European Commission

Reporting under the EU Habitats and Birds Directives 2007–2012

The State of Nature in the EU

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CONTENTS

Foreword

Europe has a stunning diversity of wild plants, animals and landscapes, many unique to our continent. However, since the start of the 20th century, our wildlife has been declining at an alarming rate. Valuable habitats have been lost as a result of rapidly changing land use, pollution, infrastructure development and continuing urban sprawl.

Taken together, the EU Birds and Habitats Directives represent the most ambitious and large-scale initiative ever undertaken to conserve Europe's natural heritage. As this brochure shows, well-targeted conservation actions deliver substantial results. It summarises the latest findings as regards the conservation status of over 2,000 species and habitats protected under the two EU Directives.

This loss of natural capital is of concern for many reasons. Nature is vital for our health. And it is a lifeline of our economy, creating jobs and stimulating new investments. We depend on nature for food, energy, raw materials, air and water. It is also a source of inspiration, knowledge, recreation and tourism and an important part of our cultural heritage.

The results of this assessment provide vital knowledge that will inform and boost our capacity to act. The findings will help minimise delays in how we can most thoroughly tackle and reverse the loss of biodiversity and ecosystem services. The evidence will help us evaluate how the Directives have been used, which should provide a solid and informed basis for future policy considerations in relation to EU nature legislation and policy.

Whilst limited progress may appear to have been made so far, the assessment shows that EU nature legislation has been fundamental in stemming the further decline of Europe's most vulnerable species and habitat types, in spite of the ever-increasing demand for land and resources.

We will have to wait a little while longer to witness the full fruits of all our hard labour, but much of the groundwork has now been laid, enabling us to concentrate wholeheartedly on ensuring that the Natura 2000 network – one of Europe's greatest success stories – is managed effectively for the benefit of all. Our mighty heritage will take time to respond to positive action, but the seeds of change are beginning to take root. Let's make sure we nurture these green shoots.

We must give our best to meet the objective set under the EU Biodiversity Strategy – reversing the loss of biodiversity and ecosystem services in the EU by 2020.

Karmenu Vella
Commissioner Environment, Maritime Affairs and Fisheries

OPPOSITE *Common swallowtail butterfly,* Papilio machaon, *resting on Viper's Bugloss,* Echium vulgare.

Introduction

Reporting on the State of Nature across the EU

The EU Birds and Habitats Directives form the cornerstones of Europe's legislation on nature conservation. Together, they make it possible for all 28 Member States to work together within the same legal framework to protect around 2,000 of Europe's most vulnerable species and habitat types.

The overall objective of the two nature Directives is to ensure that these species and habitats are maintained or restored to a good status throughout their natural range within the EU. This means more than just halting their further decline or disappearance; the aim is to ensure that they recover sufficiently to enable them to remain healthy over the long term.

Every six years, Member States are asked to report back to the European Commission on the conservation status of those species and habitats protected under the EU's Directives that are present on their territory. The Commission then pools all the data together, with the help of the European Environment Agency, in order to see how well they are faring across the EU.

The results have been published by the Commission in a report entitled the '*State of Nature in the EU*' (May 2015) which is based on a detailed technical report prepared by the European Environment Agency. The present brochure summarises its key findings.

LEFT *Gavarnie Falls, Pyrenees, France.*

What is measured and how is it done?

Gathering comparable data on the conservation status of EU-protected species and habitats across so many countries is a major undertaking and one that requires an unprecedented level of collaboration between Member States and European Institutions. After years of careful groundwork, the EU is now in an enviable position of having a comprehensive, harmonised dataset covering a significant proportion of its biodiversity.

The present reporting exercise involved the collation of over 17,000 datasets on individual species and habitats from 27 countries (Croatia was not included as it only joined the EU in July 2013). These were subsequently used to assess the status of around 450 wild bird species, 230 habitat types and more than 1,200 other species of European importance.

Having good quality data is essential not only for checking progress but also to help underpin any further action required to meet the objectives of the two Directives and address any gaps.

Additionally, it offers a valuable tool for assessing the contribution of the nature Directives towards meeting the EU's broader biodiversity policy objectives, including its overall target of halting the loss of biodiversity in the EU by 2020.

Assessing conservation **status**

The conservation status of EU-protected species and habitats is assessed using a number of scientific parameters.

For the **Habitats Directive**, these are defined on the basis of the criteria used to assess whether a species or habitat has reached a **Favourable Conservation Status** across the EU or not. Thus, for species, this means looking at their range, population, suitable habitat and future prospects. For habitat types, it focuses on slightly different aspects such as area, structure and functions, as well as range and future prospects.

Data for each of these parameters are collected in a standardised way for each biogeographical region that occurs within a Member State and then subjected to a common assessment procedure.

Working with biogeographical regions, rather than at country level, is a more meaningful way in ecological terms of aggregating the results. It also makes it easier to develop an overall picture of the conservation status of species or habitats across the EU.

For the **Birds Directive**, which protects all wild bird species present in the EU and not just those that are rare and threatened, there is a much longer history of collecting population data. The parameters used are similar to those used by the Habitats Directive but the assessment method at EU-level is different.

Also, as there is less scientific merit in using the concept of biogeographical regions for birds, the data are collected only at the national level and then aggregated at EU level.

Despite these differences in methodology, every effort has been made to ensure that the assessment categories used under the two Directives are defined in broadly comparable terms and that the reporting is done over the same time period.

Conservation status categories for species and habitats under the Habitats Directive

Favourable
Unfavourable – inadequate
Unfavourable – bad
Unknown

Population status categories for species under the Birds Directive

Secured
Near threatened, declining or depleted
Threatened (i.e. vulnerable, endangered, critically endangered, regionally extinct)
Unknown or not evaluated

What is a **biogeographical region**?

