively examine the extent to which funding constraints have limited opportunities for improving the status of habitats and species, as information was not gathered on the reasons for failure (i.e. where there have been intentions to take actions to achieve genuine improvements, but these have not materialised or been adequate due to a lack of funding). Nevertheless, it is likely that the relatively low number of identified MDI, especially for some habitats and species that would be reliant on large-scale and relatively expensive measures (e.g. on intensive farmland and in productive forests), is at least in part the result of overall funding constraints, and barriers to access as described above.

Despite its relatively small size the LIFE program appears to be the most important funding related driver of MDI, as illustrated in a large proportion of the case studies, although the projects were sometimes supported by other funding such as agri-environment schemes to deliver large-scale habitat management actions etc. However, as the LIFE projects are relatively short-term sources of funding, it is uncertain to what extent they will lead to MDI that are sustained in the long-term. Some LIFE projects were supported or followed up with larger-scale and/or longer-term funding, principally through EU agri-environment schemes. But, considering the amount of funds available, their contributions to MDI were less than expected, which may be due to insufficient targeting to implementation of the Nature Directives, and eligibility barriers for some farmers of semi-natural habitats. Other important funding sources included EU regional development funds, which were sometimes used to develop management plans or carry out one-off actions. National funds were also important for some cases, sometimes following LIFE projects. There is very little evidence that significant funding of MDI was provided by private sources or innovative funding instruments except for a couple of cases. Increasing the number and scale of MDI is therefore likely to be highly dependent on further increasing the amount and accessibility of public funding for conservation measures for habitats and species that are the focus of the Nature Directives, especially within Natura 2000 sites.

The role of research and monitoring

This study found numerous case examples supporting the widely held view that the design of appropriate, effective and efficient conservation and restoration measures are dependent on reliable, up-to-date and context relevant knowledge of the ecological requirements of the targeted habitats and species, and the pressures affecting them. Several cases also showed the value of investing in improving scientific knowledge, and the benefits of carrying out trials to test the practicality, efficacy and efficiency of measures, before rolling them out more widely. Once measures are being implemented, then adequate, appropriately designed and targeted monitoring can facilitate adaptive management (such as refinements to the practical measures), as well as providing important

assessments of trends and conservation status that can feed into Article 12 and 17 reports. However, the results of this study have shown that there are currently numerous gaps in knowledge of the status of many habitats and species, and whether or not observed improvements are genuine and the result of conservation measures, and hence the list of MDI identified under this contract is incomplete.

Factors that lead to the long-term sustainability of conservation outcomes

Whilst this study has shown that MDI can be achieved through conservation interventions, many of these are from short-term actions that often need to be maintained in the long-term, or their benefits will be undone and resources wasted. A clear lesson from the literature is that the sustainability of conservation measures needs to be carefully planned to address as necessary the following key requirements: the design of recurring practical management measures, long-term financing (e.g. through long-term funding sources such as CAP agri-environment climate measures), maintenance of partnerships and the capacity and knowledge of key actors, ongoing stakeholder engagement, monitoring, reporting and publicity.

A particularly important requirement is often to ensure long-term commitments to conservation actions. The security of these depends on at least three main factors being satisfied: ensuring the effective ongoing delivery of conservation management activities through appropriate regulatory and management systems; securing the long-term use of land for conservation purposes; and ensuring the financial sustainability of conservation management over time. The specific mechanisms that may satisfy these conditions are likely to include: a long-term management plan; a binding contractual agreement; secure rights to manage the land for conservation purposes; obligations to use the land for conservation purposes in the long-term, secure access to finance to fund conservation action, and safeguards against risk of failure.

General recommendations

1. **Strengthen governance**. Strong and coherent governance and institutions at national and regional level are required to provide the foundations (such as through species protection and protected area legislation, and coherent land use policies) on which targeted actions to improve the status of habitats and species is dependent. Steps should therefore be taken to ensure that such foundations are in place before embarking on conservation and restoration projects for habitats and species that are vulnerable to weak protection measures.

