



THE EU'S STRATEGIC APPROACH TO RAPTOR CONSERVATION

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Bearded Vulture *Gypaetus barbatus*, Spain. © Markus Varesvuo/naturepl.com/Alamy Stock Photo

Executive Summary

The European Union (EU) has been a Signatory to the Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MoU) under the Convention on Migratory Species (CMS) since 2011. Article 12 of the Raptors MoU requires its Signatories to prepare and submit, where appropriate, a national or regional (e.g. European Union) Strategy or equivalent documents (e.g. Single Species Action Plans) for Category 1 and, where appropriate, Category 2 species in Table 1 in the Action Plan.

The present document describes how **raptor conservation within the EU is being implemented through the existing EU frameworks, particularly through the EU Birds Directive¹**. It is valid for all raptor species within the EU (listed in Appendix II). The EU Birds Directive protects all naturally occurring wild birds in the EU and provides both general protection for all raptor species (strict protection regime) and site protection. The EU is also committed to contributing effectively to protecting migratory raptors along migratory flyways in Europe, Asia and Africa and to improving their conservation status over the coming years.

Priority action is required to address the main threats that affect raptors in the EU: poisoning and illegal killing, electrocution and collision with power lines and wind turbines, habitat loss (particularly outside protected areas) and the taking of birds from the wild. Many EU LIFE funded projects have been carried out for raptor conservation over the years, and they provide good practice examples of how to address these threats. The EU has also a Roadmap in place since 2012, for eliminating illegal killing, taking and trade of birds as part of the broader Tunis Action Plan (2013–2020) under the Bern Convention.

¹ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ L 20, 26.1.2010, p.7), replacing Directive 79/409/EEC of the Council of 2 April 1979 (OJ L103, 25.4.1979, p.1).

In addition, the CMS Task Force on the illegal killing, taking and trade of migratory birds in the Mediterranean region covers eight Member States and stakeholders. Adequate assessments and management will be needed to ensure the availability of food for necrophagous birds, to strengthen law enforcement and to seize opportunities for conservation through sustainable use. Improved co-ordination and cooperation for raptor monitoring can provide better information for the conservation of raptor populations, as well as environmental indicators and data to inform regular reporting mechanisms. Raptors are at the top of the food chain, thus actions to conserve raptors and their habitats typically will benefit many other species that use the same areas.

Because conservation efforts need to be implemented throughout the entire life cycles of migratory raptors, similar actions are also required beyond EU borders. International species action plans provide a useful tool to help the recovery of the species.

The EU will continue to take measures to help avert global biodiversity loss² and to develop cooperation tools to conserve biodiversity while addressing any potential negative impacts on biodiversity beyond EU borders.

Effective raptor conservation requires regular co-operation between national authorities, international bodies, environmental NGOs and stakeholders. Even with the best conditions, some raptor populations recover only slowly which can be ascribed, at least partly, to the low annual reproductive rate in many species. Therefore, long-term actions are important.

² EU Action Plan against Wildlife Trafficking is in place since February 2016, http://ec.europa.eu/environment/cites/trafficking_en.htm

1. Introduction

BIRDS OF PREY IN THE EU

Over 50 species of birds of prey occur regularly in the EU. While the trend of some birds of prey is stable or even improving in Europe, in general many species are under threat or have a poor conservation status across their full range. This is confirmed by the reports from Member States under the reporting exercise 2008–2012³ of the Article 12 of the Birds Directive (see Appendix II).

Being top predators and scavengers, birds of prey are good environmental indicators. Illegal killing and poisoning, habitat destruction, electrocution and collision with power lines, are among the main pressures in Europe (reported having high impact). In the case of migratory species, these pressures are often exacerbated during periods of migration and over-wintering. Actions to conserve raptors and their habitats typically benefit many other species in the same areas that are exposed to similar threats.

SCOPE OF THE DOCUMENT

On 21 November 2011, the EU became Signatory to the Memorandum of Understanding on the Conservation of Migratory Birds of Prey in Africa and Eurasia (Raptors MoU) under the Convention on Migratory Species (CMS). This is a legally non-binding instrument which contains, *inter alia*, a list of general conservation measures, a section on implementation and reporting, and an Action Plan⁴ containing specific actions to be implemented by the Signatories.

The European Union is committed to contributing effectively to protecting migratory raptors along migratory flyways in Europe, Asia and Africa and to improving their conservation status over the coming years. This document presents the EU approach to ensuring better conservation of European Union raptors.

The EU policy objectives both within the EU and internationally include the strengthening of EU commitments and action for global bird conservation, the promotion of flyway management and co-operation with relevant international conventions (e.g. CMS, Raptors MoU, AEWA, Bern Convention, CBD and CITES).

This document covers all migratory and non-migratory raptors (including owls) that regularly occur in the EU. In line with the MoU's Action Plan, the present document addresses:

- Globally threatened and Near Threatened species as defined according to the latest IUCN Red List and listed as such in the BirdLife International World Bird Database ('Category 1' as defined in the MoU's Action Plan). There are 10 such species occurring in the EU.

³ The on-going reporting exercise covers the period 2013–2018

⁴ Annex 3 to the Raptors MoU https://www.cms.int/sites/default/files/document/Raptors_Action_Plan_E_0.pdf. The present EU Strategic Approach to Raptor Conservation is the EU's implementation of Activity 6.1 of Table 2 in this Annex.

- Species considered to have an Unfavourable Conservation Status at a regional level within the Range States and territories listed in Annex 2 to the MoU ('Category 2' as defined in the MoU's Action Plan). There are 12 such species occurring in the EU.

The **EU Birds Directive** is the **most important instrument** to implement the MoU in the EU.

Most measures foreseen in the MoU have already been implemented in the EU through the Birds and Habitats Directives⁵ as can be seen in Appendix I. Any work done at EU level is undertaken in line with the EU legal framework and takes into account the 2017 Action Plan for nature, people and the economy, the EU species action plans, rulings from the Court of Justice of the European Union, as well as the results of LIFE⁶ projects and any conservation measures in Special Protection Areas (SPAs designated under the Birds Directive). It also takes into account on-going EU initiatives to address issues with a potential impact both inside and outside SPAs, such as wind farms, power lines and other large infrastructures, illegal killing, accidental poisoning⁷, habitat decline, sustainable farming, feeding of vultures and different types of disturbance.

Article 12 of the Raptors MoU refers also to national raptor strategies or equivalent for those migratory raptor species covered by the Raptors MoU. Such documents are under preparation in a few EU Member States. They must also take full consideration of the relevant EU legislation and initiatives as described above.

Structure of the document

The present document focuses on the implementation of the following six MoU Action Plan⁸ activities as shown in Table 1⁹:

1. Improvement of legal protection;
2. Protection and/or management of important sites and flyways;
3. Habitat conservation and sustainable management;
4. Raising awareness of problems facing birds of prey and of the measures needed to conserve them;
5. Monitoring bird of prey populations, carrying out conservation research and taking appropriate remedial measures;
6. Supporting measures.

This document provides information on 17 EU-objectives (or 'fields of activities') which are interlinked with the above six principal activities. The overview table below (Table 1) illustrates the relationship between the 17 objectives/activity fields in the EU and the six principal activities as defined in the MoU Action Plan.

The **details of the objectives/activities** are presented in **Appendix I**.

⁵ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7).

⁶ <http://ec.europa.eu/environment/life/index.htm>

⁷ EU Roadmap towards elimination illegal killing, taking and trade of birds http://ec.europa.eu/environment/nature/conservation/wildbirds/illegal_killing.htm. A proposal for EU action plan to prevent illegal poisoning of wildlife is available since November 2015 http://www.lawyersfornature.eu/wp-content/uploads/2016/04/EU-Action-Plan-to-prevent-poisoning_ENEC_SEO_BirdLife.pdf

⁸ During the preparation of this document guidance was sought from the 'Guidelines for Preparing National of Regional Conservation and Management Strategies' (Kovacs and Williams 2012)

⁹ These are defined in the Table 2 of the MoU Action Plan

Table 1. Overview on activities.

EU objectives / activity fields	MoU Action Plan principal activities					
	1	2	3	4	5	6
	Improve legal protection	Protect and/or manage important sites and flyways	Habitat conservation and sustainable management	Raise awareness of problems faced by birds of prey and measures needed to conserve them	Monitor bird of prey populations, carry out conservation research and take appropriate remedial measures	Supporting measures
1. Develop EU regional Strategy to implement MoU Action Plan						6.1
2. Site designation and management		2.1, 2.2, 2.3, 2.4				6.4
3. Mitigation of habitat loss and habitat restoration outside protected areas			3.1		5.3	
4. Integration of raptor conservation into sectoral policies			3.4	4.2		
5. Establish / maintain monitoring networks for raptors				4.5, 4.6	5.1, 5.2	6.4
6. Mitigation of electrocution and collision with overhead power lines and wind turbines	1.4	2.2, 2.4	3.2		5.5	
7. Halting persecution and deliberate disturbance: strengthening legal implementation and enforcement	1.2, 1.5					
8. Minimising the effects of pesticides and banning the use of poison baits	1.3, 1.5					
9. Mitigation of lead poisoning					5.4	
10. Establish/ maintain feeding for necrophagous birds			3.3			
11. Control of taking birds from the wild				4.6	5.8	6.4
12. Establish control over domestic breeding of raptors for falconry				4.6	5.7	6.4
13. Control over the re-introduction					5.6	
14. Development and implementation of single- or multi-species Action Plans						6.2
15. Implement scientific research supporting raptor conservation					5.9, 5.10	6.4
16. Raise public awareness and education about raptor conservation				4.1, 4.2, 4.3 4.4, 4.6		
17. Multi-national Environmental Agreements	1.1, 1.6					6.3

Red-footed Falcon *Falco vespertinus*. © Otars Opermanis



2. General information

Date the CMS Raptors MoU became effective in the EU (paragraph 28 of the MoU)	1 December 2011
Territory to which this document applies	All 28 EU Member States: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom and only territories within the European Range of the Raptors MoU (including the Macaronesian islands)
Designated Contact Point (paragraph 10 of the MoU)	Micheal O'Briain, European Commission, DG Environment, Nature Protection Unit
Date of submission	29 November 2019



3. Biological assessment – EU overview

3.1 EU FACT-SHEET

The EU is currently made up of 28 Member States. Information about the European Union and its natural conditions, as well as state of nature, can be found in publications issued by the European Commission¹⁰.

3.2 RELEVANT EU LEGAL AND POLICY INSTRUMENTS

Birds Directive

The **Birds Directive**¹¹ protects all regularly occurring birds across their entire natural range within the EU, irrespective of national boundaries. It requires EU Member States to take all necessary measures to maintain the populations of the wild birds at levels determined by their ecological, scientific and cultural needs, having regard also to economic and recreational needs.

It requires Member States to designate, implement and manage sites that are particularly important for conserving and restoring EU biodiversity (known as Special Protection Areas or SPAs), and to strictly protect all wild bird species as well as their breeding sites and resting places, wherever they occur (strict protection regime).

In particular Member States must:

- protect all bird species from persecution and unsustainable exploitation;
- take special conservation measures to maintain and restore the habitats of the species; and
- establish Special Protection Areas, in order to conserve a sufficient area of habitat for threatened and migratory birds within the EU.

In addition, the Birds Directive includes a requirement to take requisite measures to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species covered by the Directive.

By implementing and applying the Birds Directive, the 28 EU Member States can achieve far more together than they could if each Member State other acted operated on its own. Since its adoption 40 years ago, many of Europe's most threatened birds have been successfully saved from extinction or further decline thanks to the Birds Directive.

Habitats Directive

Like the Birds Directive, the **Habitats Directive**¹², is built around two pillars: the Natura 2000 network of protected sites and a strict system of species protection. All in all, the Habitats Directive protects

¹⁰ http://ec.europa.eu/environment/nature/pdf/state_of_nature_en.pdf and http://ec.europa.eu/environment/nature/info/pubs/directives_en.htm

¹¹ http://ec.europa.eu/environment/nature/legislation/birdsdirective/index_en.htm

¹² http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

over 1,000 animals and plant species as well as over 230 habitat types (e.g. forests, meadows, wetlands, etc.), considered of European importance.

The Natura 2000¹³ Network lies in the heart of the Birds and Habitats Directives. It is comprised of Sites of Community Importance (SCIs) (which Member States then need to designate as Special Areas of Conservation (SAC)) under the Habitats Directive, and of Special Protection Areas (SPAs) classified under the Birds Directive. The Network currently comprises over 27,750 sites across 28 EU Member States and covers over 18% of the EU land surface area (1,322,630 km²) as well as significant parts (9%) of its surrounding seas. Natura 2000 is a core element of the wider EU green infrastructure, which together form a great part of our living natural capital.

Natura 2000 is not a system of strict nature reserves where all human activities are excluded. Most of the land is privately owned. Hence, the emphasis is on ensuring the sustainable management of these areas, both ecologically and economically. The establishment of this protected area network also fulfils EU obligations under Convention on Biological Diversity.

In Natura 2000 sites, Member States must draw up and implement, where necessary, appropriate conservation measures to maintain or restore the natural habitats and the populations of species of wild fauna and flora present within each sites according to their ecological requirements. Guidance documents¹⁴ have also been prepared to support these activities.

Regarding new developments in and around Natura 2000 sites, the Habitats Directive (Article 6) establishes **a permitting procedure** for any plans and projects that are likely to have a significant effect on one or more sites, either individually or in combination with other plans and projects.

Potentially damaging projects must undergo an **appropriate assessment** to determine the precise nature and extent of the potential impacts on the species and habitats of EU importance present. It is then up to the competent national authorities to decide whether or not to approve the plan or project. This can only be done after they have ascertained that it will not adversely affect the integrity of that site. The onus is on proving the absence of effects rather than their presence. Exceptions may, however, be possible for certain plans or projects if they are considered necessary for imperative reasons of overriding public interest, there are no other alternatives, and all the necessary compensatory measures are in place to ensure that the overall coherence of the Natura 2000 Network is protected.

In December 2016, the European Commission concluded as part of a '**Fitness Check**', that the Birds and Habitats Directives are fit for purpose, but improvements in implementation are needed to ensure that they deliver their full potential. An **Action Plan for nature, people and the economy** (2017–2019)¹⁵ was subsequently adopted to address these concerns. The Action Plan, which requires the implementation of 15 main actions and over 100 individual measures by 2019, has both a direct and indirect relevance to raptor conservation.

All actions in the Action Plan are of relevant for birds of prey species (e.g. Action 1 on guidance, Action 5 on bilateral meetings in the context of Environmental Implementation Review, Action 6 on Natura 2000 Biogeographical Process, Action 7 on developing Action Plans for species and habitats and Action 8 on strengthening investments in nature).

¹³ http://ec.europa.eu/environment/nature/natura2000/index_en.htm and Natura 2000 public viewer <http://natura2000.eea.europa.eu/#>

¹⁴ http://ec.europa.eu/environment/nature/natura2000/index_en.htm

¹⁵ http://ec.europa.eu/environment/nature/legislation/fitness_check/action_plan/index_en.htm

Since 2012 the so-called “**Natura 2000 biogeographical process**”¹⁶ assists Member States in managing Natura 2000 sites as a coherent ecological network, through exchanging experience and best practice, identifying common objectives and priorities and enhancing cooperation and synergies. The process also includes a web-based Communication Platform¹⁷ to facilitate communication on relevant activities, and which holds key documents. Although this process may not always deal directly with raptor conservation, its strong emphasis on habitat management is relevant for raptor conservation as well.

European Bird Species Action Plans

Since 1993, the EU has funded the development and updating of **Species Action Plans**¹⁸ for 55 bird species listed in Annex I of the Birds Directive – 16 of which are raptors – to help the recovery of these species. Some of these plans have also been endorsed by the Bern Convention, the CMS or AEWA. As shown in Appendix II of this document, these plans cover 12 species of migratory raptors listed in Table 1 of the Raptors MoU Action Plan under Category 1 and 2, in particular all ten Category 1 species and two Category 2 species. Another two former Category 2 species (Eleonora’s Falcon and Gyrfalcon) with Action Plans were downgraded to Category 3 in 2015. Single species action plans have been recently drawn up for Cinereous Vulture *Aegypius monachus* and Bearded Vulture *Gypaetus barbatus* under the LIFE EuroSAP project (2014–2018)¹⁹, in the context of Action 7 of the Action Plan for nature, people and the economy.

The Species Action Plans provide information about the status, ecology, threats of each species and describe the key actions that are required to improve their conservation status in Europe. Each plan is the result of an extensive consultation and, as far as possible, consensus between government agencies, NGOs and individual experts in Europe. They provide a valuable framework for developing and implementing more detailed national and regional plans. These plans can also help developing project proposals under the LIFE programme for the recovery of targeted species, as well as under the Rural Development Programme and the Operational Programmes under various other EU funds.

Raptor conservation is also being addressed through the EU’s wider Biodiversity policy

In 2011, the European Commission adopted an ambitious new **strategy to halt the loss of biodiversity and ecosystem services in the EU by 2020**²⁰. It lists six main targets, and 20 actions to help Europe reach its goal. The six targets cover:

1. Full implementation of EU nature legislation to protect biodiversity
2. Better protection and restoration of ecosystems, and more use of green infrastructure
3. More sustainable agriculture and forestry
4. Better management of fish stocks
5. Tighter controls on invasive alien species
6. A bigger EU contribution to averting global biodiversity loss.

¹⁶ http://ec.europa.eu/environment/nature/natura2000/seminars_en.htm

¹⁷ http://ec.europa.eu/environment/nature/natura2000/platform/index_en.htm

¹⁸ http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/index_en.htm

¹⁹ <http://www.birdlife.org/europe-and-central-asia/project/life-eurosap> and Species Action Plan Tracking Tool http://www.trackingactionplans.org/pages/landing_sappt.html

²⁰ http://ec.europa.eu/environment/nature/biodiversity/strategy/index_en.htm

Targets 1, 2, 3 and 6 are of particular relevance for birds of prey species. Target 2, e.g., emphasises restoration, which is relevant for species such as the Saker Falcon *Falco cherrug*, Peregrine Falcon *Falco peregrinus*, White-tailed Sea-eagle *Haliaeetus albicilla*, Red Kite *Milvus milvus*, Bonelli's Eagle *Aquila fasciata*, Bearded Vulture *Gypaeetus barbatus*, Cinereous Vulture *Aegypius monachus*, Griffon Vulture *Gyps fulvus* and the Northern Goshawk *Accipiter gentilis*. Other relevant actions under Target 2 addressing habitat loss are: green infrastructure (Action 6b) for which a specific Strategy was adopted in 2013 and an action to develop guidance and a set of practical tools to support the integration of ecosystems into planning and decision-making processes is part of the Action Plan for nature, people and the economy (Action 1b).

Under Target 3, particularly relevant are Action 9 concerning integrating biodiversity in Rural Development and facilitating collaboration among farmers and foresters which is also part of the Action Plan for nature, people and the economy: its Action 9 on promoting synergies with funding from the Common Agriculture Policy which is especially relevant for declining²¹ birds of prey linked to agricultural habitats such as Montagu's Harrier *Circus pygargus*, Hen Harrier *Circus cyaneus*, Barn Owl *Tyto alba* and Little Owl *Athene noctua*, and Actions 11 and 12 to encourage forest holders to protect and enhance forest biodiversity and integrate biodiversity in forest management plans.

Target 6 concerns the mainstreaming of biodiversity in EU development cooperation with the aim of protecting ecosystems that are fundamental for economic development and minimizing negative impacts from economic development.

The EU also plays an active role in the work of **multilateral environmental agreements** (MEAs), such as CBD, CMS, Bern Convention and CITES. They set the framework for international co-operation on biodiversity and species' conservation, including birds of prey. The EU is actively involved in the implementation of the Tunis Action Plan under the Bern Convention and in the Task Force on illegal killing, taking and trade of birds in the Mediterranean region. The Commission provided financing to the Task Force for period 2016–2018.

Other EU legislation plays a role as well

In addition to the Birds and the Habitats Directives, the **EIA Directive** and the **SEA Directive** aim to ensure a high level of environmental protection and contribute to the integration of environmental considerations into the preparation and authorization of projects, plans and programmes, with a view to promoting sustainable development. Where the latter is applicable for projects, the former applies towards the strategic and planning stage, i.e. plans and programmes.

According to the EIA and SEA directives, before authorizing a particular project, plan or programme, their impact on biodiversity and Natura 2000 should be duly taken into account. This should be done at the very beginning of both procedures, i.e. the screening and the scoping stages, and followed throughout the entire procedure's cycle. The assessments need to cover the direct effects and any indirect ones, secondary, cumulative, short, medium and long-term, permanent and temporary, positive or negative effects of projects, plans or programmes. Aiming to streamline the environmental assessment procedures, as well as to ensure consistent and complete integration of biodiversity and nature issues therein, the Commission issued two guidance documents on integrating Climate Change and Biodiversity into EIA, and SEA, respectively²².

²¹ Declining breeding population within the EU27 either in short or long-term period <https://bd.eionet.europa.eu/article12/>

²² <http://ec.europa.eu/environment/eia/pdf/EIA%20Guidance.pdf> and <http://ec.europa.eu/environment/eia/pdf/SEA%20Guidance.pdf>

Additionally, the **Environmental Liability Directive**²³ (aims at preventing and remedying environmental damage) and **Environmental Crime Directive**²⁴ (sets minimum requirements to be implemented in national criminal laws) are relevant to raptor species. These Directives apply to raptor species listed in Annex I of the Birds Directive as well as regularly occurring migratory raptor species.

3.3 MONITORING OF RAPTOR POPULATIONS

Raptor monitoring has a long tradition in many European Union countries. Appendix II provides an overview of raptor monitoring in the EU according to each regularly occurring species (see column “EU countries where species is monitored”). This overview concerns more or less specialised single- or multi-species raptor monitoring programmes. Many are implemented not only by professional scientists but also with the help of citizen science.