The EU has nine terrestrial biogeographical regions and five marine regions, each with its own characteristic blend of vegetation, climate, topography and geology. Some Member States may have several biogeographical regions within their territory (e.g. France has four such regions: Atlantic, Alpine, Continental and Mediterranean) whereas others have only one (e.g. the Netherlands has only the Atlantic region).

Using biogeographical regions to select sites for the Natura 2000 network and assess the conservation status of species and habitats under the Habitats Directive is very useful from a scientific point of view since it allows the species and habitats to be examined under very similar natural conditions, irrespective of national boundaries.

BELOW *Blanket bog in Scotland, protected under the Habitats Directive.*

Measuring conservation **trends**

Because of the very broad categories used for assessing conservation and population status at EU level, only really substantial changes will appear from one reporting period to another. This means that many positive developments achieved on a local, regional or even national level may not be visible at this scale.

That is why the *State of Nature* report also analyses **trends**. These provide important clues as to whether those species and habitats that are not currently in a favourable or secure status are at least heading in the right direction or not.

It is important to recognise that a change from one status class to the next requires a significant change in one or more of the individual parameters, which is difficult to achieve over a period as short as six years.

It takes time for nature to respond to conservation action. Even if all the conditions are right and all threats have been removed it may still take several generations before a particular species is able to produce enough offspring for a population to increase in number and significantly expand its range.

Conservation status trends for species and habitat types under the Habitats Directive

- **Improving**
- **Stable**
- **Deteriorating**
- **Unknown**

Population trends for bird species under the Birds Directive

- **Increasing**
- **Stable**
- **Fluctuating**
- **Declining**
- **Unknown**

LEFT *Great-crested grebe,* Podiceps cristatus.
BELOW *Lady's-slipper orchid,* Cypripedium calceolus, *Kemeri NP, Latvia.*

What does **Favourable Conservation Status** mean?

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

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

The conservation status of a **species** under the Habitats Directive will be taken as 'favourable' when:

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

In the case of the Birds Directive the concept of 'Favourable Conservation Status' is not used, but the overall objective is broadly similar: to maintain and restore the populations of all naturally occurring wild bird species present in the EU at a level that will ensure their long-term survival.

Birds

The Birds Directive covers all bird species that are naturally present in the EU. In total, this amounts to around 450 species, ranging from familiar garden birds such as the Wren, *Troglodytes troglodytes*, or Robin, *Erithacus rubecula*, to much rarer migratory species that spend an important part of their annual cycle in the EU, such as the Red-breasted goose, *Branta ruficollis,* or the European Roller, *Coracias garrulus*.

Because birds are highly mobile and do not respect national boundaries, it makes sense to tackle their conservation at the EU level. The Birds Directive aims to do precisely that. It requires, amongst others, the introduction of uniform EU-wide provisions for their protection and sustainable use as well as the designation of Natura 2000 sites for a subset of around 190 threatened birds listed in Annex I of the Directive, and regularly occurring migratory species.

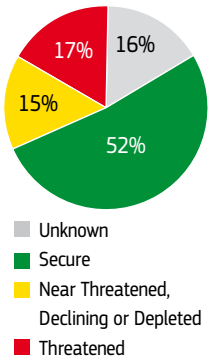
The latest *State of Nature* report provides some encouraging feedback in this respect. It shows that the status of more than half of all wild bird species assessed (52%) is secure. On the other hand, around 17% of the species are still threatened and another 15% are near threatened, declining or depleted.

LEFT *Common European Roller,* Coracias garrulus.

EU population status of bird species

Whilst the majority of Europe's birds are secure, there are still a significant number that are threatened, declining or depleted, including once common farmland species like the Skylark, *Alauda arvensis*, and the Black-tailed Godwit, *Limosa limosa*.

Some highly threatened species like the Great Snipe, *Gallinago media*, are also continuing to struggle for their survival. In this case, it may be that in addition to the continuing loss of habitats in the EU, the species is also facing major problems elsewhere, for instance, in its wintering grounds in Africa.

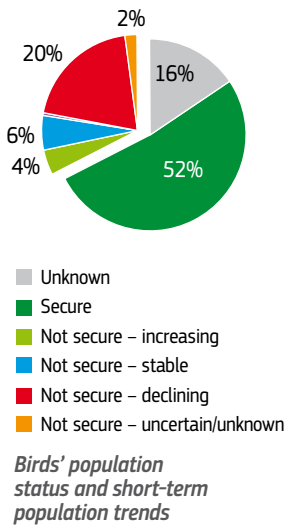


Birds' population status

Short-term population trends

Looking at the short-term population trends, these indicate that some 4% of all bird species are non-secure but increasing, and 6% are stable, even if a further 20% are declining.

Amongst those that are increasing, it is interesting to note that several have been the focus of targeted conservation action at EU level. For instance, both the Bearded Vulture, *Gypaetus barbatus*, and the White-headed Duck, *Oxyura leucocephala*, have EU Species Action Plans and have benefited from substantial funds for their conservation under the EU LIFE Fund.