2. **Improve inter-regional cooperation**. For Member States that have devolved nature conservation and related governance structures, efforts may be needed to ensure that joint and co-ordinated actions are taken to achieve improvements across multiple regions. This is especially the case where species move across regional borders, such as for feeding, or roosting, or between breeding and wintering areas.

3. **Deepen stakeholder involvement**. A high priority should be given to involving stakeholders in conservation initiatives as early and as deeply as possible, through a participatory process rather than a limited consultation. Although this takes time and resources, effective conservation measures are normally dependent on the support of stakeholders and evidence shows that participatory approaches are the best means of achieving this in the long run. Similarly, it is important to ensure that the key staff responsible for the conservation measures are themselves highly motivated, and have the aptitude and enthusiasm to engage and genuinely involve stakeholders in the project concerned.

4. **Develop and use habitat and species action plans to identify and coordinate coherent measures.** The measures needed to achieve improvements in the conservation status of

habitats and species can often be efficiently and effectively planned and implemented through the production of species action plans and habitat action plans (which should feed into the PAF process). Amongst other things, these should identify the key factors that are preventing the achievement of favourable conservation status and the conservation measures necessary to achieve favourable conservation status, as well as their relative importance and urgency, their costs and potential funding sources. In accordance with good practice they should have clear SMART objectives for actions and their outcomes, with responsibilities for actions identified. Such plans are more effective for some species and habitats than others, as indicated in Box 4.4, and therefore the need for such plans should be assessed and prioritised accordingly.

5. **Ensure the Natura 2000 and wider protected area network is sufficient and coherent.** A proven key measure for maintaining and improving the status of many habitats and species is the designation of an adequate and coherent network of Natura 2000 sites, and other types of protected area that may contribute to the overall network in the Member State. This not only helps protect habitats and species from ongoing pressures, but also triggers the development of conservation objectives and plans for the sites, which in turn increases access to targeted funding and other forms of support. The requirements for additional sites should therefore be investigated as a priority where it is suspected (e.g. as part of species or habitat action plan) that there are deficiencies in the total area of the network, or the representation of all requirements of the habitats and species in question (e.g. feeding areas, breeding sites), or required functional connectivity amongst sites (e.g. to enable movements between sites for migration, and/or to maintain meta populations and genetic variation). Where feasible the results of assessments of protected area requirements for individual species and habitats should be combined (e.g. as part of the PAF development process) to identify strategic opportunities where protected area designation can simultaneously contribute to several species and habitats in a cost-effective way.

6. **Strategically plan restoration measures**. Similarly, where habitat restoration or re-creation is planned this should be carried out strategically (e.g. identifying priority areas for restoration within a region that may provide the most cost-effective benefits, such as by linking up or expanding small isolated populations of species or habitat patches), based on research into the specific requirements of the habitats and species concerned and the required spatial distribution of areas that will enable ecological processes to function as required and the colonisation of habitat patches etc.

7. **Ensure that all public bodies are complying fully with the requirements of the Nature Directives.** A relatively quick win in terms of improving the status of habitats and species may often occur through carrying out conservation measures on public land, such as through integrating species' or habitat's requirements (e.g. as identified through a species or habitat action plan) into the area's land use regulations (e.g. into state forestry plans, or site logging plans) and ensuring that public funded projects are compliant.

8. **Fully implement other supporting broad environmental measures.** Whilst some MDI have been achieved as a result of broad scale environmental measures (in particular water quality improvements driven by the WFD) it is likely that the limited progress in achieving good ecological status of water bodies in some Member States, and in particular reducing nitrogen deposition, is a barrier to improving the conservation status of some sensitive habitats and species. It is therefore important for the WFD and National Emission Ceilings Directive (NECD)[1]

---

[1] Directive (EU) 2016/2284 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC

to be fully implemented according to their agreed timetable. In addition, to achieve the objectives of the Nature Directives, Member States need to ensure that pollution does not exceed the levels that would prevent the achievement of the favourable conservation status of habitats and species that are the focus of the Nature Directives (e.g. identified through research and preparation of habitat or species action plans). This may therefore require more stringent measures to reduce pollution and other pressures than required to achieve good ecological status under the WFD and to reduce emissions to lower levels than the ceilings allowed in the NECD.