Since 2012, all Member States are reporting on the status and trends of all raptor species under the Birds Directive through its six-yearly Article 12 report²⁵. Once compiled at EU level, such data are used for measuring progress under Target 1 of the EU Biodiversity Strategy and can be used as well to assess progress towards achieving the goals of the Raptors MoU.

Overall coverage of raptor species in national monitoring programmes across EU territory seems to be relatively good, although some gaps remain. There have also been particular successes in establishing sustainable and resource-efficient pan-European network for raptor monitoring, e.g. EURAPMON project²⁶.

3.4 INVENTORY OF SPECIES

In total 39 species of diurnal birds of prey and 13 owls regularly occur in the EU. Twenty-two concern Category 1 (10 species) and Category 2 (12 species) birds of prey species. Appendix II presents an overview of their status which is based on the latest information from the Article 12 reporting under the Birds Directive. As can be seen, half of these species (Category 1 and 2) have Threatened/Near threatened status in the EU (11), the other half are considered ‘Secure’ species (9) or species with Unknown status (2). Also, short-term trends show similar patterns: 7 species have increasing, 5 decreasing, 7 uncertain and 3 stable populations.

The latest Red List status (2015) both in the EU27 and Europe is also provided in Appendix II.

According to the State of Nature in the EU report²⁷, the conservation status of raptors’ taxonomic groups is the following: 62% of owls have a ‘Secure’ population status compared to 64% of Hawks and Eagles and to only 50% of Falcons (see Table 2 below).

²³ Directive 2004/35/EC. OJ L 143, 30.4.2004, pp. 56–75

²⁴ Directive 2008/99/EC. OJ C 10, 15.1.2008, p. 47

²⁵ https://bd.eionet.europa.eu/activities/Reporting/Article_12/Reports_2013

²⁶ http://www.eurapmon.net/sites/default/files/pdf-s/eurapmon_final_report.pdf

²⁷ This report is based on the reporting under the EU Habitats and Birds Directives 2007–2012 <https://www.eea.europa.eu/publications/state-of-nature-in-the-eu>,

Table 2. Population status of raptors by taxonomic order (%). Source: EEA, 2015a, Article 12 reports and assessments.

Order	Secure	Unknown	Near threatened, declining, depleted	Threatened
Hawks & Eagles (28)	64.3	3.6	7.1	25.0
Owls (13)	61.5	30.8	0	7.7
Falcons (10)	50.0	10.0	0	40.0

Note: the number of assessments is indicated in parenthesis.

The second Meeting of Signatories of MoU in 2015 introduced some changes in Categories 1 and 2 (Table 1 of Annex 3 of the Raptors MoU). Regarding EU species and Category 1, Bearded Vulture *Gypaetus barbatus* was added and Lesser Kestrel *Falco naumanni* was downgraded to Category 2. Regarding the Category 2, European Honey-buzzard *Pernis apivorus*, Montagu's Harrier *Circus pygargus*, Eurasian Hobby *Falco Subbuteo* and Northern Long-eared Owl *Asio otus* were added, but Eleonora's Falcon *Falco eleonora*, Gyrfalcon *Falco rusticolus*, Osprey *Pandion haliaetus*, White-tailed Sea-eagle *Haliaeetus albicilla*, Short-toed Snake-eagle *Circaetus gallicus*, Levant Sparrowhawk *Accipiter brevipes*, Long-legged Buzzard *Buteo rufinus*, Lesser Spotted Eagle *Clanga pomarina*, Golden Eagle *Aquila chrysaetos* and Booted Eagle *Hieraetus pennatus* were deleted (downgraded to Category 3, i.e. all other migratory species).

The document (UNEP/CMS/Raptors/MOS2/13/Rev. 1/Annex B)²⁸ explains that Category 2 corresponds to species listing as 'Least Concern' on the Global IUCN Red List, when it meets at least one of the three following criteria:

- Threatened or Near-Threatened on the European Red List (2015)²⁹
- Status of Species of European Conservation Concern (BirdLife International 2015)
- Declining Global trend according to the BirdLife International database (2015).

It is encouraging to see that more species are being downgraded. This possibly reflects some raptor conservation success in recent decades. But it is also obvious that the addition of four new species is due to a negative Global trend rather than negative population dynamics within EU.

From the EU perspective, some of these changes may appear odd, e.g. that MoU is upgrading species with much larger population sizes than those which are downgraded. For example, Common Kestrel *Falco tinnunculus* (with a healthy population of 314,000–460,000 breeding pairs) remains in the Category 2 only because it has a negative Global trend, while such charismatic species for Europe as, for example, Golden Eagle *Aquila chrysaetos* (population 4,800–5,700 pairs) and Osprey *Pandion haliaetus* (population 5,700–7,500 pairs) are being downgraded to Category 3 with low conservation priority. This illustrates that regional conservation priorities do not always match Global priorities.

3.5 INVENTORY OF SITES

Appendix III summarises the designated protected areas (Natura 2000 sites) for Category 1 and 2 species. There are over 13,169 raptor individuals recorded in the Natura 2000 database in 5,494 sites. Site distribution, particularly as regards to Category 1 species, is rather uneven across the EU but reflects well the actual distribution of Category 1 species (Figure 1 of Appendix III). As can be seen

²⁸ https://www.cms.int/raptors/sites/default/files/document/mos2_proposals_species_list_rev1_e_0.pdf

²⁹ http://ec.europa.eu/environment/nature/conservation/species/redlist/downloads/European_birds.pdf

from the distribution of Natura 2000 sites designated for Category 1 raptors, the majority of sites are located in Southern Europe.

Table 5 of Appendix III shows that the majority of Important Bird Areas listed in Table 3 of MoU Action Plan for raptors are either fully or partly under protection, having been designated as SPAs under the Birds Directive. However, some potential designations are missing, e.g. from Denmark (4), France (2), Italy (1) and Spain (1). Table 4 provides information on the percentage of Category 1 and 2 raptor populations within the Natura 2000 network per Member State.

Birds of prey in the EU require a diversity of habitats for breeding, feeding and roosting, details of which are summarised for individual species by Tucker & Evans (1997), Snow & Perrins (1998) Stroud (2003) and in individual species action plans. While old-growth forests with large nesting-trees are important breeding habitats for large eagles, some falcons need rocky cliffs to nest. Other raptors use open landscapes, steppe-like habitats, non-intensive farmland, mires or wetlands and other humid areas and grasslands. For different harrier species even intensively used cornfields may be an important breeding habitat.

3.6 THREAT ASSESSMENT

EU populations of birds of prey are under increasing pressure. The magnitude of certain threats is amplified for those populations that are slow to recover and remain vulnerable for a long time, even after the immediate reason for their decline has been eliminated. Similarly, some threats are especially important because of the fact that birds of prey are at the top of the food chain.

Appendix IV presents an analysis of the main threats and the raptor species which are affected by them. This is based on Birds Directive Article 12 reports from the Member States (NB Croatia not covered due to its accession to the EU one year after the end of the reporting cycle referred to in this document). The threats to the raptor species fall under several categories used for the Article 12 reports; the six most commonly reported threat categories are 'trapping, poisoning, poaching', 'wind energy production', 'use of biocides and chemicals', 'agricultural intensification', various sport and recreational activities and 'forest management'.

Historically raptors have been heavily persecuted by man, but this practice has long been banned under the Birds Directive. However, in many areas **illegal killing** continues nonetheless, e.g. mainly to reduce predation on game species and domestic animals. Effective enforcement actions still need more attention. As revealed by the Article 12 reporting results, trapping, illegal killing and poisoning constitute together by far the most important threat in the EU (details in Appendix IV). Responses to the threats can be found in Annex I (EU activities 1–17).

Poisons form the most important threat for all scavenging birds of prey in Europe today. It is caused by the illegal use of baits to poison terrestrial predators, to protect livestock and game or specifically to target birds of prey themselves. Although the use of poison baits is strictly prohibited in the EU it is still widespread in many countries³⁰. Pesticides that are legally used in agriculture are often used illegally in poison baits³¹. As these chemicals are easy to obtain on the free market, the control of their application remains a huge challenge. Potential sources of secondary poisoning can come from

³⁰ See e.g. A proposal for EU action plan to prevent illegal poisoning of wildlife (2015) http://www.lawyersfornature.eu/wp-content/uploads/2016/04/EU-Action-Plan-to-prevent-poisoning_ENEC_SEO_BirdLife.pdf

³¹ See the reference above

the consumption of inappropriately disposed poisoned animals (e.g. rodents) at rubbish dumps, the consumption of dead livestock treated with veterinary medicines, or the consumption of prey species containing lead ammunition³². The authorisation of the use of diclofenac in Italy and Spain, notably, has raised significant concerns.

Actions to strengthen the legal implementation and enforcement to halt persecution in the EU are described under the EU Activity 7 in Appendix I. Actions to minimise the effects of pesticides and prohibit the use of poison baits are described under the EU Activity 8 and mitigation measures for lead poisoning are given under the EU Activity 9. These activities include EU-wide and broader actions aimed at eliminating illegal killing, taking and trade of birds as well as the development of IMPEL-ESIX to facilitate information exchange between the enforcement authorities and stakeholders.

In addition, the EU Member States are encouraged to implement the proposal for the EU action plan to prevent illegal poisoning of wildlife. Further to the opinion of the European Chemical Agency (ECHA) on the restriction on the use of lead gunshot in and over wetlands³³, the Commission is preparing an amendment to the REACH Regulation aimed at banning the use of lead gunshot in and over wetlands. ECHA also produced a report³⁴ on non-wetland uses of lead in ammunition (gunshot and bullets) and in fishing weights. The report found sufficient evidence of risk to justify additional measures.

Examples: Concerning single species action plans, e.g. the action plan for Cinereous Vulture includes over 20 actions aiming at reducing poisoning from poison baits, agrochemicals, veterinary drugs and lead. Illegal use of poison baits is a critical threat also for the Red Kite *Milvus milvus* and the action plan for this species (2010) lists actions such as developing/promoting safe methods for, and stricter monitoring of, predator control by farmers and game managers; strengthening the effective enforcement of legislation and raising awareness of the negative effects of poisons. LIFE projects have played a pivotal role in piloting actions to help prevent and reduce illegal activities across the EU. Birds of prey e.g. Eastern Imperial Eagle *Aquila heliaca*, Lesser-spotted Eagle *Clanga pomarina*, Spanish Imperial Eagle *Aquila adalberti*, all vulture species and Hen Harrier *Circus cyaneus* have been targeted through LIFE projects.

Another threat consists of poorly designed **power lines** and **wind energy infrastructure**. As can be seen from the Appendix IV, it has affected many species in many European Union countries. Actions to mitigate electrocution and collision with overhead power lines and wind turbines are described under the EU Activity 6. This involves for instance the enforcement of EU directives on the environmental assessments of projects and plans and the preparation of sector specific EU guidance documents to ensure that both wind energy developments and power lines are compatible with EU nature legislation. The LIFE programme has helped in several EU countries to mitigate impacts of especially overhead powerlines on birds of prey.

Habitat loss due to human activities (e.g. agriculture, forestry, mineral resource extraction, and urbanisation) is also one of the most important threats to birds in Europe. In particular, raptors are often affected by modification of agricultural activities (intensification, modification of cultivation practices, abandonment of pastoral systems, etc.) (see Appendix IV). Large birds of prey and some (but not all) scavengers, are very sensitive, because they typically require large expanses of well preserved and traditionally managed habitat and do not easily coexist with humans. Actions for site management,

³² On lead ammunition see e.g. Arnemo *et al.* 2016 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5161761/>

³³ <https://echa.europa.eu/documents/10162/b092e670-3266-fb5d-6296-544eaccb5d4a>

³⁴ https://echa.europa.eu/documents/10162/13641/lead_ammunition_investigation_report_en.pdf/efdc0ae4-c7be-ee71-48a3-bb8abe20374a?_cldee=bWltc2VjcmVOYXJpYXRAZWNoYS5ldXJvcGEuZXU%3d&recipientid=lead-e2715268b1e0e71180fa005056952b31-764e4ae31ab140aa8a4260d1344d57a1&esid=9e1c1d24-5cb6-e811-8104-005056952b31

to mitigate habitat loss and habitat restoration outside protected areas, to better integrate raptor conservation into sectoral policies are described under the EU Activities 2, 3 and 4 (Appendix I).

Examples: The Single Species Action Plans for the Greater Spotted Eagle *Clanga clanga*, Eastern Imperial Eagle *Aquila heliaca* and Lesser Spotted Eagle *Clanga pomarina* identify nest disturbance of these forest-dwelling birds of prey by clear cutting and selective cutting of old large trees is a threat of critical importance. These Action Plans suggest that all forestry activity should be forbidden in their nesting habitat within at least a 300 m radius around an active nest. To improve protection of breeding habitats, the SAP for the Cinereous Vulture *Aegypius monachus* proposes as one of the high priority actions to investigate and identify key nesting and roosting areas and assess vulnerability in relation to habitat destruction, as well as working with local communities to show the importance and impact on Cinereous Vulture populations.

Reduction of prey availability (including carcasses)³⁵ is also a threat to raptor species. This can mean lack of naturally available food and reduced numbers of domestic livestock due to changes in agricultural practices. Also stricter sanitation and veterinary controls have caused a reduction in available carcasses. Actions to establish and maintain feeding for necrophagous birds are described under the EU Activity 10 (Appendix I).

Examples: Food availability and actions to improve the situation are covered in the recent SAPs for the Bearded, Cinereous and Egyptian Vulture. E.g. the SAP for the Cinereous Vulture *Aegypius monachus* (2018) identifies seven short or long-term actions of high priority for developing and applying scavenger-friendly veterinary regulations for carcass disposal and for reintroducing/restoring wild ungulate and rabbit populations in key sites for the species.

Also, the **illegal taking of birds in nature** is among the main threats for raptors (see Appendix IV), i.e., catching of birds alive or taking juveniles from nests for falconry and domestic breeding (see also Stroud 2003; BirdLife International 2004; Article 12 reports at Member State level³⁶). Actions to control taking birds from the wild are described under the EU Activity 11 and to prohibit illegal trapping and trade are presented under the EU Activity 7.

The threat '**Outdoor sports and leisure activities, recreational activities**' cover activities such as climbing, off road motorised driving and paragliding. These kind of activities during the breeding season and in proximity to the nests can have a significant negative impact on breeding activities of the birds of prey (separately or linked to forest management and agricultural activities). This threat is linked to the EU Activity 2 on site designation and management and to Activity 7 on the need to strengthen legal implementation and enforcement (Appendix I). In the EU all birds of prey benefit from full protection under the Birds Directive. Full enforcement of the law is a key action.

Examples: According to the Action Plan for the Saker Falcon *Falco cherrug* (2015) disturbance is a threat of high importance, involving activities such as uncontrolled tourism, cliff climbing, bird watching and photography (and agricultural or forestry activities and hunting). The Action Plan proposes to reach agreement on the timing and routing of potentially disturbing activities such as agriculture, forestry or hunting near nest sites and if necessary, restrict access to the nest sites. The flyway Action Plan for the Egyptian Vulture (2016) refers to studies stating that

³⁵ Under the Article 12 reporting 'Reduction of prey availability' is a subcategory under the threat category 'Reduction or loss of specific habitat features' https://bd.eionet.europa.eu/activities/Reporting/Article_12/reference_portal

³⁶ <https://bd.eionet.europa.eu/article12/>

human disturbance, including recreational activities (e.g. rock climbing)³⁷ near breeding sites, is a significant threat in almost 40% of SPAs designated for this species in Bulgaria and Greece. Creating a network of “Safe zones” around the core breeding areas and increasing awareness raising are examples of actions to combat this threat.

Developing and implementing single species action plans plays a key role in combatting all the above-mentioned threats (see EU Activity 14 in Appendix I). To date an action plan at the EU or European level has been prepared for all Category 1 species and for two Category 2 species occurring in the EU. In addition, since 2017 there is also the Multi-Species Action Plan to conserve African-Eurasian Vultures by CMS³⁸.

3.7 STAKEHOLDER INVOLVEMENT

Effective conservation activities require the active engagement of stakeholders. The Fitness Check of the Nature Directives highlighted the need to bring different stakeholders together for the successful achievement of conservation objectives. Stakeholders comprise people representing different sectors such as public administrations, conservation constituencies, researchers, landowners, economic sectors and other users (e.g. agriculture, forestry, urban development, the hunting community including falconry, tourism). Strengthening stakeholder involvement is one of the priorities of the **Action Plan for nature, people and the economy**.

In 2004, Birdlife and the Federation of Associations for Hunting and Conservation in the EU (FACE) signed an agreement under the auspices of the European Commission³⁹ to resolve conflicts and develop cooperation over the implementation of the Birds Directive. This encouraged hunters to contribute to bird conservation, which is important in terms of managing habitats and prey populations that are important for raptors.

Stakeholders may contribute positively or negatively to the conservation of raptors. The taking of raptors by falconers has for instance, an immediate negative effect, but falconry can also contribute to domestic breeding, reintroduction, research and education⁴⁰. Links between stakeholders and raptor conservation needs are addressed in the species action plans.

There are almost 250 LIFE projects (1992–2017) which target raptor species and many of them have been led by stakeholders⁴¹ often in partnership with local, regional or national authorities.

In the context of fighting against illegal killing of birds, the European Commission organises once or twice a year an informal meeting with stakeholders to discuss recent developments and needs for future work. The Bern Convention organises once a year a Special Focal Points’ meeting on illegal killing of birds where both authorities and stakeholders of the Bern Convention range countries and the Commission are involved.

³⁷ According to the Action Plan for the Egyptian Vulture similar impacts result from non-recreational human activities, including logging, honey collecting, treasure hunting and mining, and construction (e.g. roads, dams, wind farms, quarries, trail construction)

³⁸ https://www.cms.int/raptors/sites/default/files/publication/vulture-msap_e.pdf

³⁹ http://ec.europa.eu/environment/nature/conservation/wildbirds/hunting/chapter_en.htm

⁴⁰ Kenward, R.E. and Larsson, T. 2006. A survey of falconry in the European Union in the context of the Wild Birds Directive. Report by IAF & Sweden for ORNIS (results also in Kenward, R.E. and Gage, M.J.G. 2008. Opportunities in falconry for conservation through sustainable use. Pp. 181–204 in Peregrine Falcon Populations – status and perspectives in the 21st Century: EPFWG/Turul, Warsaw)

⁴¹ <http://ec.europa.eu/environment/life/publications/lifepublications/lifefocus/documents/birds2013.pdf>

4. Existing and potential sources of funding

Funding for nature conservation in the EU is available through different co-financing mechanisms.

While the main responsibility for financing Natura 2000 lies with the Member States, the Habitats Directive explicitly links the delivery of necessary conservation measures for Natura 2000 to EU co-financing. Since 2007, most EU co-funding for Natura 2000 has been made available through the integration of biodiversity related measures into various existing EU funds or instruments. This integrated co-financing model remains the basis for EU funding for Natura 2000 in the current multiannual financial period 2014–2020. The EU funds currently available for financing Natura 2000 include (see details in Appendix V):

- European Agricultural Fund for Rural Development (EAFRD);
- European Maritime and Fisheries Fund (EMFF);
- Cohesion policy funds:
 - European Regional Development Fund (ERDF);
 - European Social Fund (ESF);
 - Cohesion Fund;
- European financial instrument for the environment (LIFE); and
- Framework Programme for research and innovation (Horizon 2020).

The first five funds (so called ‘European Structural and Investment Funds’ or ESI Funds) are managed by the Member States on the basis of programmes developed by Member States and approved by the Commission (so called “shared management” funds). LIFE and Horizon 2020, on the other hand, are managed directly by the Commission. Dedicated fund-specific EU regulations lay down detailed provisions concerning measures which may be supported by these funds. More details on these funds are given in Appendix V.

The Fitness Check of the Nature Directives identified funding shortages as a major obstacle to implementation of the Nature Directives. Therefore, the **Action Plan for nature, people and the economy** aims to make better use of the available EU funding including a 10% increase in the LIFE budget dedicated to projects supporting the conservation of nature and biodiversity and to render nature more attractive for private investment⁴².

EU LIFE Programme plays a major role in conservation of raptor species

The LIFE Programme⁴³ is the EU’s financial instrument supporting environmental, nature conservation and climate action projects throughout the EU. Since 1992, LIFE has co-financed some 4 900 projects, contributing approximately €5 billion to the protection of the environment and climate. LIFE has co-financed over 1700 nature and biodiversity projects. EU support to the tune of more than €2.2 billion forms part of a total investment of €3.8 billion in nature conservation. These projects have done much

⁴² Priority C of the Nature Action Plan: Strengthening investment in Natura 2000 and improving synergies with EU funding instruments

⁴³ <http://ec.europa.eu/environment/life/index.htm> <http://ec.europa.eu/environment/life/index.htm>

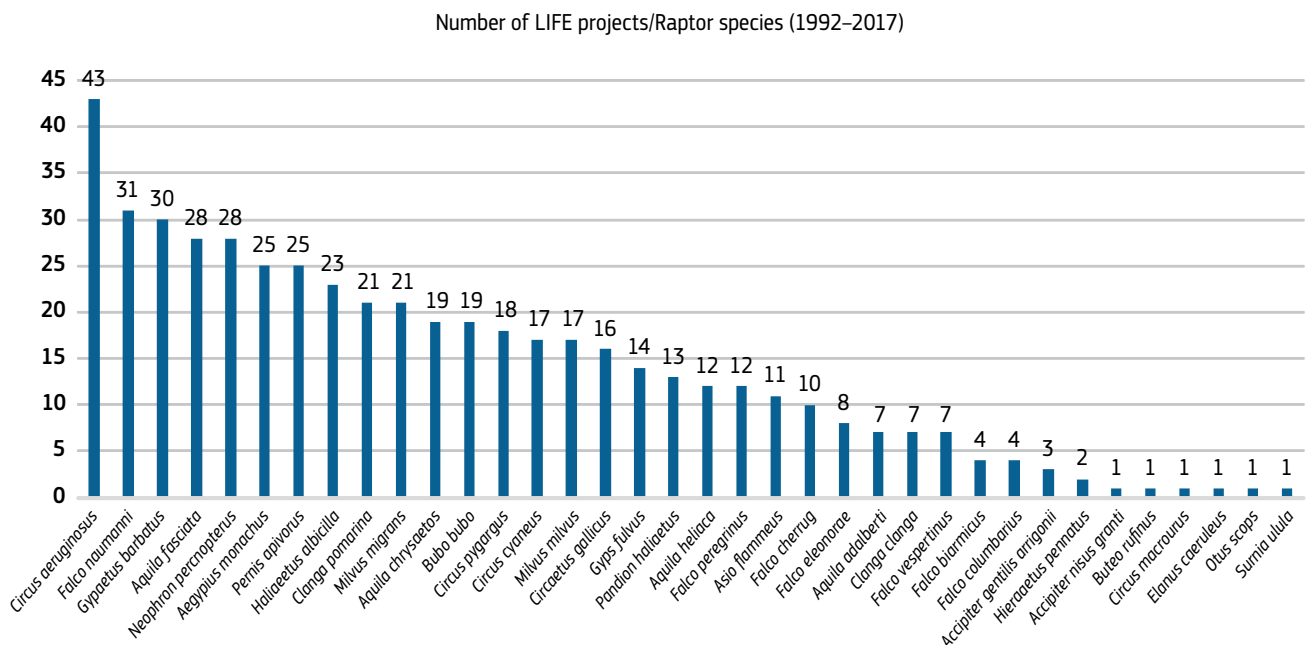
to implement the EU biodiversity policy, in particular the Nature Directives (the Birds Directive and Habitats Directive).