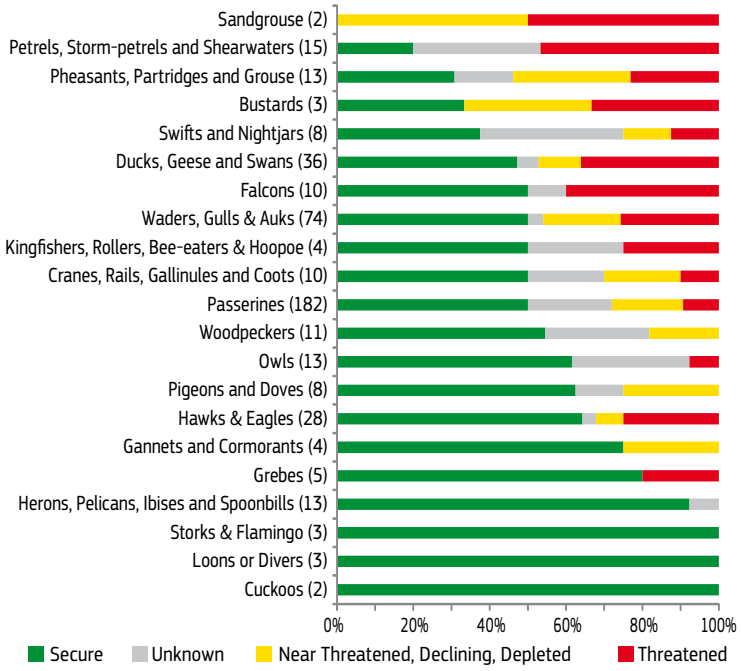


Birds' population status and short-term population trends

EU population status by taxonomic order

The *State of Nature* report also examines the population status and trends of breeding birds according to different taxonomic groups. From this, one can see that some groups are clearly doing better than others.

For instance, almost 90% of all Herons, Pelicans, Ibises and Spoonbills (13 species in total) have a secure population status in the EU, compared to only 20% of all Petrels, Storm-petrels and Shearwaters (15 species). Many species of Ducks, Geese and Swans are also not doing so well, with over 35% considered threatened.

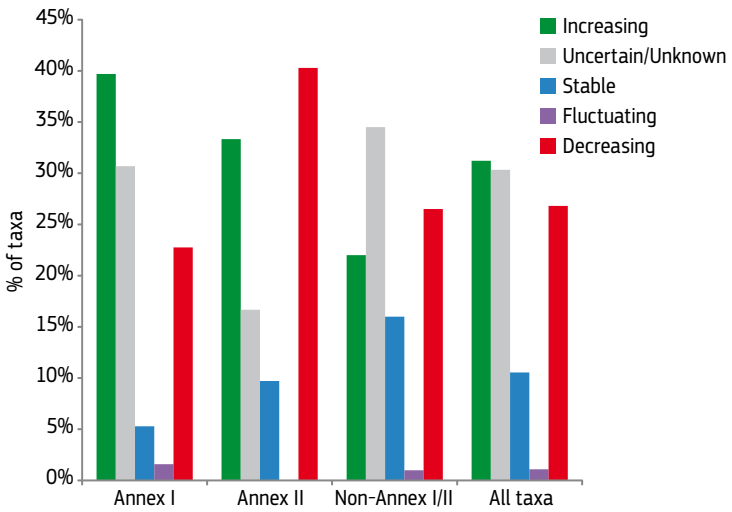


Population status of EU birds, by taxonomic order, (number of species per group in brackets)

EU population status of birds on Annex I

Looking at the population status and trends of species on different annexes of the Directive, it can be seen that a higher proportion of Annex I bird species, which have the designation of SPAs as a key measure, show increasing breeding population trends (40%) compared to species not on Annex I or II (22%).

By contrast, huntable species listed on Annex II of the Directive, show the highest percentage of species with a decreasing long-term breeding population trend (40%).



Long-term EU breeding population trends of birds on the Birds Directive annexes

White / Eurasian Spoonbill, *Platalea leucorodia*

Black-headed Bunting, *Emberiza melanocephala*

Great snipe, *Gallinago media*

Case study 1
Roseate Tern, *Sterna dougallii*

In Europe, the Roseate Tern suffered a massive decline between the early 1970s and mid-1980s, particularly in Northwest Europe. By then the population had fallen to less than 600 pairs in the northwest, with a further 1,000 pairs being recorded in the Azores.

The Roseate Tern is now considered to have reached a stable population status in the EU.

As the species tends to nest in large colonies on isolated marine islands, its breeding success was being heavily affected by the combined effects of an increase in gull populations and human disturbance related to the development of recreational activities both on land and at sea.

In 1987, a European Action Plan was drawn up for the species and, having protected all remaining breeding sites as SPAs under the Natura 2000 network, measures were introduced across all colonies to reduce the number of predators on the islands, designate reserves, and minimise human disturbance. Artificial nesting boxes have also been provided at some sites to increase the likelihood of breeding success.

Some of these conservation measures were undertaken as part of EU LIFE projects. In total six projects have been funded so far, four in the Azores and two in Brittany. By 2004 the total EU population was estimated at 1,600 pairs. It has since increased to around 2,300–2,800 pairs and is now considered to have once again a secure population status in the EU.

Case study 2
Eastern Imperial Eagle, *Aquila heliaca*

The Eastern Imperial Eagle is traditionally a lowland species that has been pushed to higher altitudes because of persecution and habitat loss in lower altitudes. In Central and Eastern Europe, it breeds in forests at altitudes up to 1,000 m, as well as in steppic and agricultural areas on large trees or even on electricity pylons.

The Central European population of the Eastern Imperial Eagle is increasing steadily.

Breeding sites are threatened primarily by intensive forestry in the mountains, and by a shortage of large trees in the lowlands. Other threats include loss of and alteration to feeding habitats, shortages of prey species (particularly ground-squirrels *Spermophilus* spp.), human disturbance, shooting, poisoning, nest robbing and electrocution by powerlines.

Many of these threats have now been addressed through a combination of stronger site designation and practical conservation actions, such as nest guarding, powerline insulation, prevention of poisoning and protection of nesting trees from felling. A number of these actions were co-financed through EU LIFE projects (to the tune of €4.7 million) and agri-environmental schemes are now in place to ensure favourable grazing and pasture maintenance in Hungary, Slovakia and Bulgaria.

As a result of these efforts, the species population has stabilised in the Balkans, and is steadily increasing in Central Europe.

Red-breasted Goose, *Branta ruficollis*

White-backed Woodpecker, *Dendrocopus leucotos*

Northern Gannet, *Sula bassana*

Other species

The Habitats Directive protects over 1,200 other rare, threatened or endemic species of wild animals and plants – often collectively referred to as *species of European importance*.