9. **Enforce Nature Directives protection measures on agricultural land, and elsewhere where necessary**. More effective and widespread measures need to be taken to address the particular challenges to achieving favourable conservation status of agricultural habitats and species. In particular, within the Natura 2000 network, greater enforcement of protection measures (e.g. in relation to prohibiting the ploughing of grasslands or other detrimental actions) appears to be necessary combined with greater use of the Natura 2000 measure available under EAFRD to compensate for the economic impacts of landuse restrictions. To support this, a high priority should be given to the preparation of site management plans, where these do not already exist, for sites with habitats and species threatened by agricultural developments and other incompatible land uses, especially where these are resulting in high opportunity costs that cannot be addressed through voluntary agri-environment schemes.

10. **Strengthen biodiversity measures in the CAP and improve the implementation of other environmental regulations on agricultural land**. To increase the achievement of MDI in the wider agricultural environment, it necessary to strengthen the environmental components of the 2021-27 CAP, ensuring that strong biodiversity focused cross compliance and greening type measures (especially the equivalent of 2013-2020 Ecological Focus Areas and the Environmental Sensitive Permanent Grassland measure) are incorporated. CAP measures also need to be supported and completed by improved implementation of all other relevant environmental regulations, including the WFD, NECD, Strategic Environmental Assessment Directive[2] and Environmental Impact Assessment Directive[3].

11. **Provide an adequate and accessible EU budget allocation for the implementation of the Nature Directives**. A major reason for the relatively low number of MDI that have been identified in this study is almost certainly funding constraints that have hampered the implementation of the Nature Directives, as identified by the Nature Directives Fitness Check and other studies. It is therefore essential to implement the recommendations that have been made in the Fitness Check, and the follow up Action Plan for Nature, People and the Economy, to increase the amount of funding available for conservation measures for the habitat and species that are the focus of the Nature Directives, especially within the Natura 2000 network, and to increase the accessibility of the funds to all nature conservation actors. The PAFs have a key role to play in identifying and prioritising funding needs and sources, and therefore need to be prepared carefully and completely, and implemented fully.

12. **Increase the capacity of environmental authorities and NGO organisations involved in nature conservation to access funds.** Some authorities, NGOs and others have found it difficult to obtain funds for nature conservation actions, especially for core administration functions, strategic conservation planning, research and monitoring, stakeholder engagement, and further fundraising. This constrains conservation planning and activities,

---

[2] Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment
[3] Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment

even sometimes when funding is available for specific practical projects and actions, as the potential beneficiaries often lack the staff capacity (in terms of numbers and knowledge) to prepare the necessary applications and supporting documents etc. This can result in available funds being left unused, and the country failing to meet its obligations under the Nature Directives, which may lead to financial penalties for the Member State. It is therefore wise for national / regional governments to ensure that authorities, and other nature conservation partners have, at the very least, the necessary capacity to access and use all available funds that can support the implementation of the Nature Directives. The Commission should also consider further ways of reducing administrative burdens for applicants and beneficiaries, and consider additional incentives for supporting applications for high EU priority projects and providing core funding for priority strategic activities (e.g. monitoring to support future Article 12 and 17 assessments – see below).

13. **Bolster the LIFE programme and increase its funding for nature projects, whilst also increasing complementary and longer-term funding sources**. Evidence from this study shows that the LIFE programme has been a very effective and efficient funding instrument that has driven many of the observed MDI. However, despite a planned increase in allocated budget for Nature Directives relevant spending for the 2021-2027 programme, it will not by itself be able to increase significantly the scale of action for species and habitats covered by the Nature Directives, and it is not intended to provide the funding for ongoing conservation measures required to maintain conservation gains in the long-term. Therefore, it is important that additional sources of funding are obtained to address more species and habitats, to increase the scale of action and to secure long-term funding of conservation measures. In particular, public funding is likely to be the main funding required for most habitats and species, but more efforts should be made to identify, develop and secure other sources of private funding and use of innovative financing methods.