LIFE has co-financed almost 250 projects (1992–2017) and actions for raptors at national or multinational level (see Figure 1 below). There are for example altogether 30 projects on Bearded Vulture *Gypaetus barbatus*, the reintroduction of the Golden Eagle *Aquila chrysaetos* in Ireland, saving Imperial Eagle *Aquila heliaca* in Hungary, adaptation of power lines in Spain and strategies against poisoning of raptors e.g. in Spain.

Since 2000, 25 LIFE projects have directly supported the implementation of the previous Cinereous Vulture SAP, with a total budget of more than 55 million Euros, from which almost 38 million Euros is EU contribution⁴⁴.

Some species listed in Annex I of the Birds Directive are considered as priority for funding under the LIFE programme. Projects that focus on practical conservation measures for any of these bird species can benefit from a higher EU co-funding rate, up to 75%. There are 16 raptors in this list⁴⁵. All Category 1 species except Pallid harrier *Circus macrourus* and Red Kite *Milvus milvus* benefit on this higher co-financing rate. However, concerning Category 2 species only Lanner Falcon *Falco biarmicus* and Lesser Kestrel *F. naumanni* are listed as priority species for LIFE funding (but the other Category 2 species are not listed in Annex I of the Birds Directive). The species list for priority funding has not been updated since 2014.

Figure 1. Number of LIFE projects dedicated to raptor species.



⁴⁴ The new SAP for Cinereous Vulture <http://www.trackingactionplans.org/SAPTT/downloadDocuments/openDocument?idDocument=52>

⁴⁵ http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/list_annex1.pdf

5. Conclusions

In the EU, the main legal tools for implementing the Action Plan annexed to the Raptors MoU are the Birds and Habitats Directives. Although it is not the only relevant EU funding instrument the LIFE Fund is a strategically important source of funding for the implementation of the relevant measures (see Appendix I for details). EU supported action plans for individual raptor species also help identify conservation measure and help identify priorities for investments under LIFE and other funds. Furthermore, the “EU Biodiversity Strategy to 2020” contributes to the implementation of the MoU. Member States are required to put in place systems for all Raptor species present in the EU to ensure:

- Site protection and management
- Strict species (individual) protection regime
- Monitoring and reporting
- Funding conservation activities.

However, a substantial improvement in the implementation of the Nature Directives remains to be done as concluded by the Nature Fitness Check That is the reason why the Commission adopted the Action Plan for nature, people and the economy. Enhanced implementation of the Directives by Member States should lead to significant improvements in the conservation status of raptors’ species.

Some activities in this document have been defined rather broadly, thus the EU Member States are encouraged to develop their national strategies and action plans to further identify and establish the required activities at the necessary detail at national and regional levels.

Some activities in this document have been defined rather broadly, thus the EU Member States are encouraged to develop their national strategies and action plans to map necessary activities more in detail at national level.



6. References

- BirdLife International (2004 a), *Birds in Europe: population estimates, trends and conservation status*. Cambridge, UK: BirdLife International. (BirdLife Conservation Series No. 12).
- BirdLife International (2004 b), *Birds in the European Union: a status assessment*. Wageningen, The Netherlands: BirdLife International.
- Fisher, I.J., Pain, D.J., Thomas, V.J. 2006. A review of lead poisoning from ammunition sources in terrestrial birds. *Biological Conservation* 131: 421–432.
- Kenward, R.E. and Larson, T. 2006. A survey of falconry in the European Union in the context of the Wild Birds Directive. Report by IAF & Sweden for ORNIS (results also in Kenward, R.E. and Gage, M.J.G. 2008. Opportunities in falconry for conservation through sustainable use. Pp. 181–204 in *Peregrine Falcon Populations – status and perspectives in the 21st Century*: EPFWG/Turul, Warsaw).
- Kovacs, A., Williams, N.P. 2012. *Guidelines for Preparing National or Regional Raptor Conservation and Management Strategies*. UNEP/CMS.
- Snow, D.W. & Perrins, C.M. 1998. *The Birds of the Western Palearctic. Volume 1: Non-Passerines*. Concise Edition. Oxford & New York, Oxford University Press.
- Stroud, D.A. 2003. The status and legislative protection of birds of prey in Europe. Pp. 51–84. In: Thompson, D.B.A., Redpath, S.M., Fielding, A.H., Marquiss, M. & Galbraith, C.A. (eds.) *Birds of prey in a changing environment*. The Stationary Office, Edinburgh.
- Tucker, G.M. & Evans, M.I. 1997. *Habitats for birds in Europe: a conservation strategy for the wider environment*. Cambridge, UK: BirdLife International (BirdLife Conservation Series No. 6).

APPENDIX I. DETAILED DESCRIPTION OF EU ACTIVITIES FOR THE IMPLEMENTATION OF THE MoU

MoU Action Plan Activities	Implementation in the EU
1. Develop regional strategy or equivalent document	
6.1 Prepare National, Regional or Sub-Regional strategies, or equivalent documents, for birds of prey (taking into account the need for collaborative trans-boundary measures with adjacent Signatory States)	<p>Most of the birds of prey naturally occurring in the EU are migratory species. The EU Birds Directive recognises the need for trans-boundary co-operation to effectively protect our common heritage. The Birds Directive – together with the Habitats Directive – provide the most important legal frameworks to take co-ordinated measures to achieve and maintain the good conservation status of birds of prey throughout their range and to reverse their decline when and where appropriate. Thus, the Raptor MoU Action Plan is implemented in the EU through the existing EU legal frameworks and existing strategies (see also chapter 3.2. on Relevant instruments), the most relevant existing strategies being the Nature Action Plan 2017–2019 and the EU Biodiversity Strategy 2020.</p> <p>As the Birds Directive dates from 1979, the EU has been addressing most of the measures foreseen in the MoU for many years. Activities include Species Action Plans adopted by the EU that are kept under revision, targeted conservation projects in particular EU LIFE funded projects, conservation measures both inside and outside Special Protection Areas (SPA), best practice reviews on the integration of environmental concerns into other policies and sectors. To further pursue these conservation goals further steps are required, in particular as regards site management, financing, law enforcement, and awareness raising as well as stakeholder engagement. These elements are valid for all species and habitats of EU interest and are currently being addressed in the new EU Nature Action Plan 2017–2019⁴⁶. This Action Plan covers four priority areas that have been identified as essential for a better implementation of the Birds and Habitats Directives.</p> <ul style="list-style-type: none"> • A: <i>Improving guidance and knowledge and ensuring better coherence with broader socio-economic objectives</i> • B: <i>Building political ownership and strengthening compliance</i> • C: <i>Strengthening investment in Natura 2000 and improving synergies with EU funding instruments</i> • D: <i>Better communication and outreach, engaging citizens, stakeholders and communities.</i> <p>Action 7 under Priority B includes an action for the European Commission, EU Member States and stakeholders to <i>Implement in the EU the MoU on the conservation of migratory birds of prey in Africa and Eurasia under CMS (by 2017–2019)</i>.</p>
2. Site designation and management	
2.1 Designate nationally and internationally important sites (including those listed in Table 3 of the Raptors MoU) as protected areas with management plans or as appropriately managed sites taking bird of prey conservation requirements into account	<p>Appropriate site designation is foreseen under the Birds and Habitats Directives and the European Commission is following up the designation progress with the Member States. Appendix III shows the distribution of Natura 2000 sites for MoU Category 1 and 2 species.</p> <p>The EU is now in a phase in which the goal is moving from designating sites and establishing Natura 2000 network sites to setting up mechanisms for the long-term conservation and management of the habitats and species present in each of the sites. In accordance with the Habitats Directive and the EU Biodiversity Strategy to 2020, Member States must ensure that management plans or equivalent instruments which set out conservation and restoration measures (ref activity 2.3.) are developed and implemented in a timely manner for all Natura 2000 sites. This issue is also addressed in the EU Nature Action Plan (Priority B).</p>
2.2 Undertake EIAs in accordance with the CBD guidelines (CBD Decision VI/7A and any subsequent amendments) and CMS Resolution 7.2 on Impact Assessment and Migratory Species for any projects potentially adversely impacting sites listed in Table 3 of the Raptors MoU and any other sites holding significant populations of Category 1 and 2 species	<p>The Natura 2000 biogeographical seminars (see chapter 3.2.) assist Member States in managing Natura 2000 sites as a coherent ecological network, through exchanging experience and best practice, setting common objectives and priorities and enhancing cooperation and synergies. This applies both to activities 2.1 and 6.4. These seminars can also cover raptor specific topics if the Member States and stakeholders so agree.</p> <p>As regards activities 2.2–2.4: these actions are implemented through the Habitats Directive, EIA and SEA Directives (see section 3.2).</p> <p>Activity 2.3 and 6.4 are also supported by the Article 12 reporting process which delivers common learning, data sharing and assessment, including threats/pressures assessment.</p> <p>LIFE Nature publication (2012)⁴⁷ <i>LIFE managing habitats for birds</i> provides examples of best practices in habitat management for birds in various parts of EU. LIFE has co-financed almost 250 projects (1992–2017) and actions for raptors at national or multinational level. There are for example altogether 30 projects on Bearded Vulture</p>

⁴⁶ http://ec.europa.eu/environment/nature/legislation/fitness_check/action_plan/index_en.htm

⁴⁷ <http://ec.europa.eu/environment/life/publications/lifepublications/lifefocus/documents/birds2013.pdf>

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
2.3 Conduct risk analysis at important sites (including those listed in Table 3 of the Raptors MoU) to identify and address actual or potential causes of significant incidental mortality from human causes (including fire, laying poisons, pesticide use, power lines, wind turbines)	<i>Gypaetus barbatus</i> , the reintroduction of the Golden Eagle <i>Aquila chrysaetos</i> in Ireland, saving Imperial Eagle <i>Aquila heliaca</i> in Hungary, adaptation of power lines in Spain and strategies against poisoning of raptors e.g. in Spain. Since 2000, 25 LIFE projects have directly supported the implementation of the previous Cinereous Vulture SAP, with a total budget of more than 55 million Euros, from which almost 38 million Euros is EU contribution ⁴⁸ .
2.4 Conduct Strategic Environmental Assessments of planned significant infrastructure developments within major flyways to identify key risk areas	
6.4 Encourage Signatories to improve international cooperation through organising conferences, seminars and workshops concerning monitoring, scientific research and conservation activities	
3. Mitigation of habitat loss and habitat restoration outside protected areas	

3.1 Survey, maintain and restore natural vegetation cover in former habitats (especially grasslands) in the range of globally threatened species

Most raptor populations depend extensively on adequate habitats also outside protected areas, particularly during migration. Thus, there is a need to maintain and restore such habitats in this wider countryside. The Birds Directive includes a requirement to take requisite measures to preserve, maintain or re-establish a sufficient diversity and area of habitats for all the species covered by the Directive (Article 3(1)). In addition the Directive requires that outside protection areas the Member States should strive to avoid pollution or deterioration of habitats (Article 4(4) last sentence)

5.3 Assess and then address the impacts of habitat loss on breeding, passage and wintering populations of birds of prey, and identify required measures to maintain Favourable Conservation Status

Several species of birds of prey, for example the Carpathian Basin populations of the Eastern Imperial Eagle *Aquila heliaca*, have increased as a result of measures, such as protection of nesting sites and habitat management.

For areas outside protected areas, the key target in the EU Biodiversity Strategy to 2020 is target 2, "by 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15% of degraded ecosystems." At EU level, there is no sub-target specifically for raptors.

Green Infrastructure (GI)⁴⁹ planning is a successfully tested tool for providing ecological, economic and social benefits through natural solutions. GI can contribute to achieving many of the EU's key policy objectives, including those of the Birds Directive. In 2013 the Commission adopted the EU Strategy on Green Infrastructure. EU aims to create a framework to encourage and facilitate GI projects within existing legal policy and financial instruments.

The mid-term review of the EU Biodiversity Strategy concluded on Target 2 that progress has been made on policy and knowledge improvement actions under this target, and some restoration activities have taken place in Member States. However, this has not yet halted the trend of degradation of ecosystems and services. National and regional frameworks to promote restoration and green infrastructure need to be developed and implemented and lot remains to be done to halt the loss of ordinary biodiversity outside the Natura 2000 network.

On the development of a Restoration Prioritization Framework, the Commission has financed a study in 2016 aiming at providing a better understanding of what is happening in relation to restoration activities in EU Member States, sectors, and habitats across the EU and how it can assist Member States in further boosting restoration actions.

⁴⁸ The new SAP for Cinereous Vulture <http://www.trackingactionplans.org/SAPTT/downloadDocuments/openDocument?idDocument=52>

⁴⁹ http://ec.europa.eu/environment/nature/ecosystems/index_en.htm

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
4. Integration of raptor conservation into sectoral policies	
3.4 Taking into account the needs of bird of prey conservation in sectors and related policies such as agriculture, forestry, fisheries, industries, tourism, energy, chemicals and pesticides	<p>The conservation of threatened birds of prey critically depends also on broader land-use and water-use patterns. The EU has already made efforts to integrate biodiversity into the development and implementation of other policies. However, efforts are not yet sufficient.</p>
4.2 Develop an awareness programme within forestry, agriculture, fisheries, energy, industry, transport and other relevant sectors to inform decision makers of the current status of birds of prey, the threats to them and the spectral actions that can be taken to conserve them	<p>In the context of Natura 2000 sites the European Commission has produced (and continues to produce) a number of sector-specific guidance documents to assist the understanding and correct application of the Nature Directives, such as for aquaculture, inland waterway transport, estuaries and coastal zones, port development, wind energy and non-energy mineral extraction⁵⁰. These documents as well as the guidance documents on “Natura 2000 and Forests” and “Farming for Natura 2000” can be applied also outside Natura 2000 sites (ref. activity 3.4). Many of these documents have direct relevance to the conservation of birds of prey at various stages of their life-cycle. The Nature Action Plan foresees to update and translate of the whole series of guidance documents in all official EU languages and actively promotes and widely disseminate them to improve local uptake (Priority area A).</p> <p>The Nature Action Plan will also strengthen investment in Natura 2000 and improve synergies with EU funding instruments (Priority area C, Actions 8–12 and individual measures under them). The Commission will e.g. carry out by 2019 an evaluation of the impact of the Common Agricultural Policy (CAP) on biodiversity, including on the use of financial resources for biodiversity protection and Natura 2000 and assess existing experience on result-based payment schemes for farmers under Rural Development, identifying opportunities and limitations in order to promote their wider use. Increasing awareness of Cohesion Policy Funding, Common Fisheries Policy and the Integrated Maritime Policy opportunities and synergy improvement are foreseen as well. The aim is also to stimulate private sector investment in nature projects.</p> <p>Improvement of communication and outreach, engaging citizens, stakeholders and communities in the practical implementation of the EU nature protection policy is also part of the Nature Action Plan (Priority area D).</p> <p>A brochure to general public on the State of Nature in the EU⁵¹ by the Commission provides reporting results under the Nature Directives (2007–2012) including examples on raptors (ref activity 4.2.). See also chapter 3.4. Inventory of species.</p> <p>The target 3 of the EU Biodiversity Strategy 2020 includes actions to ensure that agriculture⁵² and forestry⁵³ help maintain biodiversity. The work on the future of Common Agricultural Policy in the EU is currently on-going⁵⁴.</p>
5. Establish/maintain monitoring networks for raptors	
4.5 Organise sub-regional and national training workshops to improve skills in the monitoring of birds of prey	<p>The Commission, together with Member States, has improved the flow, accessibility and relevance of Natura 2000 data⁵⁵. This is integrated in a dedicated ICT tool as part of the Biodiversity Information System for Europe to improve the availability and use of data by 2012 (BISE)⁵⁶. The system is managed by the EU Biodiversity Data Centre and the European Environment Agency.</p>
4.6 Educate and raise awareness of local communities to the importance of birds of prey, and the need to monitor and protect them	<p>Article 12 of the Birds Directive concerns the general reporting obligations of the Member States and Commission⁵⁷ and requires Member States to report progress made with the implementation of the Birds Directive. The agreed reporting period is six years⁵⁸. According to the reporting format used, Member States shall provide national data on status and trends for all wild bird species occurring on their territory. To obtain such data, Member States are expected to have their national monitoring programmes in place. The Article 12 reporting format⁵⁹ also asks the EU Member States to report on monitoring schemes.</p>

⁵⁰ https://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm

⁵¹ <http://bookshop.europa.eu/en/the-state-of-nature-in-the-eu-pbKH0115312/>

⁵² Progress as in the 2015 mid-term review: <https://biodiversity.europa.eu/mtr/biodiversity-strategy-plan/target-3a-overview>

⁵³ Progress as in the 2015 mid-term review: <https://biodiversity.europa.eu/mtr/biodiversity-strategy-plan/target-3b-overview>

⁵⁴ https://ec.europa.eu/agriculture/future-cap_en

⁵⁵ <http://biodiversity.europa.eu/>

⁵⁶ <http://www.eea.europa.eu/themes/biodiversity/interactive>

⁵⁷ http://ec.europa.eu/environment/nature/knowledge/rep_birds/index_en.htm

⁵⁸ The Reporting format and guidelines as well as other useful information on the reporting period 2008 to 2012 can be found on the Reference Portal for Article 12 reporting: http://bd.eionet.europa.eu/activities/Article_12_Birds_Directive/reference_portal. The format and guidelines for the period 2013–2018 are available here: http://cdr.eionet.europa.eu/help/birds_art12

⁵⁹ http://cdr.eionet.europa.eu/help/birds_art12

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
5.1 Establish flyway-scale monitoring networks comprising a representative range of sites where systematic and coordinated monitoring of breeding populations, reproductive success and migration numbers (spring and autumn) can be undertaken	<p>An assessment of the situation (status and trends) of raptors in the EU on the basis of the reports submitted by the Member States pursuant to Article 12 is contained in Appendix II of this strategy (covering the reporting period 2008–2012). New data using the revised reporting format will be available in 2019.</p> <p>The data compiled is used, <i>inter alia</i>, for the Report on State of Nature in the EU 2007–2012⁶⁰, for the elaboration of a European Red List of Birds⁶¹, and for measuring progress under Target 1 of the EU Biodiversity Strategy. The structure of the Article 12 report builds significantly on BirdLife International's <i>Birds in Europe</i> approach and the 2004 Birds in Europe report will be used as a baseline for measuring Target 1.</p> <p>The Nature Action Plan includes (Priority area A) an action by 2019 to improve knowledge through enhanced and more efficient monitoring and to ensure public on-line access to data necessary for implementing the Nature Directives. This is also relevant to the on-going Article 12 reporting exercise 2013–2018.</p>
5.2 Design and undertake a coordinated monitoring programme and develop monitoring protocols based on the monitoring network established under 5	<p>Research and Monitoring for and with Raptors in Europe (EURAPMON)⁶² is a Research Networking Programme of the European Science Foundation that was implemented from 2010 to 2015. Scientific institutions in 15 Member States and in Norway contribute to the programme. The aim of EURAPMON is to strengthen the contribution of raptors research and monitoring to deliver biodiversity, environmental and human health benefits, including maintenance and recovery of raptor populations and their habitats and reduced chemical threats to ecosystems and human health. EURAPMON's objectives were: to establish a monitoring network, priorities, best practices, database and analytical outputs which meet user needs. Current monitoring programmes in each Member State (and beyond EU) can be seen in a dedicated web-page⁶³.</p>
6.4 Encourage Signatories to improve international cooperation through organising conferences, seminars and workshops concerning monitoring, scientific research and conservation activities	<p>As part of conservation activities carried out throughout the EU, regular monitoring of birds of prey takes place in breeding areas and on migration, on an increasing level including satellite tracking and systematic raptor watches at migration bottlenecks. Many raptors are large and conspicuous enough to be easily identified, and therefore suitable for citizen-science monitoring as used extensively in the USA and some European Countries⁶⁴. Mark-resighting estimates of population size and trends are practical for some species, involving many different stakeholder groups and thereby raising awareness and interest in raptors and biodiversity more widely.</p> <p>The rapidly improving possibilities of the new technology for satellite-tracking should be widely utilized in co-operation between relevant range states in the establishment of flyway-scale monitoring networks. This would offer better possibilities for identifying important migration routes, wintering areas and causes of mortality.</p> <p>See also Activity 15 about scientific research below.</p>