They include some high-profile species like the Iberian Lynx, *Lynx pardinus*, one of the rarest cats in the world, and the Mediterranean Monk Seal, *Monachus monachus*, as well as many lesser known, but equally important, species such as the Stag Beetle, *Lucanus cervus*, the Lady's-slipper Orchid, *Cypripedium calceolus*, and the European Tree Frog, *Hyla arborea*.

As with the Birds Directive, the Habitats Directive requires uniform EU-wide provisions to be applied to ensure the protection and sustainable use of species listed in the Directive. It also requires core sites to be designated for over 900 species listed in Annex II.

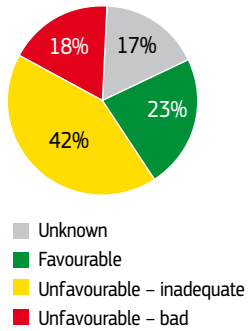
According to the *State of Nature* report, almost a quarter (23%) of the species protected under the Habitats Directive are in a favourable conservation status at EU level. But, at the same time, over half (60%) have an unfavourable assessment.

LEFT *Common European Tree Frog,* Hyla arborea.

Conservation status of other species

Overall, some 23% of the EU-level species assessments indicate a favourable status. On the other hand, 60% are unfavourable, of which 42% are considered to be unfavourable – inadequate and 18% are unfavourable – bad.

More than one-sixth (17%) of species assessments have an unknown status. Data on marine species are notably incomplete. For instance, almost no data exist for many of the species of cetaceans and marine turtles protected under the Directive.

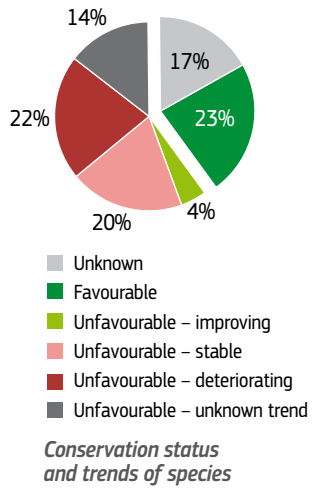


Conservation status of species

Conservation status trends

In relation to conservation trends, 4% of species are unfavourable but improving, 20% are stable, 22% are deteriorating and 14% are without a known trend.

The Otter, *Lutra lutra*, is one of the species that is showing signs of improvement. In the Atlantic region, it has made a steady recovery over the last 20 years thanks to a decrease in certain waterborne pollutants such as PCBs and mercury, protection from hunting and improvements in its aquatic habitats.
The Large Copper butterfly, *Lyceana dispar*, is also improving across the Continental region thanks to targeted conservation measures.

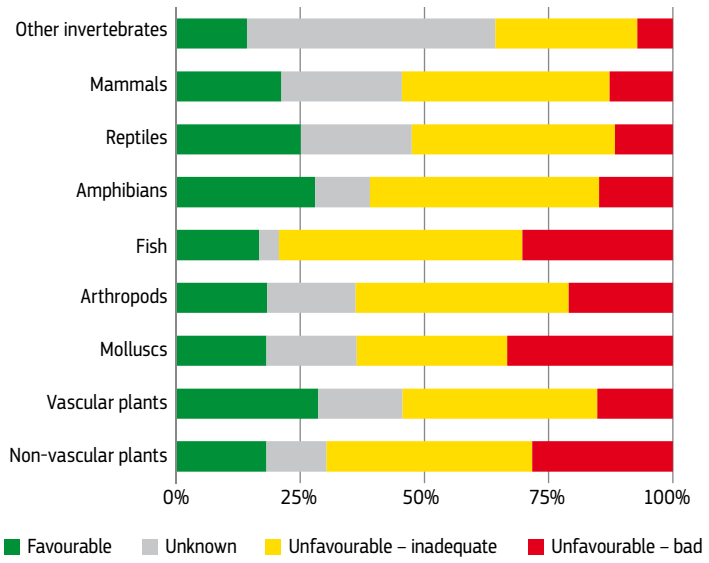


Conservation status and trends of species

Conservation **status** by taxonomic group

The *State of Nature* report also examines the conservation status of species according to different taxonomic groups. The results indicate that only 16% of the fish species protected under the Habitats Directive are assessed as having a favourable conservation status, while over a quarter of vascular plants and amphibians are considered favourable.

As for mammals, proportionally more species have a favourable status compared to those that are unfavourable – bad (21% compared to 13%). Nevertheless a significant proportion (42%) are still unfavourable – inadequate.

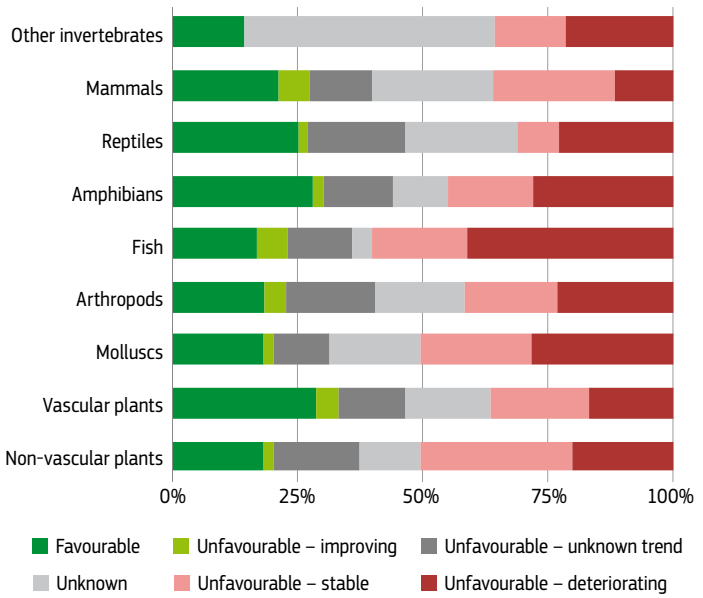


Conservation status of Habitats Directive species by taxonomic group

Conservation **status trends** by taxonomic group

Looking at the conservation status trends, fish, molluscs and amphibians appear to have a particularly high proportion of species with a deteriorating trend.