14. **Increase targeted EAFRD funding for implementation of the Nature Directives, especially through tailored agri-environment climate schemes.** It is particularly important that agri-environment climate funding is increasingly targeted to the habitats and species that are the focus of the Nature Directives, particularly within Natura 2000 sites. Alternatively, where agri-environment climate schemes and other voluntary RDP funding measures are not being taken up, Natura 2000 compensation measures could be used in combination with obligatory management measures include in management plans developed with stakeholders. Agri-environment schemes also need to be more appropriately tailored to the habitats and species that they are targeted towards (e.g. as identified in species, habitat and site management plans) as evidence indicates that such tailored schemes are much more effective than those with simpler generic measures. Where necessary other RDP measures (such as 'non-productive investment' measures) should be used to complement agri-environment schemes.

15. **Ensure CAP payment eligibility rules do not encourage damage to habitats and species covered by the Directives, or preclude farmers from obtaining CAP funds for their required conservation measures.** It is essential that Member States use the flexibility allowed within the last CAP reform to ensure that their payment eligibility rules do not create incentives that encourage landowners to damage HD Annex I habitats or other habitats that are important for species that are the focus of the Nature Directives; and that agri-environment climate and other RDP measures can be used to support high nature value farming systems and more specific targeted nature conservation management practices for such habitats and species

16. **Ensure that knowledge of a habitat's or species' ecology, effects of pressures and the impacts of planned conservation actions are adequate before implementing them at a large-**

scale. This study has shown that reliable, up-to-date and context relevant knowledge is required of the ecological requirements and pressures affecting habitats and species, so that appropriate, effective and efficient measures can be designed and implemented for them. Therefore conservation actions should not be implemented at large scale, especially if they are likely to be costly or risky (e.g. to the target habitats or species, or concerning other potential environmental risks), until adequate research and/or trials have been carried out to address uncertainties.

17. **Carry out adequate monitoring of conservation interactions and their impacts, adjust actions if necessary, learn lessons and disseminate them.** Once measures are being implemented, then adequate, appropriately designed and targeted monitoring should be carried out, as this provides the ability to check that the measures are having their intended impacts, and if necessary to make adjustments to the measures that are being taken (i.e. thereby facilitating adaptive management). Once clear lessons have been learnt then they should be carefully documented and passed on, such as through publication in widely accessible scientific papers, presentations at meetings (e.g. biogeographical seminars) and inclusion on relevant websites[4].

Recommendations for achieving sustainable long term improvements

1. **Design and plan for the long term**. Planning for long term sustainability needs to be built into conservation plans from the outset. Plans, such as After-LIFE plans, should specify how the transition from short term conservation intervention to long term management will be achieved (taking into account and addressing potential ongoing pressures) and the necessary resources, partnerships, management and governance, monitoring and evaluation arrangements to support this. Financial planning also needs to manage the risks of reduction or even cessation of future funding. Diversification of financing strategies can help to avoid over-reliance on individual funding sources. Endowments, contingency funds, financial guarantees and insurance can all play a role in enhancing the security of future funding.

2. **Provide long term finance and incentives**. Ongoing management of species and habitats normally requires financial resources, and therefore it is important that conservation finance is secure in the long term, is sufficient to achieve the scale of management required, and is suited to ongoing annual conservation management.