6. Mitigation of electrocution and collision with overhead power lines and wind turbines

1.4 Review relevant legislation and take steps where possible to make sure that it requires all new power lines to be designed to avoid bird of prey electrocution	<p>As concluded from the Article 12 reporting, wind energy production in combination with electricity and phone lines constitute a threat of the same magnitude as trapping, poaching and poisoning (Appendix IV, Table 6). Thus, various kinds of preventive measures are relevant to be prioritised.</p> <p>Electric overhead power lines are recognised as an important cause of bird of prey mortality, either by electrocution or collision. The electrocution risk can be reduced by adequate pole design. Collision can happen with all types of lines and is mainly influenced by their location, structural configuration, visibility to birds, flight conditions and surrounding habitat.</p>
2.2 Undertake EIAs in accordance with the CBD guidelines (CBD Decision VI/7A and any subsequent amendments) and CMS Resolution 7.2 on Impact Assessment and Migratory Species for any projects potentially adversely impacting sites listed in Table 3 and any other sites holding significant populations of Category 1 and 2 species	<p>Actions 2.2 and 2.4 are implemented through the EIA Directive, see section 3.2 of this report. Annex I of the EIA Directive requires construction of overhead electrical power lines with a voltage of 220 kV or more and a length of 15 km to be subjected to EIA procedure. Other and similar kind of projects for transmission of electrical energy by overhead cables (and not included in Annex I of the EIA Directive) are subject of screening under the EIA Directive.</p> <p>Strategic Environmental Assessments are carried out to ensure that the environmental consequences of certain plans and programmes are identified, assessed and taken into account during their preparation and before their adoption. As an example, a Strategic Environmental Assessment must be carried out on any plans or programmes which, in view of significant effects on sites, have been determined to require an assessment pursuant to Article 6 or 7 of the Habitats Directive (Article 3(2) b SEA Directive).</p>

⁶⁰ The State of Nature in the European Union Report on the status of and trends for habitat types and species covered by the Birds and Habitats Directives for the 2007–2012 period as required under Article 17 of the Habitats Directive and Article 12 of the Birds Directive

⁶¹ http://ec.europa.eu/environment/nature/conservation/species/redlist_en.htm

⁶² <http://www.eurapmon.net/>

⁶³ http://www.eurapmon.net/for-raptors-search?exposed_country=LV&exposed_species=&exposed_species_1=AND&cond1=&cond2=&cond3=&search=

⁶⁴ <http://birds.audubon.org/christmas-bird-count>, <http://bto.org/volunteer-surveys>, <http://rspb.org.uk/birdwatch/>

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
2.4 Conduct Strategic Environmental Assessments of planned significant infrastructure developments within major flyways to identify key risk areas	Directive, the European Commission has already produced a number of interpretative and methodological guidance documents on specific provisions ⁶⁵ . In order to minimise collision of birds with wind turbines, the Commission has prepared in 2011 a guidance document on how best to ensure that wind energy developments are compatible with the provisions of the Habitats and Birds Directives . It focuses in particular on the procedures to follow under Article 6 of the Habitats Directive when dealing with wind farm related plans and projects which could affect a Natura 2000 site and provides clarifications on certain key aspects of this approval process ⁶⁶ . This guidance document is currently being updated.
3.2 Where feasible, take necessary actions to ensure that existing power lines that pose the greatest risk to birds of prey are modified to avoid bird of prey electrocution	The Commission is currently finalising a new guidance on "Energy transmission infrastructure and EU nature legislation" was adopted in 2018 ⁶⁷ . Several LIFE projects have targeted the impacts of electrical infrastructures on birds in different EU Member States and circumstances. Some examples are provided below (all such projects can be found in LIFE database http://ec.europa.eu/environment/life/project/Projects/index.cfm). <ul style="list-style-type: none"> • LIFE00 NAT/E/007348 – Dressing stretches of power lines with spirals to improve their visibility, and change of electrical supports, Spain • LIFE00 NAT/IT/007142 – Reduction of the risk of bird collision and electrocution in the Po Delta Park, Italy • LIFE02 NAT/H/008627 – Insulation of medium-voltage power lines (bird friendly poles), Hungary • LIFE04 NAT/ES/000034 – Adaptation of the overhead electric power lines in the SPAs of Aragón, Spain • LIFE04 NAT/HU/000109 – Removal of dangerous sections of power line by burying electric lines in the ground, Hungary • LIFE06 NAT/E/000214 – Correction of dangerous overhead electric power lines in the SPAs of Murcia, Spain • LIFE07 NAT/BG/742 – Conservation of imperial eagle and saker falcon in key Natura 2000 sites in Bulgaria • LIFE07 NAT/E/000742- Priorimancha Conservation of Mediterranean priority species in Castille-La Mancha, Spain • LIFE09 NAT/SK/000396- APOMARINA_SK – Conservation of <i>Aquila pomarina</i> in Slovakia • LIFE08 NAT/RO/000501 – CAPR – Conservation of <i>Aquila pomarina</i> in Romania • LIFE 08 NAT/IT/000332 Measures for the conservation of Chiroptera and Avifauna in Central Italy • LIFE13 NAT/FR/000093 Reduction of the human threats affecting the Bearded Vulture • LIFE14 NAT/PT/000855 Egyptian Vulture and Bonelli's Eagle Conservation in Douro/Duero Canyon • LIFE14 NAT/FR/000050 Restoration of connections between the Alpine and Pyrenean populations of bearded vulture (<i>Gypaetus barbatus</i>) • LIFE16 NAT/BG/000612 Conservation of threatened birds through retrofitting of hazardous overhead powerlines in Natura 2000 sites in W Bulgaria • LIFE16 NAT/BG/000874 Egyptian Vulture New LIFE – Urgent Action to Strengthen the Balkan Population of the Egyptian Vulture and Secure Its Flyway • LIFE16 NAT/ES/000235 Accomplish Western Mediterranean Bonelli's Eagle recovery by working together for an electricity grid suitable for birds.
5.5 Monitor power line and wind farm impacts on birds of prey, including thorough analysis of existing data such as ringing data	Some LIFE projects ⁶⁸ addressing raptors have started to offer information to energy companies or potential investors, for example about areas where wind farms would not be suitable because the risks for raptors. Further information is available in Hötter et al. (2006), Drewitt & Langston (2006) and Gove et al. (2013) ⁶⁹ . In Germany, administrative orders of the Federal States are in place to minimize detrimental effects of wind energy developments on Kites and Buzzards, mainly by setting up distance rules for wind energy rotors ⁷⁰ . The 2016 judgment of the Court of Justice of the European Union (Case 141/14 ⁷¹) is relevant for raptor species.

⁶⁵ Management of Natura 2000 sites http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm

⁶⁶ Wind energy developments and Natura 2000 (2011) http://ec.europa.eu/environment/nature/natura2000/management/docs/Wind_farms.pdf

⁶⁷ <http://ec.europa.eu/environment/nature/natura2000/management/docs/Energy%20guidance%20and%20EU%20Nature%20legislation.pdf>

⁶⁸ LIFE07 NAT/BG/287 Conservation of imperial eagle and saker falcon in key Natura 2000 sites in Bulgaria; LIFE06 NAT/P/000194 Conservation of Tree Nesting Bonelli's Eagle in Portugal.

⁶⁹ Hötter, H., Thomsen K.-M., Jeromin, H. 2006. Impacts on biodiversity of exploitation of renewable energy sources: the example of birds and bats – facts, gaps in knowledge, demands for further research, and ornithological guidelines for the development of renewable energy exploitation. Michael-Otto-Institut im NABU, Bergenhusen.

Drewitt, A.L., Langston, R.H.W. 2006. Assessing the impacts of wind farms and birds. *Ibis* 148: 29-42.

Gove, B., Langston, R.H.W., McCluskie, A., Pullan, J.D. & Scrase, I. Wind farms and birds: an updated analysis of the effects of wind farms, and best practise guidance on integrated planning and impact assessment. Convention on the Conservation of European Wildlife and Natural habitat, T-PVS/Inf (2013) 15; http://www.birdlife.org/sites/default/files/attachments/201312_BernWindfarmsreport.pdf.

⁷⁰ There are a variety of measures in place, the main point being the distance rules. The Federal States rules are accessible through the link https://www.fachagentur-windenergie.de/fileadmin/files/Naturschutz/FA_Wind_Uebersicht_Umgang_mit_Artenschutz_Bundeslaender.pdf and further links mentioned on this page

Appendix I. cont'd.

MoU Action Plan Activities

Implementation in the EU

The European Commission brought this case against Bulgaria for failing to comply with the Birds and Habitats Directives and the Environmental Impact Assessment Directive⁷² in relation to the insufficient designation of SPAs in the Kaliakra region and the implementation of wind farm development projects in breach of the relevant EU legislation in the area in question.

7. Halting persecution and deliberate disturbance: strengthening legal implementation and enforcement

1.2 Review relevant legislation and take steps where possible to make sure that it protects all birds of prey from all forms of: a) deliberate killing; b) deliberate disturbance at nest sites and communal roost sites (particularly in wintering grounds) where this is considered detrimental to the conservation of the species; and c) egg-collection and taking from the wild. Unless this is authorised by the competent body and only where the action is sustainable and not detrimental to the conservation status of the species concerned

A comprehensive evaluation of the EU Nature Directives (Fitness Check) concluded in 2016 that these Directives are fit for purpose but achieving their objectives and realising their full potential will depend upon substantially improving their implementation. Although wild birds already benefit from full legal protection in the EU through the **Birds Directive** (see Section 3.2. of this document), trapping, poisoning and poaching are still by far the most serious threat to several raptor species, as shown in the Article 12 reporting (Appendix IV). Thus, steps must be taken to fully enforce the law. The EU has over the past years taken stock of the problem of persecution and disturbance of migratory birds of prey and has analysed possible options for action. This work has been done in collaboration with the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and the Council of Europe within a broader framework comprising illegal killing, trapping and trade of wild birds. Conscious of the need for cooperation in order to promote enforcement, the EU is determined to step up efforts towards zero tolerance of illegal activities.

The Birds Directive establishes a general system of protection for all species of birds naturally occurring in the wild state in the EU. The purpose of the Directive is to protect and manage these species and to regulate the hunting and capture of such species. It concerns wild birds as well as their eggs, nests and habitats. Under the **Environmental Crime Directive**⁷³, unlawful taking, destruction, possession or taking of specimens of protected wild fauna (as regards the Birds Directive: birds listed in its Annex I) or flora species constitutes a criminal offence for which Member States are required to provide for criminal penalties in their national legislation.

1.5 Strengthen the application of legal protection, and reporting of persecution, for birds of prey by ensuring appropriate penalties, training law enforcement authorities, and raising public awareness to boost surveillance and reporting of illegal activities

However, illegal activities such as illegal killing, trapping and trade of birds still occur and are one of the threats hindering the achievement of the objectives of the Birds Directive and the first target of the **EU 2020 Biodiversity Strategy**. Social acceptance of wildlife crime, lack of awareness of the judiciary and the need for international cooperation are factors that help to explain this gap. Having in mind that illegal killing of birds in the EU range states is one of the most significant threats to birds, it can have a very negative impact on bird populations in some specific situations and for specific species or regions. For more than 100 years this has been an issue for NGOs and for more than 20 years this issue has been an open file at the annual meeting of the Standing Committee of the Bern Convention. Ensuring the respect of all bird conservation legislation, in particular through proper law enforcement, but also by education and awareness raising initiatives, is one out of 10 points on which BirdLife and FACE agreed in 2004.

The EU identified a range of actions to be taken with a view to increase effectiveness of measures aimed at eliminating illegal killing, trapping, and trade of birds in the EU. These actions are based on various sources of information, in particular the 2011 Declaration⁷⁴ of the European Conference on Illegal Killing of Birds held in Cyprus and the subsequent Recommendation No 155 (2011)⁷⁵ of the Bern Convention, a study⁷⁶ produced for the Commission and discussions with BirdLife International and FACE. The **EU Roadmap on eliminating illegal killing, taking and trade of birds** has been in place since 2012. It is part of the broader work under the **Tunis Action Plan 2013–2020 under Bern Convention**. The Bern Convention leads also a group '**Special Focal Points on Eradication of Illegal Killing, Trapping**'.

An inter-governmental Task Force on illegal killing, taking and trade of migratory birds in Mediterranean has been established under UNEP/CMS and the EC has provided financing for its first three years. It establishes a detailed Programme of Work until 2020⁷⁷. Eight EU Member States are members of this Task Force.

⁷¹ Case C-141/14, www.curia.europa.eu

⁷² Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment

⁷³ Directive 2008/99/EC. OJ C 10, 15.1.2008, p. 47.

⁷⁴ [http://www.moi.gov.cy/moi/wildlife/wildlife_new.nsf/web22_gr/F5BC37B27C945EBCC22578410043F43F/\\$file/Larnaca%20%20Declaration.pdf](http://www.moi.gov.cy/moi/wildlife/wildlife_new.nsf/web22_gr/F5BC37B27C945EBCC22578410043F43F/$file/Larnaca%20%20Declaration.pdf)

⁷⁵ <https://wcd.coe.int/ViewDoc.jsp?id=1855837&Site=&BackColorInternet=B9BDEE&BackColorIntranet=FFCD4F&BackColorLogged=FFC679>

⁷⁶ BIO Intelligence Service (2011), Stocktaking of the main problems and review of national enforcement mechanisms for tackling illegal killing, trapping and trade of birds in the EU, Final report prepared for the European Commission (DG Environment). Study contract No 07.0307/2011/595012/ETU/B3.

⁷⁷ <http://www.cms.int/en/taskforce/mikt>

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MoU Action Plan Activities	Implementation in the EU
	<p>An EU Action Plan against Wildlife Trafficking is in place since February 2016⁷⁸.</p> <p>BirdLife International provided an assessment of the scope and scale of illegal killing and taking of birds in the Mediterranean in 2016 in order to raising awareness of this persistent problem. A similar assessment has been carried out also in the Central and Northern Europe and Caucasus⁷⁹. The Commission closely cooperates with the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL)⁸⁰ which is an EU level network of environmental inspection authorities in Europe. Over the last four years and upon suggestion by the Commission, IMPEL expanded its areas of activities and launched several projects to address nature issues focusing on illegal killing, trapping and trade of birds. E.g. in 2016 IMPEL-ESIX, a real-time communication tool for information exchange and cooperation between enforcement officials, national authorities and (inter) national and regional organizations of stakeholders was launched. IMPEL is in a position to undertake further concrete actions to improve implementation and enforcement of EU nature protection legislation such as reviews of national compliance assurance systems and joint inspections.</p> <p>The Commission supports also the work of other environmental enforcement networks, such as the European Network of Prosecutors for the Environment (ENPE)⁸¹, the network of police officers specialised in combating environmental crime EnviCrimeNet⁸² and the European Forum of Judges for the Environment (EUFJE)⁸³. Part of their work focusses on development of guidance and preparation of case-law databases and training material on prosecution and adjudication on wildlife crime cases.</p> <p>The Commission has launched a program for cooperation with national judges and prosecutors in the field of EU environmental law. Within this framework, training modules including on tackling wildlife crime have been prepared and made available on-line and several workshops have taken place⁸⁴.</p> <p>The Commission and Member States will continue these activities in order to facilitate enforcement of the Nature Directives by improving the specialist knowledge of national inspectors and enforcement officers and by developing better compliance promotion capacities.</p> <p>A brochure on "LIFE and wildlife crime" was published in 2018⁸⁵. It aims to provide a set of lessons learnt and best practices, with a particular focus on illegal killing of bird species (poisoning and poaching). The best practices and lessons learnt in this publication, addressing both the problems, solutions and outcomes, concern in particular monitoring and data collection, preventing wildlife crime, training, information exchange and evidence gathering and also enforcement and legal aspects. The majority of the 43 LIFE projects covered in this brochure targeted directly birds of prey.</p> <p>An example of a recent activity at Member State level to increase the knowledge on illegal killing of raptors, is from Germany which is currently carrying out a study on illegal killing of raptors (mainly by hunters and dove breeders).</p>
<h3>8. Minimising the effects of pesticides and banning the use of poison baits</h3>	

1.3 Review relevant legislation and take steps to ban the use of exposed poison baits for predator control and those chemicals where they have been shown to cause significant avian mortalities

The aim is to enforce legislation and disseminate best practice to eliminate birds of prey mortality caused by exposure to poisons. A **Proposal for an EU Action plan to prevent illegal poisoning of wildlife** of December 2015, was developed by the European Network against Environmental Crime (ENEC). The Commission has encouraged Member States to implement this Action Plan.

Poisoning and pesticides have also been addressed in many **Species Action Plans**⁸⁶ for priority birds that have been developed since 1993. For example, the Red Kite action plan⁸⁷ sets up actions to tackle poisoning through the ingestion of illegal poisoned baits for predator control as well secondary poisoning from consumption of poisoned rodents or ingestion of lead shot fragments. The greatest threat to Red Kite *Milvus milvus* in Europe – after threat of illegal poisoning from feeding on illegally poisoned carcasses laid in order to control predators such

⁷⁸ http://ec.europa.eu/environment/cites/trafficking_en.htm

⁷⁹ <http://www.birdlife.org/campaign/stop-illegal-bird-killing>

⁸⁰ <http://impel.eu/>

⁸¹ European Network of Prosecutors for the Environment, <https://www.environmentalprosecutors.eu/>

⁸² <http://envicrimenet.eu/EN/>

⁸³ www.eufje.org

⁸⁴ http://ec.europa.eu/environment/legal/law/training_package.htm

⁸⁵ http://ec.europa.eu/environment/life/publications/lifepublications/lifefocus/documents/wildlife_crime_web.pdf

⁸⁶ http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/index_en.htm

⁸⁷ http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/docs/milvus_milvus.pdf

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
1.5 Strengthen the application of legal protection, and reporting of persecution, for birds of prey by ensuring appropriate penalties, training law enforcement authorities, and raising public awareness to boost surveillance and reporting of illegal activities	<p data-bbox="470 253 1439 423">as foxes and wolves – appears to be accidental poisoning from ingesting rodents (mainly voles and rats), which have themselves been, primarily legally, poisoned by anti-coagulant rodenticides laid in order to reduce rodent outbreaks. One of the main actions envisaged is to reduce the risks of secondary poisoning: promote studies of vole ecology; promote responsible rodenticide use; develop vole damage compensation schemes through agricultural insurance; prevent licensing of highly toxic second generation rodenticides; develop and promote ecological pest control methods.</p> <p data-bbox="470 456 1439 510">The recent species action plans for three vulture species (<i>Gypaetus barbatus</i>, <i>Aegypius monachus</i>, <i>Neophron percnopterus</i>) propose a number of actions to fight against poisoning⁸⁸.</p> <p data-bbox="470 544 1439 629">A number of EU LIFE funded projects have addressed the problem of illegal poisoning and have done valuable work at local, regional and national level. The LIFE focus publication 'LIFE and Wildlife Crime' by the Commission compiles information on these projects (see above chapter 7).</p> <p data-bbox="470 663 1439 922">During the first ten years of LIFE funding, bird poisoning was identified as a main threat, or at least a potential risk for birds, in more than 30 LIFE projects dealing with the recovery of the most threatened birds of prey birds. These were either resident or partial migrants, including Iberian Imperial Eagle <i>Aquila adalberti</i> in Spain; Bearded Vulture <i>Gypaetus barbatus</i> and Cinereous Vulture <i>Aegypius monachus</i> in Greece, Spain, France and more recently in Portugal; Golden Eagle <i>Aquila chrysaetos</i> in Ireland; Griffon Vulture <i>Gyps fulvus</i> in Greece; and Bonelli's Eagle <i>Aquila fasciata</i> in Spain. In addition, a number of LIFE projects concerning Egyptian Vulture <i>Neophron percnopterus</i> were carried out in Greece, France, Spain and more recently also in Bulgaria. These were the first LIFE projects associating the risk of poisoning with a long-distance migratory bird species. These were followed, as from 2004, by LIFE projects on Lesser Kestrel <i>Falco naumanni</i> in France and Spain.</p> <p data-bbox="470 956 1439 1245">Since 2007, poisoning and other forms of deliberate killing have become a central key issue in LIFE projects. In Italy, LIFE07 NAT/IT/000436 "Antidoto"⁸⁹ sought to develop an integrated Strategy to tackle the use of poison on large carnivores and raptors. LIFE08 NAT/E/000062 "Veneno No"⁹⁰ aimed to achieve a significant reduction in illegal poisoning incidents affecting protected species in Spain. This project⁹¹ led by Sociedad Española de Ornitología was selected as 'Best of Best' LIFE-Nature/Information project in 2015: it succeeded in putting the issue of the illegal use of poison much higher up the political agenda in Spain. The LIFE programme has recently funded the creation of anti-poison dog units through a series of projects, such as VENENO NO, HELICON, PannonEagle Life, LIFE WOLFALPS and LIFE Rupis, in Austria, Czech Republic, Hungary, Portugal, Spain and other countries. Evidence collected by these dog units has led to an increase in the number of prosecutions for illegal poisoning in the EU.</p> <p data-bbox="470 1279 1439 1332">Also in Spain, LIFE09 NAT/ES/000533 "Innovation against poison"⁹² developed actions for combating illegal poisoning of raptors and carnivores, targeting in particular stockbreeders and hunters.</p> <p data-bbox="470 1366 1439 1507">The main objective of LIFE10 NAT/HU/000019 "Helicon"⁹³ was to maintain the increasing population trend of the Eastern Imperial Eagle <i>Aquila heliaca</i> in Hungary by significantly reducing non-natural mortality rates. The recent project "Conservation of the eastern imperial eagle by decreasing human-caused mortality in the Pannonian Region" LIFE15 NAT/HU/000902⁹⁴ covers also Saker Falcon and has actions against illegal poisoning in Austria, Czech Republic, Hungary and Slovakia.</p> <p data-bbox="470 1541 1439 1650">The EU has published in October 2014 a set of recommendations on the most suitable risk mitigation measures for anticoagulant rodenticides based on the current experience in the EU and beyond. These recommendations reinforce the responsible and sustainable use of these products, reducing even more the risks posed to wildlife and the environment⁹⁵.</p>