On the other hand, only 12% of assessments for mammal species show a deteriorating trend, while 6% are unfavourable but improving. Amongst those that are improving are species such as the European Bison, *Bison bonasus*, in the Alpine region, the Grey Seal, *Halichoerus grypus*, in the marine Baltic region and the Mediterranean Horseshoe Bat, *Rhinolophus euryale*, in the Mediterranean region.



Conservation status trends of Habitats Directive species by taxonomic group

Grey Seal, *Halichoerus grypus*

Large Copper, *Lycaena dispar*

European Bullhead, *Cottus gobio*

Case study 3
Europe's Brown Bear, *Ursus arctos*

Large carnivores are often used as flagship species for nature conservation. To some they symbolise wild nature, to others they are seen as a major threat to lives and livelihoods. This, combined with the fact that they require large territories, makes their conservation particularly challenging.

European Brown Bear, Ursos arctus, is showing signs of recovery over much of its range in the EU.

The species is now confined, within the EU, to 10 distinct populations, the largest of which is to be found in the Carpathian Mountains (7,000 bears). At the other end of the scale are the Alpine (45–50 bears) and Pyrenean populations (22–27 bears).

In 1992 the Brown Bear was listed as a strictly protected species under the Habitats Directive and some 750 Natura 2000 sites have since been designated for its conservation across the EU. Thanks to these concerted actions, the species is now showing signs of recovery over much of its range and its overall population has increased to some 17,000 individuals.

However, the low social acceptance of their presence remains a major issue, not just because of the potential damage they cause but also because of people's innate fear of such large animals. In 2012, the European Commission launched a new Large Carnivore Initiative to encourage an active dialogue with all relevant stakeholders and to explore ways to promote the continued co-existence of humans and large carnivores in the EU.

Case study 4
Endemic plants

Europe is exceptionally rich in plants that are found here and nowhere else in the world. The Mediterranean region is particularly well endowed, harbouring more endemic plant species than the rest of Europe put together. This richness is also reflected in the Habitats Directive. Over two-thirds of the 466 plant species listed in Annex II are unique to the EU.

White-leaved Bugloss, Echium albicans, is endemic to the mountains of Andalucia, Spain.

Since habitat loss is the primary cause of species loss, the first priority is to protect the remaining areas. This is precisely what was done in the Sierra Nevada mountain range in southern Spain, an exceptional area harbouring no less than 7% of all Mediterranean flora.

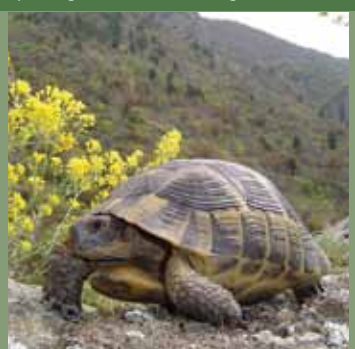
In 1997 the entire mountain range (172,000 ha) was included in Natura 2000. Thereafter, large-scale restoration works were carried out with the help of EU LIFE funds to ensure the long-term conservation of the species. This included the construction of a high altitude (1,900 m) Botanical Garden to help propagate seedlings in an ex situ environment, with a view to reinforcing the wild population.

Thanks to these efforts the species are now slowly recovering. One of the 11 species listed in the Habitats Directive, *Senecio nevadensis*, has already reached a favourable conservation status.

Mediterranean Horseshoe Bat, *Rhinolophus euryale*

Rosalia alpina

Spur-thighed Tortoise, *Testudo graeca*



Habitat types

The EU has a stunning diversity of landscapes and habitats for its size, a significant proportion of which have been fashioned through centuries of diverse farming and forest practices. Some 230 of these natural and semi-natural habitat types are protected under the Habitats Directive in their own right.

They have been selected either because they are in danger of disappearance within the EU or they have a small natural range, or they present outstanding examples of characteristic habitats from one or more of Europe's biogeographical regions.

They include well known habitats such as shifting sand dunes, Atlantic wet heaths and mountain hay meadows, as well as other typically European habitat types such as active raised bogs, Mediterranean temporary ponds and dehesas – the latter is a characteristic type of wooded pasture found across much of the Iberian peninsula.

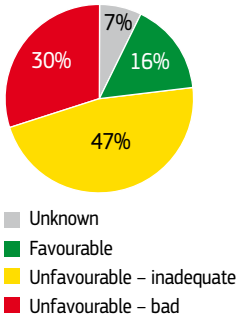
According to the *State of Nature* report, habitat types, on the whole, have a worse conservation status and trend than species. Across the EU-27, only 16% of habitat assessments are favourable, while more than two-thirds are unfavourable.

LEFT *Autumn colours in Long Ridge Woods, the Cotswolds, UK.*

Conservation status of habitats

Only around one sixth of the habitat types protected under the Habitats Directive have a favourable conservation status. This is probably linked to a range of factors including the longer tradition of conservation action for species, the shorter response times for species, as well as the sheer complexities involved in habitat conservation.

The overwhelming majority of habitats have an unfavourable status, with 47% of the assessments being unfavourable – inadequate and 30% being unfavourable – bad.

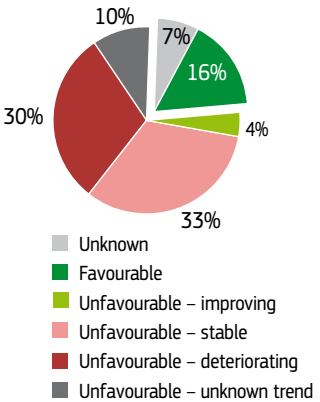


Conservation status of habitats

Conservation status trends

Looking at the conservation status, a third of the habitat types are unfavourable but stable (33%). However, a further 30% are still deteriorating, which is a serious cause for concern.