3. **Maintain diverse partnerships and engagement**. The case studies examined in this project demonstrate that building broad and effective partnerships, involving a range of relevant stakeholders, can help to enhance the long-term sustainability of conservation management and its outcomes. While the commitment of a dedicated lead partner is often necessary to mobilise resources and efforts to achieve conservation outcomes in the short term, the sustainability of outcomes over time normally depends on establishing broader partnerships and engagement. This reduces the risks inherent on relying on particular organisations and individuals, while involving key partners such as farmers, landowners and local community groups can help to share the burden of responsibility and reduce dependence on conservation organisations. In addition, conservation partnerships allow for widening the management regime to adjusted areas that lay outside the N2000 network and in this way can act as buffer.

4. **Demonstrate socio-economic benefits**. While short term conservation actions may be driven by the conservation sector, longer term sustainability often depends on the support of local

---

[4] E.g. www.conservationevidence.com and https://chapter.ser.org/europe/knowledge-base/

communities and businesses. Raising awareness and enhancing appreciation of species and habitats can motivate communities and businesses to value them and take responsibility for their protection. This can have positive effects in building local resistance to threats from disturbance, development, habitat damage and species persecution, and in mobilising resources for conservation through volunteering and local finance.

5. **Ensure that appropriate land uses and management are maintained**. Ensuring long term conservation outcomes depends on securing ongoing sympathetic land use and management over time. In some cases land purchase may be necessary to guarantee this, although legal designations and long term management agreements can also play a role. Legal mechanisms such as covenants and easements are another means of ensuring that land continues to be used for conservation purposes.

6. **If necessary, ensure commitments are underpinned by legal and contractual arrangements**. Where third parties are involved in the delivery of conservation actions, binding contractual arrangements can help to ensure that these are implemented as planned. This can be important in long term management agreements for sites and species. The LIFE programme contains provisions whereby land purchased and durable goods acquired with LIFE funding must be indefinitely assigned to nature conservation activities beyond the end of the project.

List of case studies sorted by habitat type and species group and biogeographical region

MS & no.	Habitat / species included	Habitat type / taxa	BGR
EE-1	Active raised bogs* [7110]	Habitat - bog	BOR
SI-1	Natural eutrophic lakes with Magnopotamion or Hydrocharition -type vegetation [3150], Natural dystrophic lakes and ponds [3160], Raised bogs [7110], Transition mires [7140], Alkaline fens [7230], Bog forest - Sphagnum spruce woods [91D0].	Habitat - bogs, freshwater wetlands & forest	CON / ALP
IE-1	Sandbanks which are slightly covered by sea water all the time [1110], Estuaries [1130], Mudflats and sandflats not covered by seawater at low tide [1140], Large shallow inlets and bays [1160]	Habitat – coastal & halophytic	ATL MAR
FI-1	Boreal Baltic coastal meadows [1630]	Habitat – coastal & halophytic	BOR
UK-1	Mudflats and sandflats not covered by seawater at low tide [1140], Salicornia and other annuals colonizing mud and sand [1310], *Spartina* swards (Spartinion maritimae) [1320], Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]	Habitat – coastal & halophytic	MATL
SK-1	Inland salt meadows [1340]	Habitat – coastal & halophytic	PAN
NL-1	Humid dune slacks (2190)	Habitat - dunes	ATL
LV-1	Dry sand heaths (2320)	Habitat - dunes	BOR
IE-2	*Taxus baccata* woods (91J0)	Habitat - forest	ATL
EE-2	Nordic alvar and precambrian calcareous flatrocks * [6280]	Habitat - grassland	BOR
PL-1	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites) [6210]	Habitat - grassland	CON
BE-1	N Atlantic wet heaths (4010) + other habitats and associated species	Habitat - heath & scrub	ATL
EE-3	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260]	Habitat - river	BOR
DE-1	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260], European bitterling (*Rhodeus amarus),* Barbel (*Barbus barbus),* Eurasian Otter (*Lutra lutra*), European River Lamprey (*Lampetra fluviatilis*), Atlantic Salmon (*Salmo salar*)	Habitat - river, fish & mammal	ATL
NL-2	European Tree Frog (*Hyla arborea*)	Amphibian	ATL
EE-4	Common Spadefoot (*Pelobates fuscus*)	Amphibian	BOR
BG-1	Pygmy Cormorant (*Phalacrocorax pygmeus*) & Ferruginous Duck (*Aythya nyroca*)	Bird	-
ES-2	Spanish Imperial Eagle (*Aquila adalberti*)	Bird	-
ES-3	Lesser Kestrel (*Falco naumanni*)	Bird	-
FR-3	Eurasian Spoonbill (*Platalea leucorodia*)	Bird	-
HU-3	Black Stork (*Ciconia nigra*)	Bird	-
LV-2	Corncrake (*Crex crex*)	Bird	-
MT-1	Yelkouan Shearwater (*Puffinus yelkouan*) & Mediterranean Storm Petrel (*Hydrobates pelagicus melitensis*)	Bird	-
NL-4	Little Tern (*Sterna albifrons*)	Bird	-
PT-1	Great Bustard (*Otis tarda*)	Bird	-
SK-2	Saker Falcon (*Falco cherrug*)	Bird	-
SK-3	Eastern Imperial Eagle (*Aquila heliaca*)	Bird	-
UK-4	Eurasian Bittern (*Botaurus stellaris*)	Bird	-
UK-5	Eurasian Stone Curlew / Eurasian Thick-knee (*Burhinus oedicnemus*)	Bird	-
FR-2	Egyptian Vulture (*Neophron percnopterus),* Cinerous Vulture (*Aegypius monachus),* Bearded Vulture (*Gypaetus barbatus*) & Griffon Vulture (*Gyps fulvus*)	Birds	-
DK-2	North Sea Houting (*Coregonus oxyrhynchus*)	Fish	ATL
UK-3	Twaite Shad (*Alosa fallax*)	Fish	ATL
SI-2	Mediterranean Killifish (*Aphanius fasciatus*)	Fish	CON