⁸⁸ http://www.trackingactionplans.org/SAPTT/main_guest

⁸⁹ <http://www.lifeantidoto.it/>

⁹⁰ <http://www.venenono.org/>

⁹¹ http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=3573

⁹² <http://www.lifeagainstpoison.org/>

⁹³ http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=4043&docType=pdf

⁹⁴ http://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=search.dspPage&n_proj_id=5848

⁹⁵ <https://circabc.europa.eu/sd/a/352bfd8-babc-4af8-9d0c-a1c87a3c3afc/Final%20Report%20RMM.pdf>

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
9. Mitigation of lead poisoning	
<p>5.4 Assess and then address the impacts of the use of toxic chemicals, including heavy metals (for example lead in shot pellets and other type of ammunitions), on breeding, passage and wintering populations of birds of prey, and their survival, identify and then implement appropriate measures to assist in achieving and maintaining Favourable Conservation Status</p>	<p>The EU is since long aware of the risks of lead poisoning⁹⁶ for waterbirds. During the last decades also risks related to raptors' consumption of lead from shots in game carcasses (e.g. Fisher <i>et al.</i> 2006, Arnemo <i>et al.</i> 2016)⁹⁷ have attracted increased attention. European as well as American scientists have also highlighted in consensus statement health risks for wildlife and humans from lead-based ammunitions⁹⁸. A recent study from Finland on lead poisoning and other human-related mortality factors examined 123 carcasses of White-tailed Sea-eagle <i>Haliaeetus albicilla</i> collected in 2000–2014 and found that human-related factors accounted for 60% of the causes of death. The most important factor was lead poisoning (31% of all cases) followed by human-related accidents (e.g. electric power lines and traffic) (24%). The temporal and regional patterns of occurrence of lead poisonings suggested spent lead ammunition as the source. Lead was a problem especially in the Åland Islands (lead shot was found in the gizzards of five lead-poisoned birds) where lead shot is legal in all hunting. Although lead shot in wetlands in continental Finland has been banned since 1996, still lead poisoning was frequently found indicating a source from terrestrial hunting or non-compliance with lead shot ban; the highest frequency of lead poisoning was observed in September–December which is the main hunting season. It is well known that lead bullets can be fragmented into hundreds of large and small pieces widely along the wound channel in deer tissues and offal⁹⁹.</p> <p>In 2008, the Meeting of the Parties (MoP 4) to the African-Eurasian Waterbird Agreement (AEWA) urged all Contracting Parties “to publish self-imposed timetables for completing the phase out and to inform the AEWA Secretariat accordingly by 30 September 2009”¹⁰⁰. The EU and the 25 Member States that are contracting parties to AEWA have therefore committed themselves to endeavouring phasing out the use of lead shot in wetlands. Furthermore, phasing out the use of lead shot in wetlands is one of the points addressed in the agreement signed in 2004 by BirdLife International and FACE (Federation of Associations for Hunting and Conservation in the EU) under the auspices of the Commission. It appears that, for enforcement reasons, it is easier to ban the use of lead-shot everywhere rather than just in wetlands. Furthermore, alternatives to lead-free ammunitions are now available.</p> <p>Most EU Member States have imposed some kind of ban, which varies in scope from country to country. The strictest measure is a total ban on the use and sale of lead shots. Some countries have banned the use of lead shots everywhere (on wetlands and dry lands) on their whole territory or part of it but have not imposed restrictions on sale. Other countries have banned the use of lead shots either on wetlands or for waterfowl hunting. Some countries are considering phasing out the use of lead shots but have not taken any measure so far.</p> <p>Endorsement of the ban by the hunting community is essential for its effective implementation. Therefore awareness-raising measures for hunters are important to increase the understanding of the reasons behind the ban and to improve the level of compliance. A total ban is realistic and does not cause any major problem. The price of alternative ammunitions and technical questions may represent obstacles. Enforcement is more difficult when the possession of lead shot ammunition is authorised and the ban concerns only wetlands, or even some wetlands. Investigation of the risks to wildlife and human health from lead ammunition is being carried out in a few countries.</p> <p>In December 2015 the Commission requested the European Chemicals Agency (ECHA) to prepare a dossier in accordance with Annex XV of Reach for a potential restriction of the use of lead shots in wetlands across the European Union. The dossier includes a risk assessment, an analysis of alternatives and a socio-economic assessment.</p> <p>Should the ‘Annex XV dossier’ demonstrate that action on the use of lead shots in wetlands beyond measures already in place is necessary on a Union-wide basis, ECHA will, within 12 months, communicate its conclusion to the Commission via an opinion of the two Scientific Committees (Risk Assessment Committee - RAC - and Socio-Economic Assessment Committee - SEAC). The Commission will then start the legislative procedure to amend Annex XVII of REACH by including the restriction on lead in shots in wetlands. All documents are available</p>

⁹⁶ E.g. already at the Bergen op Zoom conference in 2004, the aim was formulated to phase out the use of lead shot in wetlands as soon as possible and ultimately by 2009 (Action 5–8, <http://edepot.wur.nl/118449>).

⁹⁷ As regards the risk of lead poisoning for birds of prey, see e.g.: <http://www.sciencedirect.com/science/article/pii/S0006320706000802>, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5161761/>

⁹⁸ <https://www.zoo.cam.ac.uk/research-groups/conservation-science/European-Statement>, <https://escholarship.org/uc/item/6dq3h64x>

⁹⁹ Isomursu, M. *et al.* 2018. Lead poisoning and other human-related factors cause significant mortality in white-tailed eagles. *Ambio* 47: 858. <https://doi.org/10.1007/s13280-018-1052-9>

¹⁰⁰ AEWA Resolution 4.1 http://www.unep-aewa.org/meetings/en/mop/mop4_docs/final_res_pdf/res4_1_phasing_out_lead_shot_final.pdf

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
	<p>on the ECHA website¹⁰¹ for consultation. The public consultation on the proposed restriction took place between June–December 2017. The public consultation on the SEAC draft opinion was open until 21 May 2018. Further to the RAC and SEAC opinions¹⁰² the Commission is supposed to prepare an amendment to Annex XVII of REACH Regulation within three months of the receipt of the opinion and the whole legislative procedures usually takes around 8 months.</p> <p>In parallel, the Commission asked ECHA to assess the potential ban of lead in habitats other than wetlands and in fishing weights (ref to CMS resolutions 11.15). See also under chapter 3.6.</p>
	<h3>10. Establish/maintain feeding for necrophagous birds</h3>
<p>3.3 Endeavour to facilitate feeding opportunities for necrophagous birds of prey as far as it is possible taking into account sanitary considerations</p>	<p>During the last 50 years, intensification of agriculture and urbanisation have not only reduced the habitat of most European carrion-eating species, but also significantly reduced available food for these species. More recently, policies to enhance safety of the human food chain, e.g. following the mad-cow crisis, exacerbated the problem. The requirement of collecting and destroying carcasses of fallen domestic animals represented a serious setback for carrion eating species. Open disposal areas of carcasses in countries with large populations of vultures, e.g. traditional Spanish '<i>muladares</i>', had become part of the habitat of a large number of them since the Middle Ages. The closure of these open disposal areas represented the end of the 'natural' food chain.</p> <p>EU Regulation 1774/2002 and more recently through EC Regulation 1069/2009 and EU Regulation 2011, which replaced the former one, contain derogations to the obligation to dispose of carcasses in closed systems in view of protecting various populations of wild carrion-eating species of birds.</p> <p>Member States are encouraged to make use of these derogations. Furthermore, the review of more recent Regulations expanded the previous scope of options to conserve affected wild bird species. Yet, the derogations to the animal by-product legislation do not solve the relentless loss of habitat of carrion eating species. They only mitigate it.</p> <p>Concerning single species action plans, the action plan for the Cinereous Vulture (2018) lists several high priority actions to ensure food availability for this species. These include e.g. development of specific guidelines for supplementary feeding for Cinereous Vultures, reintroduction/restoration of wild ungulate and rabbit populations (or other small mammal species) in key sites for the Cinereous Vulture, promotion of scavenger-friendly traditional land use practices such as mobile pastoralism and promotion of vultures as free sanitary agents providing a valuable ecosystem service. Although the aim is that all populations should be self-sustaining in terms of food resources in the long term for the species to be viable, the supplementary feeding can be a powerful conservation tool provided that right protocols are followed, and considering the species' needs in different areas.</p> <p>There are a number of LIFE projects aiming at establishing supplementary feeding points as well as addressing other actual threats for the species, such as poisoning, poaching, disturbance etc.</p>
	<h3>11. Control of taking from the wild</h3>
<p>4.6 Educate and raise awareness of local communities to the importance of birds of prey, and the need to monitor and protect them</p>	<p>The strict protection provisions of the Birds Directive prohibit taking of wild birds of prey, including their killing or capture by any method, the deliberate destruction of, or damage to, their nests and eggs or removal of their nests, taking their eggs in the wild and keeping these eggs even if empty, deliberate disturbance of these birds particularly during the period of breeding and rearing, in so far as disturbance would be significant having regard to the objectives of the Directive, keeping birds of species the hunting and capture of which is prohibited (Article 5). However, under Article 9 of the Directive, Member States may derogate from the provisions of Articles 5 to 8, for the reasons listed in Article 9 and in the absence of other satisfactory solution. The competent national authorities bear the burden of proof in terms of meeting the conditions set in Article 9 and must motivate their decisions in a clear and sufficient manner. Member States have to report all granted derogations under Article 9 to the European Commission in annual derogation reports.</p>
<p>5.8 Assess the scale of harvests so as to evaluate the implications for the populations concerned</p>	<p>Therefore, reporting under Article 9 under the Birds Directive constitutes the system of reporting the taking of birds of prey from the wild. The overview tables compiling all EU Member States annual derogation reports is available on-line¹⁰³.</p>

¹⁰¹ <https://echa.europa.eu/restrictions-under-consideration/-/substance-rev/17005/term>

¹⁰² <https://echa.europa.eu/documents/10162/b092e670-3266-fb5d-6296-544eacbb5d4a>

¹⁰³ Composite reports/overview tables: http://ec.europa.eu/environment/nature/knowledge/rep_birds/index_en.htm

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
6.4 Encourage Signatories to improve international cooperation through organising conferences, seminars and workshops concerning monitoring, scientific research and conservation activities	<p>According to the EU Member States annual derogation reports, some of these derogations concern birds found dead or caring for wounded birds, which by their nature do not negatively impact the populations. According to the EU Member States annual derogation reports, capture of migratory birds of prey covered by the Raptors MoU are mainly justified for the purposes of research, restocking or re-introduction and for the breeding necessary for these purposes (derogation under Article 9(1)(b)); or for the capture, keeping or other judicious use of certain birds in small number, under strictly supervised conditions and on a selective basis (derogation under Article 9(1)(c)).</p> <p>Guidance on the interpretation of the derogation provisions and on sustainable hunting has been elaborated by the Commission, in consultation with Member States experts and stakeholders. This includes the Guide on Sustainable Hunting under the Birds Directive¹⁰⁴. This guide recognises the relevance of Article 9(1)(c) derogations for the taking of certain bird species in small numbers as being relevant to falconry, however, only on condition that all other formal conditions set in Article 9 are respected.</p> <p>According to the derogation reports submitted by Member States only three species of those listed in Category 1 and 2 of the MoU – Saker Falcon <i>Falco cherrug</i>, Gyr Falcon <i>Falco rusticolus</i> and Golden Eagle <i>Aquila chrysaetos</i> – are being used for falconry and all of these without any wild take in the EU.</p> <p>The 2006 Ornis survey of falconry (Kenward et al. 2006) found that the potential for conservation from falconry, in terms of using pure-bred wild falcons suitable for release, was greatest where there was most access to wild raptors. Far from being damaged by falconry, wild peregrine populations were highest in the countries with most falconers¹⁰⁵, whose efforts have even re-established tree-nesting peregrines in Germany and Poland.</p> <p>Data on harvest and from mark-recapture monitoring need to be modelled together to ensure sustainability, and should feed into the monitoring activities in 5.2, for which Secretariat encouragement and guidance for effective international programmes will be required (6.4). This process is already ongoing for Saker Falcon <i>Falco cherrug</i>. In order to build appreciation of raptors, and hence encourage conservation of habitats in the wider countryside (e.g. prey-rich steppe for breeding sakers), it is important also to have training for engagement with local communities to assist in the marking (4.6). As recently recognised by UNESCO¹⁰⁶, falconers have a unique cultural capability for communicating values of raptors, and also a relatively small ecological footprint in terms of demand for species to hunt which confers high potential for conserving habitats through sustainable use¹⁰⁷.</p>
12. Establish control over domestic breeding of raptors for falconry	

4.6 Educate and raise awareness of local communities to the importance of birds of prey, and the need to monitor and protect them

5.7 Seek to promote appropriate programmes of captive breeding so as to alleviate the pressure of wild harvests on populations of birds of prey

Birds of prey are kept in large numbers within some Member States of the EU, mainly for falconry purposes. Many of these raptors are hybrids, or otherwise differ in their genetic background from native raptor populations (e.g. they belong to a different subspecies or belong to species that are non-native in Europe but are closely related to native raptors and may potentially hybridise with them). Inevitably, a certain percentage of these birds escape or are intentionally released into the wild where some of them have been documented to pair up with native raptors, thereby causing genetic introgression, and/or exclude naturally occurring birds from breeding (occupying a fertile individual) or from their territory (being more aggressive or viable than naturally occurring bird populations). In Great Britain alone, 1564 falcons escaped from captivity during 1983–2007, including 642 hybrids (44%)¹⁰⁸, indicating that risks of hybrid falcons causing an introgression on non-native genes into the wild population must not be neglected although most likely it is low¹⁰⁹.

In order to prevent loss of biodiversity by genetic introgression and thus genetic homogenization, several Member States therefore do not permit the keeping of hybrid raptors for private purposes or even breeding and keeping for commercial purposes, in order to reduce these threats (e.g. Germany and Finland).

¹⁰⁴ http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/guidance_en.htm

¹⁰⁵ Kenward, R.E. 2009. Conservation values from falconry. Pp. 181–196 in *Recreational Hunting, Conservation and Rural Livelihoods: Science and Practice*. Zoological Society & IUCN SSC/Sustainable Use Specialist Group & Blackwell Publishing.

¹⁰⁶ <http://www.unesco.org/culture/ich/RL/00732>

¹⁰⁷ Kenward, R.E. and Gage, M.J.G. 2008. Opportunities in falconry for conservation through sustainable use. Pp. 181–204 in Sielicki, J. & Mizerta, T. (eds.): *Peregrine Falcon Populations – status and perspectives in the 21st Century*: EPFWG/Turul, Warsaw

¹⁰⁸ Fleming, L.V., Douse, A.F., & Williams, N.P. 2011. Captive breeding of peregrine and other falcons in Great Britain and implications for conservation of wild populations. *Endangered Species Research* 14: 243–257; http://www.int-res.com/articles/esr_oa/n014p243.pdf.

¹⁰⁹ European Code of Conduct on Hunting and IAS. Convention on the Conservation of European Wildlife and Natural Habitats. T-PVS/Inf (2013) 20 corrigendum; <https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=2590537&SecMode=1&DocId=2021112&Usage=2>

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
6.4 Encourage Signatories to improve international cooperation through organising conferences, seminars and workshops concerning monitoring, scientific research and conservation activities	<p>Breeding of raptors was started by nature conservation NGOs (e.g. in Sweden already in 1974) and falconers and became widespread during the 1980s. Breeding has been encouraged as a conservation measure to reduce pressure of harvest on wild raptor populations when these had been impacted by organochlorine pesticides. The Ornithological survey recorded that in 2005 at least 6800 raptors were bred for falconry in Europe, with only 89 (mostly Goshawks and Peregrines) obtained under licence from the wild.</p> <p>Governance to gain maximum conservation value from domestic breeding requires careful management of socio-environmental trade-offs. Whereas adequate access to wild stocks is desirable to encourage conservation of an appropriate genetic base among birds flown in falconry, and for possible release, adequate motivation to breed should ideally avoid competitive selection of genetic traits within and across species. Adaptive governance may also be necessary to set a conservation levy on wild use at levels which optimise outputs from domestic breeding. These processes will benefit from monitoring, research and trust-building between all stakeholders, encouraged by European Commission and CMS Secretariat (6.4).</p>
13. Control over the re-introduction and reinforcement	
5.6 Undertake research into the desirability of re-introducing birds of prey, and implement appropriate conservation programmes (including those involving captive breeding), where this is shown to improve their conservation status in the wild, and where these are in accord with IUCN guidelines	<p>There is increasing interest to use reintroduction as a conservation tool for species restoration. The aim is to ensure that raptor reintroduction is conducted with adequate guidance and due precautions where it would improve conservation status of wild raptor populations. In general use of IUCN reintroduction guidelines¹¹⁰ is recommended to be used. Within the LIFE programme a reintroduction or other conservation translocation proposal have to demonstrate that all 10 conditions listed in the LIFE Nature & Biodiversity Guidelines are met (including acceptance of local people).</p> <p>NGOs, including national BirdLife partners in several Members States were pioneers in establishing captive-breeding and release programs¹¹¹, and as recognised by Ornithological delegates, also falconers have been engaged in this kind of conservation actions. The techniques for release of raptors through hacking (a "soft release" technique) were developed by falconers¹¹² and have subsequently been applied widely in projects by various stakeholder groups^{113, 114}.</p>
5.9 Undertake relevant surveillance for diseases which may pose a threat to birds of prey populations, so as to inform conservation and management responses	<p>Where reinforcements are conducted, special care may be needed to ensure that released individuals are free from disease (5.9) and of appropriate genetic stock. Need to translocate species to mitigate impacts of climate change is probably lower for raptors than less mobile species, as raptors are mobile enough to colonise naturally unless major geographic barriers occur, although successful translocation of Californian Condors <i>Gymnogyps californianus</i> to the Grand Canyon¹¹⁵ is worth noting.</p>
14. Development and implementation of single or multispecies Action Plans	
6.2 Prepare single species, or, if more appropriate, multi-species, action plans for all globally threatened species, taking account of existing international plans and where necessary extending them to cover the entire African-Eurasian range of each species	<p>Since 1993, 16 Species Action Plans for the EU have been developed for individual raptor species listed in Annex I of the Birds Directive¹¹⁶. Some of these plans have also been endorsed by the Bern Convention and the CMS. As shown in Appendix II of this document, these plans cover 12 species of migratory raptors listed in Table 1 of the Raptors MoU under Category 1 and 2, in particular all the ten Category 1 species which occur in the EU and two Category 2 species. Another two species with Action Plans have been downgraded to Category 3 in 2015. The most recent single species action plans are for Egyptian Vulture <i>Neophron percnopterus</i>, Cinereous Vulture <i>Aegypius monachus</i> and Bearded Vulture <i>Gypaetus barbatus</i>. The two latter ones are developed under the LIFE EuroSAP project (2014–2018)¹¹⁷. The action plans for the Egyptian and Cinereous Vultures are developed in close collaboration with the Multi-species Action Plan for Vultures under CMS. Under the LIFE EuroSAP project also a European Species Co-ordination Group was established in 2018, to improve e.g. the co-ordination of planning of future international species action plans. The Species Action Plan Tracking Tool (SAP Tracking tool http://www.trackingactionplans.org/SAPTT/main_guest) developed by the LIFE EuroSAP project includes also monitoring of the implementation of the single species action plans.</p>

¹¹⁰ <https://portals.iucn.org/library/sites/library/files/documents/2013-009.pdf>

¹¹¹ E.g. a captive-breeding program for Peregrines were established in Sweden already in 1974, supported by *inter alia* the main national conservation NGO; <http://nordensark.se/vara-projekt/pilgrimsfalk/>

¹¹² <https://www.conservationevidence.com/actions/626>

¹¹³ Cade, T. J. 1986. Using science and technology to re-establish species lost in nature. In: Wilson, E.O. (ed.). *Biodiversity*. Washington DC, pp. 279–288.

¹¹⁴ Cade, T.J. 2000. Progress in translocation of diurnal raptors. Pp. 343–372 in Chancellor, R.D. and Meyburg, B.-U. (eds.) *Raptors at risk. World Working Group on Birds of Prey and Owls*, Berlin, Germany.