Only 4% are showing any improvements so far.

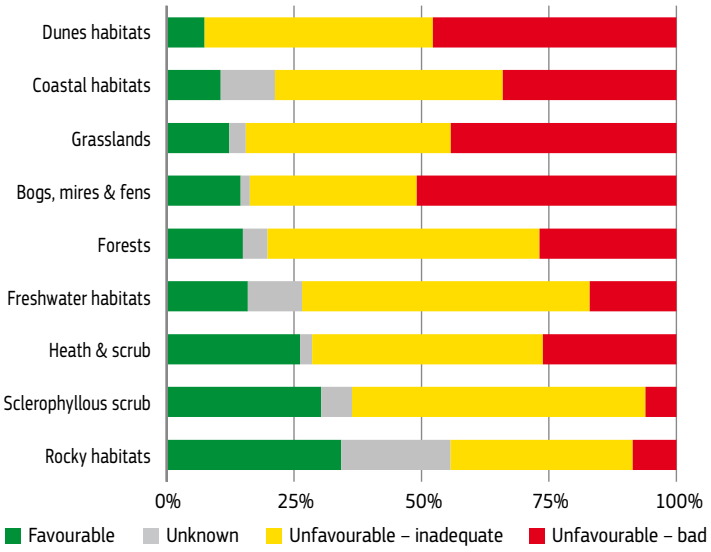


Conservation status and trends of habitats

Conservation **status** by main habitat group

Looking at the conservation status by main habitat group, the results indicate that dune habitats have the lowest proportion of assessments marked as favourable, while rocky habitats have the highest proportion. This may be because many of these habitat types are found in high mountain areas and away from human activities.

Heathland, scrub and sclerophyllous scrub habitats also appear to be doing better than the average, with over a quarter of assessments considered favourable.

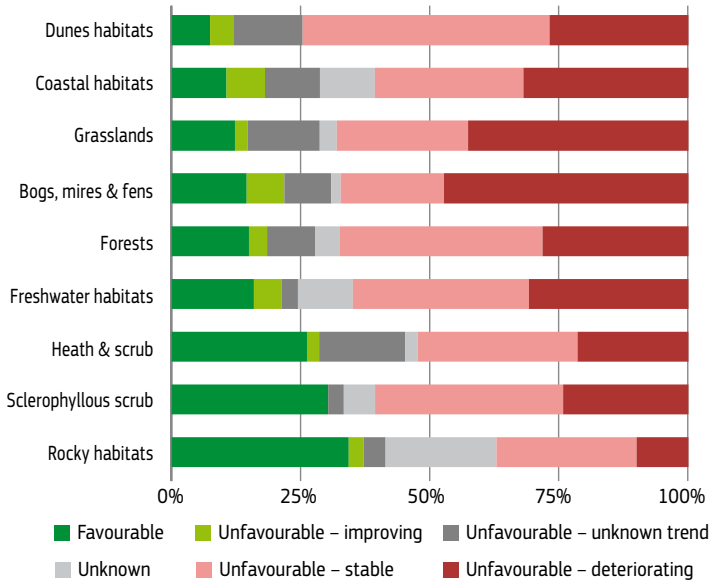


Conservation status of habitat types by main habitat group

Conservation **status trends** by main habitat group

In terms of conservation status trends, bogs, mires and fens seem to be faring the worst. Almost half of these habitat types are deteriorating, followed closely by grasslands (40%).

Dunes habitats have the highest proportion of types that are stable. Forests and freshwater habitats are also predominantly unfavourable but stable.



Conservation status trends of habitat types by main habitat group

Saltmarsh

Ancient oak forest

Sand dune

Case study 5
Appenine beech forest

The Italian Appenines were once covered in large tracts of ancient beech forests with Silver Fir, *Abies alba*, European Yew, *Taxus baccata*, and European Holly, *Ilex aquifolium*. However, changes in forest practices, combined with the introduction of exotic tree species and livestock grazing, has led to their radical decline over the last 50 years.

Appenine beech forest habitats in Italy now have a favourable conservation status across much of their range.

These original habitat types became so restricted in range that they were given priority status under the Habitats Directive. Having designated most of the remaining areas as Natura 2000 in the 1990s, the Italian authorities subsequently set about restoring what was left.

This was done using a combination of site management and carefully planned re-afforestation to improve the overall resilience of the forests and to enable them to expand their range naturally over time. Particular attention was paid to maintaining the genetic purity of the native trees since this is a unique feature of these habitat types.

Today, after years of targeted conservation effort, what is left of these habitat types has been assessed as having a favourable conservation status.

Case study 6
Aapa mires

Aapa mires are an unusual type of bog that develop under the combined effects of short summers and long winters with abundant snow. Because of this, they are only found in the very north of the EU, in Finland and Sweden.

Aapa mires have a favourable conservation status in the Alpine region, but are still unfavourable – inadequate in the Boreal region.

Heavy snow causes long-lasting springtime flooding, which prevents them from developing into a proper bog complex. However, like other peatlands, aapa mires are capable of storing vast quantities of carbon. This means they have a major role to play in tackling climate change.

Aapa mires are also an important source of food for many animals. Cloudberries, cranberries and other fruiting dwarf shrubs grow in abundance here. Because they are generally very remote, they have become ideal breeding grounds for many birds, such as the Wood Sandpiper, *Tringa glareola*, Whooper Swan, *Cygnus cygnus*, and Ruff, *Philomachus pugnax*.

Aapa mires enjoy a favourable conservation status in the Alpine region of Fennoscandia but are still unfavourable – inadequate at lower altitudes in the adjacent Boreal region. Conservation efforts are underway to help to restore their biodiversity value and, at the same time, improve their capacity to absorb more carbon.