MS & no.	Habitat / species included	Habitat type / taxa	BGR
LU-1	Violet Copper (*Lycaena helle*)	Invertebrate - butterfly	CON
ES-1	White-clawed Crayfish (*Austropotamobius pallipes*)	Invertebrate - crustacean	MED
DK-1	Green Gomphid (*Ophiogomphus cecilia*)	Invertebrate - dragonfly	CON
BE-2	Freshwater Pearl Mussel (*Margaritifera margaritifera*)	Invertebrate - mollusc	CON
UK-2	Fisher's Estuarine Moth (*Gortyna borelii lunata*)	Invertebrate - moth	ATL
NL-3	Varnished Hook-moss / Slender Green Feather-moss (*Drepanocladus vernicosus*)	Lower plant	ATL
SK-4	Northern Chamois (*Rupicapra rupicapra tatrica*)	Mammal	ALP
SK-5	European Bison (*Bison bonasus*)	Mammal	ALP
DE-2	Eurasian Beaver (*Castor fiber*)	Mammal	ATL
IT-1	Brown Bear (*Ursus arctos*)	Mammal	ATL
NL-5	Eurasian Otter (*Lutra lutra*)	Mammal	ATL
UK-6	Greater Horseshoe Bat (*Rhinolophus ferrumequinum*)	Mammal	ATL
EE-5	European Mink (*Mustela lutreola*)	Mammal	BOR
ES-4	Iberian Lynx (*Lynx pardinus*)	Mammal	MED
AT-1	*Myosotis rehsteineri*	Higher Plant	ALP
FR-1	*Biscutella neustriaca*	Higher Plant	ATL
HU-1	Long-lasting Pink (*Dianthus diutinus*)	Higher Plant	PAN
LT-1	European Pond Turtle (*Emys orbicularis*)	Reptile	BOR
HU-2	Hungarian Meadow Viper / Orsini's Viper *(Vipera ursinii rakosiensis)*	Reptile	PAN
CY-1	Loggerhead Turtle (*Caretta caretta*) & Green Turtle (*Chelonia mydas*)	Reptiles	MMED