¹¹⁵ <https://www.peregrinefund.org/projects/california-condor>

¹¹⁶ http://ec.europa.eu/environment/nature/conservation/wildbirds/action_plans/index_en.htm

¹¹⁷ <http://www.birdlife.org/europe-and-central-asia/project/life-eurosap>

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
	<p>In 2015 the Vulture Conservation Fund assessed the implementation of the 2008 EU Action Plan for Egyptian Vulture and the conclusions were the following: (1) The species continues to decline in Europe; (2) Overall, the EU SAP implementation was not very good; (3) countries analysis showed good implementation in Spain, France and Bulgaria; (4) The EU SAP implementation seems to be effective in terms of tackling poison, food availability and disturbance; (5) The EU SAP implementation was significantly better in countries where EU funding was available; (6) At EU level, there were no differences in the level of threats and their prioritization for the period of implementation¹¹⁸.</p> <p>The views on potential multispecies action plans for raptors have been preliminary discussed between the European Commission and the Member States (2015).</p>
<h3>15. Implement scientific research supporting raptor conservation</h3>	
<p>5.10 Initiate collaborative research into the effects of climate change on birds of prey and their habitats, and implement appropriate adaptation measures</p>	<p>The Birds Directive (Article 10) addresses the need for research and any work required as a basis for the protection, management and use of wild birds. A list of research and work subjects comprises topics such as species geographical distribution, ecology, population effects of taking wild birds, development of ecological methods to prevent damage caused by birds, birds as environmental indicators and toxicity (Annex V of the Directive).</p>
<p>6.4 Encourage Signatories to improve international cooperation through organising conferences, seminars and workshops concerning monitoring, scientific research and conservation activities</p>	<p>As far as birds of prey are concerned, part of this work has been carried out in response to other requirements of the Bird Directive, such as national lists of endangered species, the need to establish SPAs and the identification of conservation measures. In particular the role of LIFE projects aiming at the recovery of certain species continues being noticeable (ref action 6.4., LIFE programme encourages international cooperation).</p> <p>Studies have shown that climate change has already influenced bird species richness and composition in Europe. However, further research is needed. We have knowledge gaps not only on the impacts of climate change but for example mortality caused by e.g. windfarms, power lines and persecution is not well enough known in a wider scale. There are also gaps in knowledge on population trends of some species (ref. e.g. on Member States' Article 12 reports where reported short/long term trends are reported as unknown). The recent SAPs for three vulture species and the Multispecies Action Plan for Vultures by CMS reveal needs to study e.g. the impact of artificial structures in relation to flying patterns and biology of the species, mapping mortality hotspots and how to decrease their effect, to survey and monitor genetic diversity in wild relict populations and those subjected to severe bottleneck effect (Bearded Vulture), to test methods to increase the productivity of wild populations (Egyptian Vulture) and to promote a European census across the range and monitor the breeding productivity of the most significant populations of Cinereous Vulture. The SAPs for the Saker Falcon and the Greater Spotted Eagle identify several gaps in knowledge e.g. concerning habitat use and home range size, survival rate of different Saker Falcon populations and hybridization between the Greater and Lesser Spotted Eagles.</p> <p>The EU Biodiversity Strategy 2020 includes specific actions to improve monitoring and reporting, to build on the biodiversity knowledge base and to continue to fill research gaps. Amongst other things, it will improve our understanding of the links between biodiversity and climate change. The mid-term review of the EU Biodiversity Strategy¹¹⁹ further underlines the need to strengthen the knowledge base. Effective policymaking for biodiversity and ecosystem services relies on continuous research and innovation (incl. use of new technology).</p> <p>E.g. Horizon 2020 supports integrated assessments and science-policy interfaces with a focus on nature-based solutions (see under Chapter 5).</p>

¹¹⁸ <http://www.trackingactionplans.org/SAPTT/downloadDocuments/openDocument?idDocument=55>

¹¹⁹ http://ec.europa.eu/environment/nature/biodiversity/strategy/index_en.htm#mid

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
16. Raise public awareness and education about raptor conservation	
4.1 Develop a programme of public awareness, using electronic and print media to publicise the migrations undertaken by birds of prey, their current status, the threats to them and actions, including review of superstitions about them, that can be taken to conserve them	At the EU level the Commission has implemented over the past years a number of awareness raising activities which support also raptor conservation although raptors are not necessarily the main/only target ¹²⁰ . In 2014 a Natura 2000 Award was launched to be the main campaign on Natura 2000 carried out at EU level. E.g in 2015 <i>"Vultures: Providing Gains for Nature and Communities in Gorges du Tarn et de la Jonte"</i> in France won the Socio-Economic Benefits Award and in 2018 <i>"Partnership to stop the poisoning of imperial eagles"</i> in Hungary won the Conservation Award.
4.2 Develop an awareness programme within forestry, agriculture, fisheries, energy, industry, transport and other relevant sectors to inform decision makers of the current status of birds of prey, the threats to them and the spectrum of actions that can be taken to conserve them	This is all general public awareness raising. More specific awareness and education activities on birds of prey are carried out at national level, e.g., very many awareness campaigns are part of LIFE programme and also under other EU financing tools like INTERREG projects (ref actions 4.3–4.6). The Commission publishes regularly thematic publications on LIFE-Nature projects ¹²¹ , e.g. LIFE managing habitats for birds in 2013 and LIFE preventing species extinction: Safeguarding endangered flora and fauna through ex-situ conservation in 2012 (incl Golden Eagle, Bearded Vulture, Black Vulture, Griffon Vulture). A LIFE publication addressing the illegal killing and taking of birds, "LIFE and wildlife crime" , was published in 2018 ¹²² , focusing largely on birds of prey. The Nature Action Plan includes a specific priority area on <i>Better communication and outreach, engaging citizens, stakeholders and communities</i> . Under this objective, the Commission will offer young Europeans cross-border volunteering opportunities, among others, in the field of nature conservation 'European Solidarity Corps' ¹²³ .
4.3 Develop a school educational programme and teaching resources to inform school children of the migrations undertaken by birds of prey, their current status, the threats to them and actions that can be taken to conserve them	
4.4 Establish information notices and provide leaflets at bottleneck sites informing people of their importance for birds of prey and the measures that they can take to conserve them	
4.6 Educate and raise awareness of local communities to the importance of birds of prey, and the need to monitor and protect them	

¹²⁰ Natura 2000 related activities: http://ec.europa.eu/environment/nature/natura2000/index_en.htm, publications: http://ec.europa.eu/environment/nature/knowledge/index_en.htm

¹²¹ <http://ec.europa.eu/environment/life/publications/lifepublications/lifefocus/nat.htm#birds2013>

¹²² http://ec.europa.eu/environment/life/publications/lifepublications/lifefocus/documents/wildlife_crime_web.pdf

¹²³ https://europa.eu/youth/solidarity_en

Appendix I. cont'd.

MoU Action Plan Activities	Implementation in the EU
17. Multi-national Environmental Agreements	
1.1 Update CMS Appendix I to include all Category 1 species	<p>Out of the 14 species listed in Category 1, nine are listed in CMS Appendix I. Out of the other five species, two do not occur in the EU, Sooty Falcon <i>Falco concolor</i> and Black Harrier <i>Circus maurus</i>. Pallid harrier <i>Circus macrourus</i> has only recently started nesting in Finland and in the Netherlands. The distribution range of the other two species (Red Kite <i>Milvus milvus</i> and Cinereous Vulture <i>Aegypius monachus</i>) includes the EU. These two species – whose current Red List status is Near Threatened – are fully protected in the EU, but not necessarily throughout their entire distribution range.</p> <p>As regards updating tables 1 and 3 in the annexes to the MoU, as foreseen under action 6.3, the EU and its Member States will constructively look into any proposals from the secretariat.</p>
1.6 Identify gaps in existing MEAs where bird of prey protection and conservation can be improved and draw these to the attention of the relevant Secretariat and other Parties	
6.3 Update Tables 1 and 3 according to new information emerging from the monitoring programme	

APPENDIX II. STATUS OF BIRDS OF PREY OCCURRING IN THE EUROPEAN UNION

The list of species is based on the document ‘Proposals for amendments to the raptors MoU and/or its annexes’ agreed on October, 2015, at MOS2 of MoU, namely Annexes B (providing a new list of species for Category 1) and C (providing a new list for Category 2).

Data sources and interpretation:

- EU conservation status, breeding population and trend are taken from the EU Birds Directive Article 12 Reporting data (official dataset, European environment Agency/ETC-BD: <http://bd.eionet.europa.eu/article12/progress?period=1&conclusion=bs>). This dataset, however, does not cover Croatia, due to its accession to EU one year after the end of the last reporting cycle and no data were received for Greece, and the Czech Republic only reported Annex I breeding bird taxa. As part of the consultation of this document in 2018 Spain has provided 2016–2017 breeding pairs data for some species.
- EU conservation status, as reported, does not translate directly into Favourable/Unfavourable categories. This is due to EU-specific legal reasons, namely the fact that the term ‘conservation status’ is not embedded in the Birds Directive. But the following approximation can be suggested, i.e., Threatened, Near-threatened, Depleted, Declining as Unfavourable, and Secure as Favourable.
- It is not possible to assess migrating numbers for each species in EU due to difficulties to compile observed numbers from multiple countries spreading over a large territory, or, sometimes, even within one Member State (the field left out).
- The data on monitoring is obtained from the EURAPMON website; a project which undertook an overall survey of all raptor monitoring activities in the EU in 2012 (<http://www.eurapmon.net/for-raptors-search>). Although all Member States deliver ‘monitoring data’ as an obligation under the Article 12 of the Birds Directive, these indications suggest presence of more detailed data based on specific monitoring programmes. Country name abbreviations follow the ISO codes. Please note that the list may be incomplete, e.g. no data for Lithuania, apparently incomplete data for Bulgaria, Czech Republic and possibly some other countries. The overview includes not only monitoring of breeding populations but also other periods, e.g. migration. Spain, Hungary, Finland and Sweden have updated their data in 2018 as part of the consultation of this document.
- Population trend abbreviations: ST = Short term, LT = Long term. x Unknown, 0 Stable, + Increasing, – Decreasing, F Fluctuating, u Uncertain, n Not applicable. National or Regional breeding population trend in the last 10 years (or three generations).
- Red List status of 2015 in EU27 and Europe¹²⁴ are provided in brackets under column ‘EU status’. The Red List status highlight species’ risk of extinction. The Birds Directive demands much more than just avoiding extinction.

¹²⁴ http://ec.europa.eu/environment/nature/conservation/species/redlist/downloads/European_birds.pdf

Scientific name	English name	EU legal status	EU cons. status (RL EU27 & Europe)	EU status	Breeding population size (breeding pairs)	EU trend	Trend period	EU countries where species is monitored	National or Regional Conservation / Action Plan ²⁵
Raptors MoU, Category 1 species (Globally threatened and Near Threatened species according to the latest IUCN Red List)									
<i>Aegypius monachus</i>	Cinereous Vulture	strictly protected	Secure (LC, LC)	Regular breeder	2,500 – 2,600 (2016)	ST +, LT +	2008–2012	BG, FR, IT, PT, ES	EU + Bern Convention + Bonn Convention (1996) Updated in 2018 by LIFE EuroSAP
<i>Aquila adalberti</i>	Spanish Imperial Eagle	strictly protected	Threatened (VU, VU)	Regular breeder	530 – 550 (2017)	ST +, LT +	2008–2012	ES, PT	EU + Bern Convention + Bonn Convention (1996, 2008)
<i>Aquila heliaca</i>	Eastern Imperial Eagle	strictly protected	Near Threatened (NT, LC)	Regular breeder	190 – 250	ST +, LT +	2008–2012	AT, BG, HU, RO, SK	EU + Bern Convention + Bonn Convention (1996)
<i>Circus macrourus</i>	Pallid Harrier	strictly protected	Threatened (EN, NT)	Regular breeder	1 – 12	ST u, LT u	2008–2012	CY, RO, FI (FR, SK, SE)	Bern Convention (2002)
<i>Clanga clanga</i>	Greater Spotted Eagle	strictly protected	Threatened (CR, EN)	Regular breeder	17 – 33	ST -, LT -	2008–2012	EE, FI, RO (FR, DE, PT, SI, SE)	EU + Bern Convention + Bonn Convention (1997, 2015)
<i>Falco cherrug</i>	Saker Falcon	strictly protected	Threatened (VU, VU)	Regular breeder	270 – 350	ST +, LT +	2008–2012	BG, CY, HU, RO, SK (FR, PT)	EU + Bern Convention (2006), CMS Global Action Plan (2014)
<i>Falco vespertinus</i>	Red-footed Falcon	strictly protected	Threatened (VU, NT)	Regular breeder	1,700 – 2,900	ST -, LT -	2008–2012	AT, BG, CY, HU, RO, SI (FI, FR, PT, SI)	EU (2010)
<i>Gypaetus barbatus</i>	Bearded Vulture	strictly protected	Threatened (VU, VU)	Regular breeder	237 – 245 (2017)	ST +, LT +	2008–2012	FR, GR, IT, ES	Updated Action Plan (2018) developed by LIFE EuroSAP
<i>Milvus milvus</i>	Red Kite	strictly protected	Near Threatened (NT, NT)	Regular breeder	24,000 – 31,900	ST 0, LT -	2008–2012	BE, DK, FR, DE, IT, LU, PT, SI, SE, UK, ES, HU	EU (2010)
<i>Neophron percnopterus</i>	Egyptian Vulture	strictly protected	Threatened (VU, EN)	Regular breeder	1400 – 1700	ST 0, LT -	2008–2012	BG, CY, ES, FR, IT, PT	EU (2008), Flyway Action Plan for the conservation of the Balkan and Central Asian populations adopted by the CMS COP12 in 2017 as integrated part of the Vulture MsAP
Raptors MoU, Category 2 species (species considered to have Unfavourable Conservation Status at regional level within a Range State)									
<i>Asio flammeus</i>	Short-eared Owl	strictly protected	Secure (LC, LC)	Regular breeder	2,200 – 22,500	ST F, LT -	2008–2012	BE, DK, EE, FI, FR, DE, IE, LV, NL, PT, SI, UK, HU	-
<i>Asio otus</i>	Northern Long-eared owl	strictly protected	Unknown (LC, LC)	Regular breeder	114,615 – 268,276	ST x, LT x	2008–2012	CY, DK, EE, FI, DE, IE, LV, NL, PT, SI, SK, SE, UK, ES	
<i>Bubo scandiacus</i>	Snowy Owl	strictly protected	Threatened (CR, LC)	Regular breeder	0 – 12	ST F, LT -	2008–2012	FI, SE	-
<i>Circus cyaneus</i>	Hen Harrier	strictly protected	Secure (LC, NT)	Regular breeder	9,200 – 13,300	ST -, LT +	2008–2012	BE, CY, DK, EE, FI, FR, DK, IE, NL, PT, RO, SI, UK, ES	
<i>Circus pygargus</i>	Montagu's Harrier	strictly protected	Secure (LC, LC)	Regular breeder	15,590 – 21,401	ST -, LT u	2008–2012	BE, CY, DK, EE, FI, FR, DE, IT, NL, PT, RO, SI, SK, SE, UK, ES, HU	

Scientific name	English name	EU legal status	EU cons. status (RL EU27 & Europe)	EU status	Breeding population size (breeding pairs)	EU trend	Trend period	EU countries where species is monitored	National or Regional Conservation / Action Plan ¹²⁵
<i>Falco biarmicus</i>	Lanner Falcon	strictly protected	Threatened (VU, EN)	Regular breeder	180 - 250	ST x, LT u	2008-2012	CY, FR, IT, PT	EU + Bern Convention (2000)
<i>Falco naumanni</i>	Lesser Kestrel	strictly protected	Secure (LC, LC)	Regular breeder	25,700 - 29,300	ST +, LT +	2008-2012	HR, CY, FR, IT, PT, ES	EU + Bern Convention + Bonn Convention (1996, 2000, 2011)
<i>Falco subbuteo</i>	Eurasian Hobby	strictly protected	Secure (LC, LC)	Regular breeder	41,317 - 59,835	ST u, LT u	2008-2012	BE, CY, DK, EE, FI, FR, DE, IT, NL, PT, RO, SI, SE?, UK, ES	
<i>Falco tinnunculus</i>	Common Kestrel	strictly protected	Secure (LC, LC)	Regular breeder	314,000 - 460,000	ST -, LT u	2008-2012	AT, BE, CY, DE, EE, FI, FR, DE, HU, IE, IT, NL, PT, RO, SI, SE, UK, ES	-
<i>Milvus migrans</i>	Black Kite	strictly protected	Secure (LC, LC)	Regular breeder	47,400 - 52,900	ST +, LT +	2008-2012	BE, CY, FI, FR, DE, IT, LV, PT, RO, SI, DE, ES, HU	-
<i>Otus scops</i>	Eurasian Scops-owl	strictly protected	Unknown (LC, LC)	Regular breeder	64,800 - 126,000	ST u, LT u	2008-2012	CY, DE, PT, SI, ES	-
<i>Pernis apivorus</i>	European Honey-buzzard	strictly protected	Secure (LC, LC)	Regular breeder	44,026 - 71,078	ST 0, LT u	2008-2012	BE, CY, DK, EE, FI, FR, DE, IT, NL, PT, SI, SE, UK, ES	
Other Raptor species occurring in the European Union (Category 3 of MoU and other, not corresponding to 'migratory' definition as in MoU)									
<i>Accipiter brevipes</i>	Levant Sparrowhawk	strictly protected	Unknown (LC, LC)	Regular breeder	1,740 - 3,371	ST x, LT x	2008-2012	CY, RO	
<i>Accipiter gentilis</i>	Goshawk	strictly protected	Secure (LC, LC)	Regular breeder	55,775 - 81,161	ST -, LT -	2008-2012	BE, CY, DK, EE, FI, FR, DE, NL, PT, RO, SI, SE?, UK, ES	
<i>Accipiter nisus</i>	Eurasian Sparrowhawk	strictly protected	Secure (LC, LC)	Regular breeder	213,944 - 357,116	ST -, LT +	2008-2012	BE, CY, DK, EE, FI, DE, IE, IT, NL, PT, RO, SI, SE, UK, ES	
<i>Aegolius funereus</i>	Boreal owl	strictly protected	Secure (LC, LC)	Regular breeder	32,311 - 127,915	ST F, LT -	2008-2012	DK, EE, FI, DE, IT, LV, SI, ES, SE?	
<i>Aquila chrysaetos</i>	Golden Eagle	strictly protected	Secure (LC, LC)	Regular breeder	4,856 - 5,700	ST +, LT +	2008-2012	AT, DK, ES, EE, FI, FR, HR, DE, GR, HU, IE, IT, PT, SI, SE, UK, CY, FR, GR, PT, ES	EU (1997)
<i>Aquila fasciata</i>	Bonelli's Eagle	strictly protected	Near Threatened (NT, NT)	Regular breeder	1,063 - 1,167	ST 0, LT -	2008-2012		
<i>Athene noctua</i>	Little Owl	strictly protected	Unknown (LC, LC)	Regular breeder	217,877 - 411,543	ST -, LT x	2008-2012	CY, DK, DE, IT, NL, PT, UK, ES	
<i>Bubo bubo</i>	Eurasian Eagle Owl	strictly protected	Secure (LC, LC)	Regular breeder	12,501 - 17,888	ST +, LT +	2008-2012	AT, BE, DK, EE, ES, FI, DE, HU, IT, LU, NL, PT, SK, SI, SE, UK	
<i>Buteo buteo</i>	Eurasian Buzzard	strictly protected	Secure (LC, LC)	Regular breeder	528,379 - 767,807	ST -, LT +	2008-2012	BE, CY, DK, EE, ES, FI, FR, DE, IE, IT, NL, PT, RO, SI, SE, UK	
<i>Buteo lagopus</i>	Rough-legged buzzard	strictly protected	Threatened (EN, LC)	Regular breeder	2,200 - 9,200	ST 0, LT -	2008-2012	DK, FI, FR, NL, RO, SI, SE?, UK	
<i>Buteo rufinus</i>	Long-legged buzzard	strictly protected	Secure (LC, LC)	Regular breeder	1,317 - 2,029	ST +, LT +	2008-2012	CY, PT, RO	

Scientific name	English name	EU legal status	EU cons. status (RL EU27 & Europe)	EU status	Breeding population size (breeding pairs)	EU trend	Trend period	EU countries where species is monitored	National or Regional Conservation / Action Plan ¹²⁵
<i>Circus gallicus</i>	Short-toed Snake-eagle	strictly protected	Secure (LC, LC)	Regular breeder	14,771 – 16,567	ST 0, LT +	2008–2012	FR, HU, IT, PT, RO, SI, ES	
<i>Circus aeruginosus</i>	Western Marsh Harrier	strictly protected	Secure (LC, LC)	Regular breeder	37,730 – 87,846	ST +, LT +	2008–2012	BE, CY, DK, EE, FI, FR, DE, IT, NL, PT, RO, SI, SE, UK, ES	
<i>Clanga pomarina</i>	Lesser-spotted Eagle	strictly protected	Secure (LC, LC)	Regular breeder	11,498 – 15,448	ST -, LT +	2008–2012	CY, EE, FR, DE, HU, LV, PT, RO, SK, SE	EU + Bern Convention (1997)
<i>Elanus caeruleus</i>	Black-winged Kite	strictly protected	Secure (LC, LC)	Regular breeder	1,115 – 2,630	ST +, LT +	2008–2012	FR, PT, ES	
<i>Falco columbarius</i>	Merlin	strictly protected	Secure (LC, LC)	Regular breeder	8,164 – 13,546	ST 0, LT +	2008–2012	CY, FI, FR, IE, NL, PT, RO, SI, SE?, UK	
<i>Falco eleonora</i>	Eleonora's Falcon	strictly protected	Unknown (LC, LC)	Regular breeder	14,266 – 14,387	ST +, LT x	2008–2012	CY, ES, FR, GR, PT	EU + Bern Convention (2000)
<i>Falco peregrinus</i>	Peregrine Falcon	strictly protected	Secure (LC, LC)	Regular breeder	9,657 – 11,882	ST +, LT +	2008–2012	AT, BE, CY, CZ, DE, DK, ES, FI, FR, HR, IE, IT, LU, NL, PL, PT, RO, SI, SK, SE, UK, ES, HU	
<i>Falco rusticolus</i>	Gyrfalcon	strictly protected	Threatened (VU, LC)	Regular breeder	122 – 182	ST 0, LT 0	2008–2012	FI, SE	EU + Bern Convention (2000)
<i>Glaucidium passerinum</i>	Eurasian Pygmy Owl	strictly protected	Secure (LC, LC)	Regular breeder	32,172 – 71,354	ST F, LT +	2008–2012	FI, SE	
<i>Gyps fulvus</i>	Griffon Vulture	strictly protected	Secure (LC, LC)	Regular breeder	31,514 – 33,171	ST +, LT +	2008–2012	BG, CY, ES, FR, GR, IT, PT, RO, SI	
<i>Haliaeetus albicilla</i>	White-tailed Sea-eagle	strictly protected	Secure (LC, LC)	Regular breeder	3,513 – 4,241	ST +, LT +	2008–2012	AT, BG, DK, EE, FI, FR, DE, IE, LV, NL, PO, SI, SK, SE, UK, HU	Bern Convention (2003)–
<i>Hieraetus pennatus</i>	Booted Eagle	strictly protected	Secure (LC, LC)	Regular breeder	21,035 – 24,332	ST +, LT 0	2008–2012	CY, ES, FR, IT, PT, RO	
<i>Pandion haliaetus</i>	Osprey	strictly protected	Secure (LC, LC)	Regular breeder	5,799 – 7,495	ST +, LT +	2008–2012	CY, DK, EE, FI, FR, DE, LV, PT, RO, SI, SE, UK, ES	
<i>Strix aluco</i>	Tawny Owl	strictly protected	Unknown (LC, LC)	Regular breeder	371,252 – 630,032	ST u, LT u	2008–2012	DK, EE, FI, DE, LV, NL, PT, SI, SE, UK, ES	
<i>Strix nebulosa</i>	Great Grey Owl	strictly protected	Secure (LC, LC)	Regular breeder	302 – 2,715	ST -, LT F	2008–2012	FI, SE	
<i>Strix uralensis</i>	Ural Owl	strictly protected	Secure (LC, LC)	Regular breeder	16,995 – 28,384	ST u, LT +	2008–2012	AT, EE, FI, HU, LV, SI, SE?	
<i>Sumia ulula</i>	Northern Hawk-owl	strictly protected	Secure (LC, LC)	Regular breeder	1,400 – 18,900	ST +, LT x	2008–2012	FI, SE?	
<i>Tyto alba</i>	Barn Owl	strictly protected	Secure (LC, LC)	Regular breeder	103,005 – 215,535	ST F, LT -	2008–2012	CY, DK, DE, HU, IE, NL, PT, UK, ES	

¹²⁵ Please see Activity 14 in Appendix 1.