Heathland

Freshwater habitat

Mountain rocky habitat

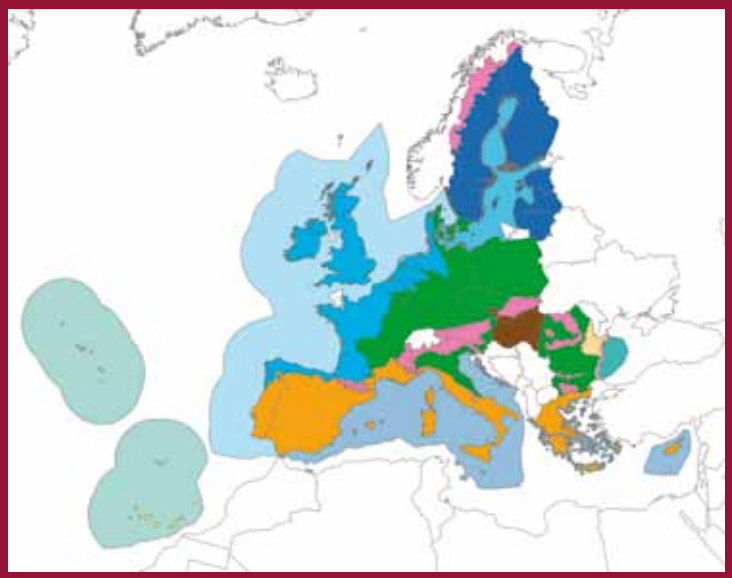
Biogeographical regions in the EU

The EU is divided into nine biogeographical regions and five marine regions, for the purposes of the Habitats Directive.

According to the *State of Nature* report, the conservation status of these species and habitat types varies quite considerably from one region to another.

Overall, the Alpine region stands out as the one that has the most species and habitats with a favourable conservation status. By contrast, both the Atlantic and the Boreal regions show the highest proportion of unfavourable – bad assessments.

The EU has nine terrestrial biogeographical regions and five marine regions.



LEFT *Early-purple orchids,* Orchis mascula, *Monti Sibillini NP, Italy.*

Terrestrial biogeographical regions

Region	Countries	% of EU terrestrial territory
Alpine	Austria, Bulgaria, Italy, Germany, France, Spain, Italy, Sweden, Finland, Romania, Slovakia, Slovenia	8.6%
Atlantic	Ireland, Netherlands, Belgium, United Kingdom, Denmark, Spain, Portugal, France, Germany	18.4%
Black Sea	Bulgaria, Romania	0.3%
Boreal	Finland, Sweden, Lithuania, Estonia, Latvia	18.8%
Continental	Austria, Belgium, Bulgaria, Luxembourg, Czech Republic, Denmark, France, Germany, Italy, Lithuania, Poland, Slovenia and Sweden	29.3%
Macaronesian	Portugal, Spain	0.2%
Mediterranean	Portugal, Spain, France, Italy, Malta, Greece, Cyprus	20.6%
Pannonian	Czech Republic, Hungary, Romania, Slovakia	3%
Steppic	Romania	0.9%

Excludes Croatia, which was not included in the current reporting exercise as it only joined the EU in 2013.

Marine biogeographical regions

Region	Countries
Marine Atlantic	Ireland, Netherlands, Belgium, United Kingdom, Denmark, Sweden, Spain, Portugal, France, Germany
Marine Black Sea	Bulgaria, Romania
Marine Baltic	Finland, Sweden, Lithuania, Estonia, Latvia, Germany, Denmark, Poland
Marine Macaronesian	Portugal, Spain
Marine Mediterranean*	Spain, France, Italy, Malta, Greece, Cyprus, Slovenia

**Excludes Croatia, which was not included in the current reporting exercise as it only joined the EU in 2013.*

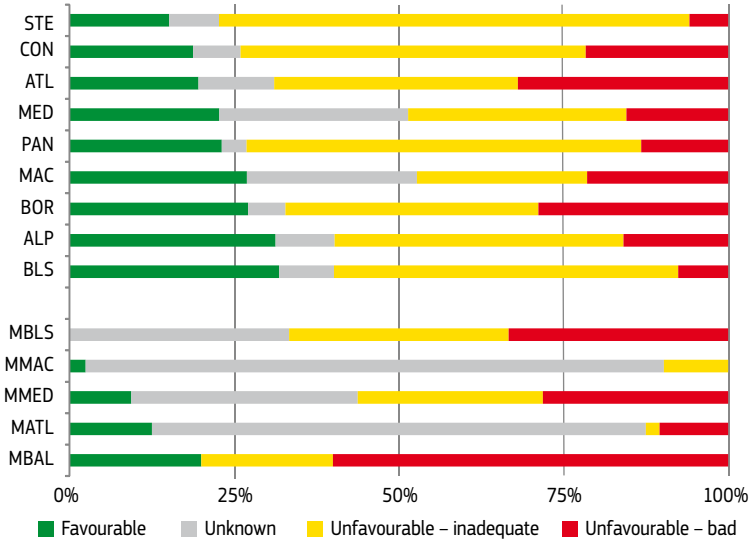
Species conservation **status and trends** according to biogeographical region

For terrestrial species under the Habitats Directive, the highest proportions of favourable assessments were reported for the Black Sea and Alpine regions (over 30%) while the Boreal and Atlantic regions show the highest share of unfavourable – bad assessments.