APPENDIX III. SITES: DISTRIBUTION OF NATURA 2000 SITES FOR MoU CATEGORY 1 AND CATEGORY 2 SPECIES

For this compilation we used end-2014 Natura 2000 database. Only breeding and resident raptor populations reported were taken into account. Data presented are as reported by the Member States. Figures 1 and 2 reflect the distribution of Natura 2000 sites for raptor MoE species categories. Table 3 provides details about the number of Natura 2000 sites by species and country. Table 4 summarises designation progress of Important Bird Areas particularly important for raptors.

Figure 1. Protected areas (Natura 2000 sites) designated for (A) species in MoU Category 1 and (B) species in MoU Categories 1 and 2 together.

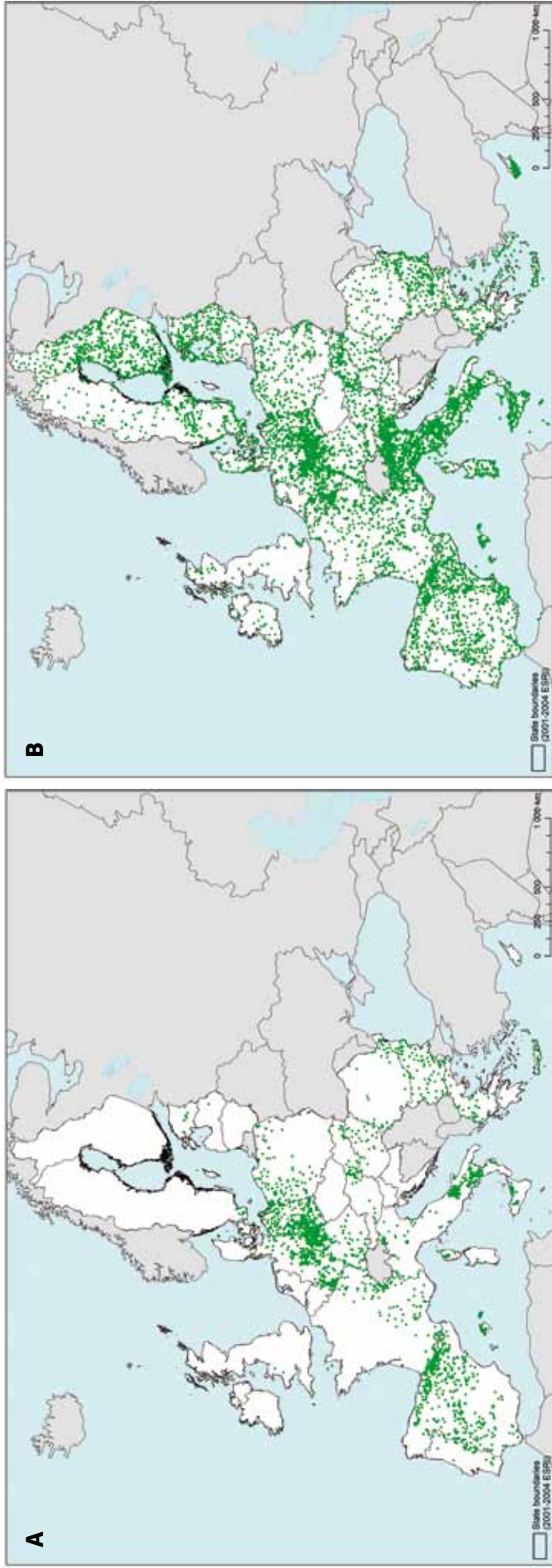


Table 3. Natura 2000 sites by Category 1 and 2 species and per country. Country names follow ISO codes.

Species	Cat.	AT	BE	BG	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK	Total
<i>Aegypius monachus</i>	1			4	2					72		6	5											4						93
<i>Aquila adalberti</i>	1									65																				65
<i>Aquila heliaca</i>	1	6		29									4		17										2			12		70
<i>Asio flammeus</i>	2	4	6	1			36	34	12	33	140	29		5	15	1	1	9		12		7	41		4	40	1	6	436	
<i>Asio otus</i>	2	7			5		3			37		2	2			234								4	44		31		369	
<i>Clanga clanga</i>	1			1					9											1			5						16	
<i>Circus cyaneus</i>	2	1	2	3			20	6	10	152	141	119				14	6			6	8	57	4			20	1	17	587	
<i>Circus macrourus</i>	1																2					1							3	
<i>Circus pygargus</i>	2	10	3	27			88	19	16	246	8	102	4	10	16	164	27			32		1	148	40	12	13	5		991	
<i>Falco biarmicus</i>	2			2									73	2		195													272	
<i>Falco cherrug</i>	1	2		49		1	1								16										11		13		93	
<i>Falco naumanni</i>	2			12						147		4	41	1		47								14	1		1	1	269	
<i>Falco subbuteo</i>	2	46	2	101	6		324			254	163	132	45			237			14			6	21	42	5		36	2	1436	
<i>Falco tinnunculus</i>	2	21		152			15		2	99	121	83	4			559					2	3			51	8		56	1	1177
<i>Falco vespertinus</i>	1	3		28								2	1		18	20									42		5		119	
<i>Gypaetus barbatus</i>	1	7								93		41	25			30													196	
<i>Milvus migrans</i>	2	14	9	58		1	410			324	3	210	18	9	17	378	9	22	22	12		119	36	24		3	20		1696	
<i>Milvus milvus</i>	1	5	20			1	678	7		311		87				168		32	32	1		115	21			11	14	2	1473	
<i>Neophron percnopterus</i>	1			31						329		31	46			21								9					467	
<i>Bubo scandiacus</i>	2										4															5			9	
<i>Otus scops</i>	2	6		70	6					242		38	141		10	192								26	23		5	8		767
<i>Pernis apivorus</i>	2	62	104	112	1	5	519	22	8	196	65	222	80	20	24	545	35	24	63			3	182	8	62	106	10	80	1	2559
Grand Total		194	146	681	20	8	2094	88	57	2600	645	1108	494	47	133	14	2799	80	92	127	2	19	677	187	318	208	18	283	30	13,169

Table 4. Proportion of Category I and II raptor populations within Natura 2000 sites (SPAs) per country.

Species	AT	BE	BG	CY	CZ	DE	DK	EE	ES	FI	FR	HU	IE	IT	LT	LU	LV	NL	PL	PT	RO	SE	SI	SK	UK
<i>Aegypius monachus</i>			0-100						13		92									60-75					100
<i>Aquila adalberti</i>									67-68											45-67					
<i>Aquila heliaca</i>	82-83		84-70	x								55-58									0-33			57-75	
<i>Asio flammeus</i>	100	50-60	1-3		0-5	100	60	10-40	x	15-21	36-69	90-98			0-5		0-100	91-93	0-100	40-50	48-65	4-6	x	x	5-18
<i>Asio otus</i>	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Bubo scandiaca</i>										0-100												x			
<i>Circus cyaneus</i>	25-30	x	8-58	x	x	93-98	x	20	5-7	7-9	9-13	83	43-45		x	50	x	82-85	x	50-80	24-46	9-12	100		27-37
<i>Circus macrourus</i>			x	x						x											x				
<i>Circus pygargus</i>	23-34	x	20-23	x		49-51	32-36	19-20	17-20	0-22	15-26	60-100		38-53	4-5		79-100	6	13-14	15-20	25-20	44-53		0-25	x
<i>Clanga clanga</i>			x					20		0-100					x		x		100		80-90				
<i>Falco biarmicus</i>			0-100											64-81											
<i>Falco cherrug</i>	30-31		0-63		40-50							41-53									0-20			33-50	
<i>Falco naumanni</i>			0-100	x					23-24		94			45-56						91-92	0-100		x		100
<i>Falco subbuteo</i>	x	x	x	x		x	x	x	2	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x
<i>Falco tinnunculus</i>	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<i>Falco vespertinus</i>	100		47-50	x								92-96		80-86	x						47-50			0-50	
<i>Gypaetus barbatus</i>	x		x						77		64			83-86											
<i>Milvus migrans</i>	55-58	20	28-29	x	50	24-33			13	x	8-14	37-43		47-61	20-23	12-24	60-65		34-37	12-13	0-20	x	x	100	x
<i>Milvus milvus</i>	71-100	0-13	x		43-50	16-21	x		6-7		12-19	x	x	56-57	x	16-30	x		20-24	75-34	x	2-3		33-75	1
<i>Neophron percnopterus</i>			40-83						61-65		75-78			100						86-95					x
<i>Otus scops</i>	29-75		x	x					0-1		x	18-29		x						x	x		37-43	3-25	100
<i>Pernis apivorus</i>	15-17	33-35	33-38	x	18-19	24-27	0-3	11-15	9-10	2	9-11	50-52		x	5-7	15-17	x	10	32-48	10	14-24	2-2	34-36	17-20	6-11

For this compilation the data are based on the Article 12 reporting data 2008-2012 under Birds Directive. The data fields of minimum and maximum national population and of minimum and maximum population within SPA network were used. "X" means that there is either no data on national population or no data on population within SPAs reported, but apparently species is present in the country. In most cases reported populations are breeding populations, but in some cases also non-breeding populations. Data quality should be considered when interpreting the results.

No data were available from Malta (no Natura 2000 sites designated for raptor species), Greece (no Article 12 data 2008-2012) and Croatia (due to its accession to the EU one year after the end of the Article 12 reporting cycle). The UK data include also species occurring only in Gibraltar.

Table 5. Protection level of congregatory birds of prey sites in European Union.

Table 5 of the MoU Action Plan provides a list of minimum of internationally important areas (IBAs) that should be protected by MoU signatories. IBA information was obtained from BirdLife International web-page¹²⁶. These sites were verified against Natura 2000 sites (end-2014 database).

Country	Site name	IBA_code	Natura2000	N2000_code(s)	IBA/N2000_overlap
Bulgaria	Atanasovo Lake	BG036	Atanasovsko ezero	BG0000270	Complete
Bulgaria	Mandra-Poda complex	BG034	Mandra - Poda	BG0000271	Complete
Denmark	Gilleleje area	DK126	–	–	None
Denmark	Hellebæk	DK124	–	–	SCI only
Denmark	Korshage, Hundested and surrounding sea area	DK102	Havet mellem Korshage og Hundested	DK005Y102	Complete
Denmark	Marstal Bugt and the coast of south-west Langeland	DK072	Marstal Bugt og den sydlige del af Langeland	DK008X072	Complete
Denmark	Skagen	DK125	–	–	None
Denmark	Stevns	DK127	–	–	None
Finland	Merenkurkku archipelago	FI045	Merenkurkun saaristo	FI0800130	Partial
France	Basses Corbières	FR218	Basses Corbières	FR9110111	Partial
France	Col de l'Escrinet	FR163	–	–	None
France	Col de Lizarrieta	FR191	Col de Lizarrieta	FR7212011	Complete
France	Etangs de Leucate et Lapalme	FR214	Complexe lagunaire de Salses-Leucate / Côte languedocienne / Étang de Lapalme	FR9112005, FR9112035, FR9112006	Partial
France	Etangs Narbonnais	FR215	Étangs du Narbonnais	FR9112007	Complete
France	Gorges de la Dordogne	FR145	Gorges de la Dordogne	FR7412001	Almost complete
France	Haute chaîne du Jura: défilé de l'écluse, Etournel et Mont Vuache	FR172	Crêts du haut-Jura	FR8212025	Almost complete
France	Haute Soule : Forêt d'Irraty, Organbidexka et Pic des Escaliers	FR183	Haute Soule : forêt d'Irraty, Orgambidexka et Pic des Escaliers	FR7212005	Complete
France	Hautes Corbières	FR217	Basses Corbières / Hautes Corbières / Corbières orientales / Corbières occidentales	FR9110111, FR9112028, FR9112008, FR9112027	Almost complete
France	Hautes garrigues du Montpelliérans	FR225	Hautes Garrigues du Montpelliérans / Gorges de Rieutord, Fage et Cagnasse	FR9112004, FR9112012	Partial
France	Massif du Canigou-Carança	FR222	Canigou-conques de La Preste / Puigmal-Carança	FR9110076, FR9112029	Partial
France	Montagne de la Clape	FR213	Montagne de la Clape	FR9110080	Almost complete
France	Montagne de la Serre	FR151	Pays des Couzes	FR8312011	Complete
France	Monts et Plomb du Cantal	FR149	Monts et Plomb du Cantal	FR8310066	Complete
France	Pointe de Grave	FR177	–	–	None
France	Val d'Allier: Saint-Yorre-Joze	FR158	Val d'allier Saint Yorre-Joze	FR8312013	Complete
France	Val de Drôme: Les Ramières-printegarde	FR162	Les Ramières du Val de Drôme / Printegarde	FR8210041, FR8212010	Partial
France	Vallée de la Nive des Aldudes-Col de Lindex	FR192	Vallée de la Nive des Aldudes, Col de Lindex	FR7212012	Complete
Greece	North, east and south Kithira Island	GR129	KYTHIRA KAI GYRO NISIDES: PRASONISI, DRAGONERA, ANTIDRAGONERA, AVGO, KAPELLO, KOUFO KAI FIDONISI	GR3000013	Partial
Italy	Aspromonte	IT151	Parco Nazionale della Calabria	IT9310069	Complete
Italy	Cape Otranto	IT147	–	–	None
Italy	Costa Viola	IT150	Costa Viola	IT9350300	Complete

Country	Site name	IBA_code	Natura2000	N2000_code(s)	IBA/N2000_overlap
Italy	Maritime Alps	IT035	Alte Valli Stura e Maira / Alpi Marittime / Alte Valli Pesio e Tanaro / Gruppo del Monviso e Bosco dell'Alevè	IT1160062, IT1160056, IT1160057, IT1160058	Partial
Italy	Mount Beigua	IT036	Beigua - Turchino	IT1331578	Partial
Italy	Mount Conero	IT085	Monte Conero	IT5320015	Partial
Italy	Mount Grappa	IT054	Massiccio del Grappa	IT3230022	Partial
Italy	Peloritani Mountains	IT153	Monti Peloritani, Dorsale Curcuraci, Antennamare e area marina dello stretto di Messina	ITA030042	Complete
Italy	Piave River	IT055	Grave del Piave / Garzaia di Pederobba	IT3240023, IT3240034	Partial
Latvia	Slitere Nature Reserve	LV015	Sliteres nacionalais parks	LV0200300	Complete
Lithuania	Kuronian spit	LT004	Kuršių nerijos nacionalinis parkas	LTKLAB001	Complete
Malta	Buskett and Wied il-Luq	MT004	L-Inhawi tal-Buskett u tal-Girgenti	MT0000018	Complete
Portugal	South-west coast of Portugal	PT031	Costa Sudoeste	PTZPE0015	Complete
Spain	Bujeo, Ojén, del Niño and Blanquilla Mountain ranges	ES245	Los Alcornocales	ES0000049	Complete
Spain	Cabras, Aljibe and Montecoche mountain range	ES244	Los Alcornocales	ES0000049	Partial
Spain	Cadí mountains	ES135	Prepirineu Central català	ES0000018	Partial
Spain	Ceuta	ES247	Calamocarro-Benzú	ES6310001	Complete
Spain	De la Plata mountain range	ES248	Estrecho	ES0000337	Complete
Spain	Guadalquivir marshes	ES259	Doñana	ES0000024	Partial
Spain	La Janda	ES250	–	–	None
Spain	Roncesvalles-Irati-Abodi mountain range	ES085	Roncesvalles-Selva de Irati	ES0000126	Partial
Spain	Tarifa	ES246	Estrecho / Los Alcornocales	ES0000337, ES0000049	Partial
Sweden	Bay of Skälderviken	SE057	Skälderviken	SE0430125	Complete
Sweden	Falsterbo-Bay of Foteviken	SE061	Falsterbo-Foteviken	SE0430002	Partial
UK	Rock of Gibraltar	GI001	Rock of Gibraltar	UKGIB0001	Partial

¹²⁶ <http://www.birdlife.org/datazone>

APPENDIX IV. INFORMATION ON THREATS FROM THE ARTICLE 12 REPORTING PROCESS

We used information which European Union Member States delivered in the framework of the reporting process under Article 12 of the Birds Directive.

According to instructions¹²⁷, the threat information is designed to capture information about the principal factors responsible for causing individual bird species to decline, suppressing their numbers or restricting their ranges. It should only be completed for species listed in Annex I of the Birds Directive, plus a selection of key migratory species for which Natura 2000 sites have been classified per Member State. Therefore the threat assessment for species not in Annex I (e.g., Northern Long-eared Owl *Asio otus*, Eurasian Hobby *Falco subbuteo*, Common Kestrel *Falco tinnunculus*) is generally missing.

In this reporting, pressures are considered to be factors that are acting now or which were acting during the reporting period, while threats are factors that are expected to act in the future. Often, the same impact acts both as a pressure and a threat, if it is having an impact now and this impact is likely to continue. Thus, for the reporting under Article 12 of the Birds Directive, no distinction will be applied between pressures and threats.

It is recommended that the time span for pressures is the six years covered by the current reporting period (exceptionally, due to the change in reporting cycles, 2008–2012 for the current reporting round). For threats, the recommended time span is two reporting periods (i.e. 12 years) into the future, reporting only those impacts that are very likely to occur.

EU Member States were allowed to list up to a maximum of 20 factors, using codes from the checklist of threats and pressures. The number was strictly limited to avoid reporting of very long lists of threats and pressures of possibly minor importance, and it was recommended to use the lowest number of possible data entries to adequately describe the situation. Altogether there were 413 threat categories in three levels. 198 of them were found relevant to raptors (used at least in one case by the reporting authorities). Most often used threat categories and their frequency are shown in Table 6 of this Appendix. In this analysis we used all raptor species (Categories 1 – 3) listed in Annex I of MoU.

The relative importance of each of the pressures and threats entered was ranked in one of three categories:

- H = High importance/impact: Important direct or immediate influence, and/or acting over large areas.
- M = Medium importance/impact: Medium direct or immediate influence, mainly indirect influence, and/or acting over moderate part of the area/ regionally only.
- L = Low importance/impact: Low direct or immediate influence, indirect influence, and/or acting over small part of the area/ locally only.

Table 7 of this Appendix further analyses the 12 main threats listed in Table 6. It lists all species by threat which were at least once reported by some EU Member State. The aim of this table is to show the magnitude of each threat and the main species groups affected.

¹²⁷ <https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp>

Table 6. Twelve most commonly reported threat categories in Article 12 reporting (Impact counting unit: raptor species/country).

Threat category	Impact			Total
	High	Medium	Low	
Trapping, poisoning, poaching	64	71	38	173
Wind energy production	42	53	24	119
Use of biocides, hormones and chemicals	27	44	40	111
Agricultural intensification	43	52	9	104
Outdoor sports and leisure activities, recreational activities	16	60	27	103
Forest and Plantation management & use	24	59	17	100
Electricity and phone lines	18	29	19	66
Modification of cultivation practices	26	30	7	63
Abandonment of pastoral systems, lack of grazing	30	27	5	62
Reduction of prey availability (including carcasses)	29	28	5	62
Reduction or loss of specific habitat features	17	29	4	50
Taking from nest (e.g. falcons)	9	19	20	48



Pallid Harrier *Circus macrourus*.

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Table 7. Most frequently used threat categories by species. Threat categories appear as in the Article 12 reporting format.

Trapping, poisoning, poaching		Wind energy production		Use of biocides, hormones, chemicals		Agricultural intensification	
Species	Number of countries	Species	Number of countries	Species	Number of countries	Species	Number of countries
<i>Aquila chrysaetos</i>	11	<i>Milvus milvus</i>	10	<i>Falco peregrinus</i>	11	<i>Circus pygargus</i>	10
<i>Bubo bubo</i>	11	<i>Aquila chrysaetos</i>	9	<i>Circus aeruginosus</i>	9	<i>Circus cyaneus</i>	9
<i>Circus aeruginosus</i>	11	<i>Haliaeetus albicilla</i>	9	<i>Circus pygargus</i>	9	<i>Pernis apivorus</i>	9
<i>Milvus milvus</i>	10	<i>Milvus migrans</i>	7	<i>Pernis apivorus</i>	9	<i>Asio flammeus</i>	7
<i>Haliaeetus albicilla</i>	9	<i>Aquila heliaca</i>	5	<i>Milvus milvus</i>	7	<i>Falco naumanni</i>	6
<i>Milvus migrans</i>	9	<i>Circus aeruginosus</i>	5	<i>Falco naumanni</i>	6	<i>Falco vespertinus</i>	6
<i>Falco peregrinus</i>	8	<i>Circus pygargus</i>	5	<i>Bubo bubo</i>	5	<i>Clanga pomarina</i>	5
<i>Circus cyaneus</i>	7	<i>Falco naumanni</i>	5	<i>Circus aeruginosus</i>	5	<i>Circus aeruginosus</i>	5
<i>Circus pygargus</i>	7	<i>Pernis apivorus</i>	5	<i>Clanga pomarina</i>	4	<i>Buteo rufinus</i>	4
<i>Falco cherrug</i>	6	<i>Falco peregrinus</i>	5	<i>Falco cherrug</i>	4	<i>Falco cherrug</i>	4
<i>Pernis apivorus</i>	6	<i>Bubo bubo</i>	4	<i>Falco eleonora</i>	4	<i>Aquila heliaca</i>	3
<i>Aquila heliaca</i>	5	<i>Circus aeruginosus</i>	4	<i>Falco vespertinus</i>	4	<i>Neophron percnopterus</i>	3
<i>Circus aeruginosus</i>	5	<i>Gyps fulvus</i>	4	<i>Milvus migrans</i>	4	<i>Clanga clanga</i>	2
<i>Falco vespertinus</i>	5	<i>Haliaeetus pennatus</i>	4	<i>Asio flammeus</i>	3	<i>Bubo bubo</i>	2
<i>Neophron percnopterus</i>	5	<i>Neophron percnopterus</i>	4	<i>Buteo rufinus</i>	3	<i>Buteo buteo</i>	2
<i>Pandion haliaetus</i>	5	<i>Aegypius monachus</i>	3	<i>Circus cyaneus</i>	3	<i>Circus aeruginosus</i>	2
<i>Clanga pomarina</i>	4	<i>Clanga clanga</i>	3	<i>Neophron percnopterus</i>	3	<i>Circus macrourus</i>	2
<i>Buteo rufinus</i>	4	<i>Aquila fasciatus</i>	3	<i>Otus scops</i>	3	<i>Elanus caeruleus</i>	2
<i>Gyps fulvus</i>	4	<i>Buteo rufinus</i>	3	<i>Aquila chrysaetos</i>	2	<i>Falco columbarius</i>	2
<i>Aegypius monachus</i>	3	<i>Circus cyaneus</i>	3	<i>Aquila fasciatus</i>	2	<i>Haliaeetus albicilla</i>	2
<i>Aquila fasciatus</i>	3	<i>Falco cherrug</i>	3	<i>Aquila heliaca</i>	2	<i>Haliaeetus pennatus</i>	2
<i>Circus macrourus</i>	3	<i>Aquila adalberti</i>	2	<i>Falco subbuteo</i>	2	<i>Milvus migrans</i>	2
<i>Falco naumanni</i>	3	<i>Clanga pomarina</i>	2	<i>Haliaeetus albicilla</i>	2	<i>Milvus milvus</i>	2
<i>Haliaeetus pennatus</i>	3	<i>Circus macrourus</i>	2	<i>Haliaeetus pennatus</i>	2	<i>Accipiter brevipes</i>	1
<i>Strix uralensis</i>	3	<i>Falco vespertinus</i>	2	<i>Pandion haliaetus</i>	2	<i>Aegypius monachus</i>	1
<i>Accipiter brevipes</i>	2	<i>Pandion haliaetus</i>	2	<i>Accipiter brevipes</i>	1	<i>Aquila adalberti</i>	1
<i>Aquila adalberti</i>	2	<i>Accipiter brevipes</i>	1	<i>Accipiter gentilis</i>	1	<i>Aquila chrysaetos</i>	1
<i>Clanga clanga</i>	2	<i>Asio flammeus</i>	1	<i>Accipiter nisus</i>	1	<i>Aquila fasciatus</i>	1
<i>Asio flammeus</i>	2	<i>Buteo buteo</i>	1	<i>Aegolius funereus</i>	1	<i>Falco eleonora</i>	1
<i>Falco biarmicus</i>	2	<i>Falco biarmicus</i>	1	<i>Aegypius monachus</i>	1	<i>Falco peregrinus</i>	1
<i>Falco columbarius</i>	2	<i>Falco rusticolus</i>	1	<i>Aquila adalberti</i>	1	<i>Falco subbuteo</i>	1
<i>Falco eleonora</i>	2	<i>Falco subbuteo</i>	1	<i>Buteo buteo</i>	1	<i>Falco tinnunculus</i>	1
<i>Falco subbuteo</i>	2			<i>Circus macrourus</i>	1	<i>Gyps fulvus</i>	1
<i>Gypaetus barbatus</i>	2			<i>Elanus caeruleus</i>	1	<i>Otus scops</i>	1
<i>Accipiter gentilis</i>	1			<i>Falco biarmicus</i>	1		
<i>Accipiter nisus</i>	1			<i>Glaucidium passerinum</i>	1		
<i>Elanus caeruleus</i>	1			<i>Gypaetus barbatus</i>	1		
<i>Falco tinnunculus</i>	1			<i>Strix uralensis</i>	1		
<i>Otus scops</i>	1						

Table 7 (cont'd.) Most frequently used threat categories by species. Threat categories appear as in the Article 12 reporting format.

Outdoor sports and leisure activities, recreation		Forest and plantation management and use		Electricity and phone lines		Modification of cultivation practices	
Species	Number of countries	Species	Number of countries	Species	Number of countries	Species	Number of countries
<i>Falco peregrinus</i>	10	<i>Milvus milvus</i>	9	<i>Bubo bubo</i>	9	<i>Circus cyaneus</i>	6
<i>Pandion haliaetus</i>	9	<i>Pernis apivorus</i>	9	<i>Milvus migrans</i>	5	<i>Milvus milvus</i>	6
<i>Bubo bubo</i>	8	<i>Aegolius funereus</i>	7	<i>Aquila chrysaetos</i>	4	<i>Circus pygargus</i>	5
<i>Circus aeruginosus</i>	7	<i>Haliaeetus albicilla</i>	7	<i>Falco peregrinus</i>	4	<i>Clanga pomarina</i>	4
<i>Haliaeetus albicilla</i>	7	<i>Milvus migrans</i>	7	<i>Milvus milvus</i>	4	<i>Circus aeruginosus</i>	4
<i>Aquila chrysaetos</i>	6	<i>Strix uralensis</i>	7	<i>Aegypius monachus</i>	3	<i>Aquila fasciatus</i>	3
<i>Milvus milvus</i>	6	<i>Aquila chrysaetos</i>	6	<i>Asio flammeus</i>	3	<i>Asio flammeus</i>	3
<i>Pernis apivorus</i>	6	<i>Clanga pomarina</i>	5	<i>Circaetus gallicus</i>	3	<i>Circaetus gallicus</i>	3
<i>Milvus migrans</i>	5	<i>Glaucidium passerinum</i>	5	<i>Falco cherrug</i>	3	<i>Falco naumanni</i>	3
<i>Circus cyaneus</i>	4	<i>Pandion haliaetus</i>	5	<i>Pandion haliaetus</i>	3	<i>Aquila chrysaetos</i>	2
<i>Falco eleonorae</i>	3	<i>Bubo bubo</i>	4	<i>Pernis apivorus</i>	3	<i>Aquila heliaca</i>	2
<i>Gyps fulvus</i>	3	<i>Circaetus gallicus</i>	4	<i>Buteo buteo</i>	2	<i>Bubo bubo</i>	2
<i>Neophron percnopterus</i>	3	<i>Falco peregrinus</i>	3	<i>Falco vespertinus</i>	2	<i>Buteo rufinus</i>	2
<i>Accipiter nisus</i>	2	<i>Accipiter gentilis</i>	2	<i>Gyps fulvus</i>	2	<i>Falco vespertinus</i>	2
<i>Aegypius monachus</i>	2	<i>Aegypius monachus</i>	2	<i>Haliaeetus albicilla</i>	2	<i>Milvus migrans</i>	2
<i>Aquila adalberti</i>	2	<i>Aquila heliaca</i>	2	<i>Hieraetus pennatus</i>	2	<i>Otus scops</i>	2
<i>Aquila fasciatus</i>	2	<i>Falco cherrug</i>	2	<i>Neophron percnopterus</i>	2	<i>Falco biarmicus</i>	1
<i>Asio flammeus</i>	2	<i>Hieraetus pennatus</i>	2	<i>Accipiter nisus</i>	1	<i>Falco cherrug</i>	1
<i>Circus pygargus</i>	2	<i>Neophron percnopterus</i>	2	<i>Aquila adalberti</i>	1	<i>Falco columbarius</i>	1
<i>Falco biarmicus</i>	2	<i>Aquila adalberti</i>	1	<i>Aquila fasciatus</i>	1	<i>Falco peregrinus</i>	1
<i>Strix uralensis</i>	2	<i>Clanga clanga</i>	1	<i>Aquila heliaca</i>	1	<i>Falco tinnunculus</i>	1
<i>Aquila heliaca</i>	1	<i>Buteo rufinus</i>	1	<i>Clanga pomarina</i>	1	<i>Gyps fulvus</i>	1
<i>Clanga pomarina</i>	1	<i>Circus cyaneus</i>	1	<i>Circus aeruginosus</i>	1	<i>Haliaeetus albicilla</i>	1
<i>Buteo buteo</i>	1	<i>Falco columbarius</i>	1	<i>Circus pygargus</i>	1	<i>Hieraetus pennatus</i>	1
<i>Circaetus gallicus</i>	1	<i>Falco subbuteo</i>	1	<i>Falco eleonorae</i>	1	<i>Neophron percnopterus</i>	1
<i>Falco naumanni</i>	1	<i>Falco vespertinus</i>	1	<i>Falco naumanni</i>	1		
<i>Falco rusticolus</i>	1	<i>Gyps fulvus</i>	1	<i>Falco subbuteo</i>	1		
<i>Falco subbuteo</i>	1	<i>Otus scops</i>	1				
<i>Falco vespertinus</i>	1	<i>Strix nebulosa</i>	1				
<i>Gypaetus barbatus</i>	1						
<i>Hieraetus pennatus</i>	1						

Table 7 (cont'd.) Most frequently used threat categories by species. Threat categories appear as in the Article 12 reporting format.

Abandonment of pastoral systems, lack of grazing		Reduction of prey availability, including carcasses		Reduction or loss of specific habitat features		Taking from the nest (e.g. falcons)	
Species	Number of countries	Species	Number of countries	Species	Number of countries	Species	Number of countries
<i>Gyps fulvus</i>	6	<i>Aquila chrysaetos</i>	5	<i>Circus aeruginosus</i>	5	<i>Falco peregrinus</i>	9
<i>Circus aeruginosus</i>	5	<i>Gyps fulvus</i>	5	<i>Milvus milvus</i>	4	<i>Aquila chrysaetos</i>	5
<i>Aquila chrysaetos</i>	4	<i>Milvus migrans</i>	5	<i>Circus cyaneus</i>	3	<i>Falco cherrug</i>	4
<i>Clanga pomarina</i>	4	<i>Asio flammeus</i>	4	<i>Falco vespertinus</i>	3	<i>Aquila heliaca</i>	3
<i>Aquila fasciatus</i>	3	<i>Bubo bubo</i>	4	<i>Haliaeetus albicilla</i>	3	<i>Aquila adalberti</i>	2
<i>Bubo bubo</i>	3	<i>Milvus milvus</i>	4	<i>Milvus migrans</i>	3	<i>Buteo rufinus</i>	2
<i>Falco naumanni</i>	3	<i>Neophron percnopterus</i>	4	<i>Pandion haliaetus</i>	3	<i>Circus pygargus</i>	2
<i>Falco vespertinus</i>	3	<i>Aquila fasciatus</i>	3	<i>Aegolius funereus</i>	2	<i>Falco biarmicus</i>	2
<i>Milvus milvus</i>	3	<i>Circus cyaneus</i>	3	<i>Aquila fasciatus</i>	2	<i>Accipiter nisus</i>	1
<i>Neophron percnopterus</i>	3	<i>Aquila adalberti</i>	2	<i>Clanga pomarina</i>	2	<i>Aquila fasciatus</i>	1
<i>Pernis apivorus</i>	3	<i>Circus aeruginosus</i>	2	<i>Bubo bubo</i>	2	<i>Clanga pomarina</i>	1
<i>Aegypius monachus</i>	2	<i>Falco naumanni</i>	2	<i>Falco naumanni</i>	2	<i>Bubo bubo</i>	1
<i>Buteo rufinus</i>	2	<i>Falco vespertinus</i>	2	<i>Otus scops</i>	2	<i>Buteo buteo</i>	1
<i>Circus aeruginosus</i>	2	<i>Hieraaetus pennatus</i>	2	<i>Aegypius monachus</i>	1	<i>Circus aeruginosus</i>	1
<i>Falco cherrug</i>	2	<i>Aegypius monachus</i>	1	<i>Aquila chrysaetos</i>	1	<i>Circus aeruginosus</i>	1
<i>Gypaetus barbatus</i>	2	<i>Clanga pomarina</i>	1	<i>Aquila heliaca</i>	1	<i>Elanus caeruleus</i>	1
<i>Hieraaetus pennatus</i>	2	<i>Bubo scandiaca</i>	1	<i>Asio flammeus</i>	1	<i>Falco eleonorae</i>	1
<i>Milvus migrans</i>	2	<i>Buteo buteo</i>	1	<i>Circus pygargus</i>	1	<i>Falco naumanni</i>	1
<i>Aquila clanga</i>	1	<i>Falco biarmicus</i>	1	<i>Elanus caeruleus</i>	1	<i>Falco rusticolus</i>	1
<i>Aquila heliaca</i>	1	<i>Falco cherrug</i>	1	<i>Falco biarmicus</i>	1	<i>Falco vespertinus</i>	1
<i>Asio flammeus</i>	1	<i>Falco columbarius</i>	1	<i>Falco cherrug</i>	1	<i>Gyps fulvus</i>	1
<i>Buteo buteo</i>	1	<i>Falco peregrinus</i>	1	<i>Falco columbarius</i>	1	<i>Haliaeetus albicilla</i>	1
<i>Circus cyaneus</i>	1	<i>Falco rusticolus</i>	1	<i>Hieraaetus pennatus</i>	1	<i>Hieraaetus pennatus</i>	1
<i>Circus macrourus</i>	1	<i>Falco tinnunculus</i>	1			<i>Milvus migrans</i>	1
<i>Falco peregrinus</i>	1	<i>Gypaetus barbatus</i>	1			<i>Otus scops</i>	1
<i>Otus scops</i>	1	<i>Otus scops</i>	1			<i>Pernis apivorus</i>	1
						<i>Strix nebulosa</i>	1

APPENDIX V. EU FUNDING OPPORTUNITIES

European Agricultural Fund for Rural Development:

The EAFRD is implemented in the Member States through rural development programmes (RDPs). A Member State may develop either a single programme for its entire territory or a set of regional programmes. The EAFRD provides several opportunities to fund Natura 2000 including measures for birds. Direct opportunities include, for example, financing a range of Natura 2000 activities in the context of agri-environment-climate and forest-environmental schemes, compensation payments for additional costs and income foregone resulting managing agricultural and forest land within Natura 2000 sites, improving knowledge on rural biodiversity, and drawing up Natura 2000 management plans.

In the current financing period all RDPs include some measures aimed at protection of biodiversity and Natura 2000. For example, the RDP for Bulgaria includes dedicated measures aimed at maintenance of habitats of protected bird species (including imperial eagle *Aquila heliaca*, Montagu's Harrier *Circus pygargus*, Egyptian vulture *Neophron percnopterus*) in important bird areas. The RDPs for Aragon region in Spain, Bulgaria, Burgundy in France, Cyprus, Finland, Poland and Romania include payments for specific farming practices adapted to maintenance of habitats, food and cover for protected bird species which can be also beneficial to raptors. Slovakia on the other hand planned measures to preserve biodiversity in forests, e.g. through support to the installation of artificial nests for birds.

It is also important to remember that direct payments for EU farmers from the EU Common Agricultural Policy (so called pillar 1 payments) are subject to so called cross-compliance. In order to receive payments, farmers must respect a set of basic rules including on environment. These rules include obligation to apply the requirements of the Birds Directive.

European Maritime and Fisheries Fund:

The EMFF provides several opportunities to fund Natura 2000 in the framework of sustainable fishing and aquaculture activities. The EMFF Regulation provides, among others, for possibilities of financing "schemes for compensation for damage to catches caused by mammals and birds protected by the Habitats and Birds Directives". Potentially, damage caused by raptors to aquaculture (e.g. by ospreys) could be therefore compensated by payments from EMFF, on condition that the Member State concerned provides for such an opportunity in their EMFF operational programme.

Cohesion policy funds: ERDF, ESF and Cohesion Fund:

The cohesion policy funds are implemented through dedicated operational programmes. The most relevant for biodiversity is the European Regional Development Fund (ERDF) which provides dedicated opportunities for protection of biodiversity and ecosystem services, including Natura 2000 and green infrastructure outside the network. In the 2014–2020 period some EU Member States are using the ERDF to finance measures aimed at birds which can be also relevant for raptors. For example Portugal, Poland and Greece are preparing dedicated species action plans. Greece is also financing establishment of feeding sites for raptors, installation of artificial nests and islets and means of control of illegal poison use. Other Member States have included in their programmes other

measures potentially very relevant for raptors such as establishment of monitoring systems, species inventories, management plans, communication/information/awareness activities or establishment of rehabilitation centres for wildlife (Poland).

The European Territorial Cooperation (ETC) is an integral part of the ERDF funding. It provides specific provisions for enhancing territorial cohesion by supporting joint actions and policy exchange between different Member States. ETC cross-border, transnational and interregional programmes can also finance nature protection including measures aimed at birds.

LIFE programme:

LIFE is the EU's financial instrument supporting environmental, nature conservation and climate action projects throughout the EU. Since 1992, LIFE has co-financed some 4900 projects. For the 2014–2020 funding period, LIFE will contribute approximately €3.4 billion to the protection of the environment and climate. Around 75% of this sum is allocated to the sub-programme for Environment, of which at least 55% of the resources dedicated to projects financed by way of action grants shall be allocated to support the conservation of nature and biodiversity. This share was recently increased by 10%, in the context of the implementation of the Action Plan for nature, people and the economy.

LIFE programme operates on the basis of annual calls for proposals published by the Commission. Member States receive and collect the individual proposals and put them forward to be considered by the Commission. Finally, the Commission decides which projects should receive funding from the annual LIFE budget. When selecting the projects priority is given to those which make the greatest contribution to EU-wide environmental objectives, including transnational projects. Figure 1 under Chapter 3.2 provides statistics on how birds of prey have benefitted from this programme.

Horizon 2020:

Horizon 2020 is the biggest EU research and innovation programme ever with nearly €80 billion of funding available over seven years (2014 to 2020). Horizon 2020 supports transnational research in a range of priority areas including environment.

The concrete project opportunities, including possible elements focusing on and/or relevant to managing the Natura 2000 network, are defined by theme specific calls from the Commission – describing challenges, scope and expected impacts for each research topic – for which European R&I institutes and researchers then submit respective proposals. Given the scope of Horizon 2020, all opportunities related to financing management activities on Natura 2000 sites need to take place in the research context. However, this allows for a wide range of Natura 2000 measures to be funded, mainly related to the development and testing of new management approaches and/or evaluation of the past Natura 2000 management regime.

Most co-funding for Natura 2000 sites from Member States budgets comes from public (national or regional) nature conservation budgets. However, the ability of sites to deliver a range of public benefits should encourage Member States to consider the potential to use a wider range of public funding sources to enhance their management e.g. economic development, public health, climate, education budgets as well as those for water management, flood control and coastal protection.

Where Natura 2000 sites provide benefits to private individuals or companies, this offers potential for private sector funding, through new funding mechanisms and market creation. Opportunities for private sector funding may occur through a range of mechanisms such as the development of product markets, corporate sponsorship, biodiversity offsets, visitor payback schemes and payments for ecosystem services.

To this end, the multiple benefits of the Natura 2000 network, and the actions to implement it, provide the key to identifying and exploiting innovative funding opportunities.



Lesser Kestrel *Falco naumanni*
Extremadura, Spain.

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APPENDIX VI. LIST OF ABBREVIATIONS

AEWA	Agreement on the Conservation of African-Eurasian Migratory Waterbirds
b.p.	breeding pairs
CBD	Convention on Biological Diversity
CITES	Convention on the International Trade in Endangered Species of Wild Fauna and Flora
CLLD	Community-led Local Development
CMS	Convention on the Conservation of Migratory Species of Wild Animals (the “Bonn Convention”)
CoP	Conference of the Parties
CPR	Common Provision Regulations
EAFRD	European Fund for Rural Development
ECHA	European Chemical Agency
EEA	European Environment Agency
EIA	Environmental Impact Assessment
EMFF	European Maritime and Fisheries
ERDF	European Regional Development Fund
ESF	European Social Fund
ETC	ETC European Topic Centre on Biological Diversity
EU	European Union
GIS	Geographical Information System
ICT	Information and Communication Technology
IAF	International Association for Falconry and Conservation of Birds of Prey
LIFE	Financial Instrument for the Environment (L'Instrument Financier pour l'Environnement)
MEA	Multilateral Environmental Agreement
MoP	Meeting of the Parties
MoS	Meeting of the Signatories
MoU	Memorandum of Understanding (on the Conservation of Migratory Birds of Prey)
PAF	Prioritised Action Framework
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
SAC	Special Area/s of Conservation
SEA	Strategic Environmental Assessment
SCI	Site of Community Importance
SPA	Special Protection Area
UNEP	United Nations Environment Programme

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p. 47. Pallid Harrier *Circus macrourous*. © Petri Ahlroth

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