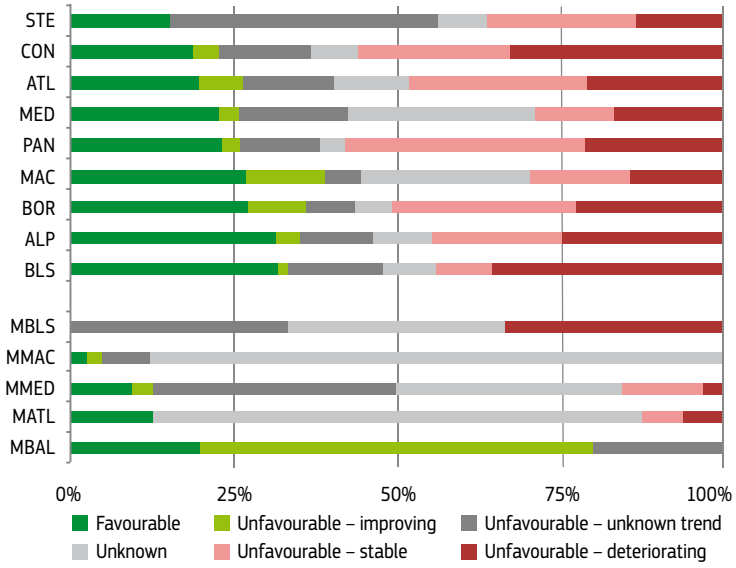
Although there are a smaller number of species assessments in the marine regions, the proportion of unknown assessments is much higher for these (up to 88% in the Macaronesian region). The Baltic Sea region shows the worst status, with 60% of the assessments being unfavourable – bad, followed by the Black Sea Region (33%).

Looking at the trends in conservation status, a significant number of species are declining in the Black Sea and Continental regions, whilst those in the Pannonian region are predominantly stable.

There are proportionally more species in the Boreal (9%) and Atlantic regions (6.8%) that are reported as unfavourable but improving than in the other regions, apart from the Macaronesian region which exceeds this with 12.1% of species classed as unfavourable but improving. In the marine regions, there simply isn't enough data to determine any clear trends.



Conservation status of species per biogeographical region



Conservation status trends of species per biogeographical region

Continental region

Atlantic region

Mediterranean region

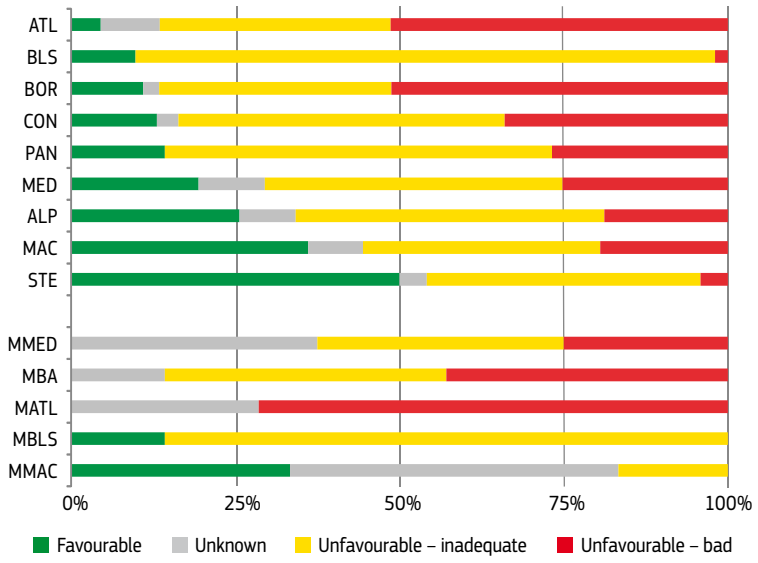
Habitat conservation **status and trends** according to biogeographical region

In the case of terrestrial habitats, the highest proportion of favourable assessments are to be found in the Alpine (25%), Macaronesian (36%) and Steppic regions (50%). On the other hand, the Atlantic and Boreal biogeographical regions show a particularly high proportion of unfavourable – bad assessments, with more than half of all their habitats falling into this category.

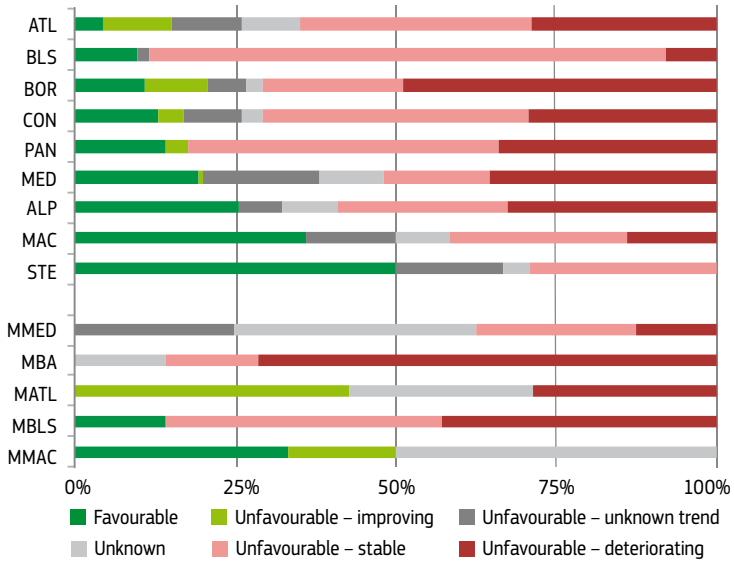
For the marine regions, it would appear that habitat types are faring much better in the Marine Macaronesian region (33% favourable) and the Marine Black Sea region (14% favourable) compared with other regions. By contrast, over 70% of habitat types in the Atlantic marine region have an unfavourable bad status.

Looking at the conservation trends for habitat types, it appears that more habitats are stable than declining in the majority of terrestrial biogeographical regions, with the exception of the Boreal region. Despite the high proportion of habitats with an unfavourable status in the Atlantic region, this is also where the greatest proportion of habitat types are improving (11%).

For marine regions, there is a significant share of improving – unfavourable habitats in the Marine Atlantic region (43%), followed by the Marine Macaronesian region (17%). By contrast, the share of declining habitat assessments in the Marine Baltic region exceeds 70%, followed by the Marine Black Sea region with 43%.



Conservation status of habitat types per biogeographical region

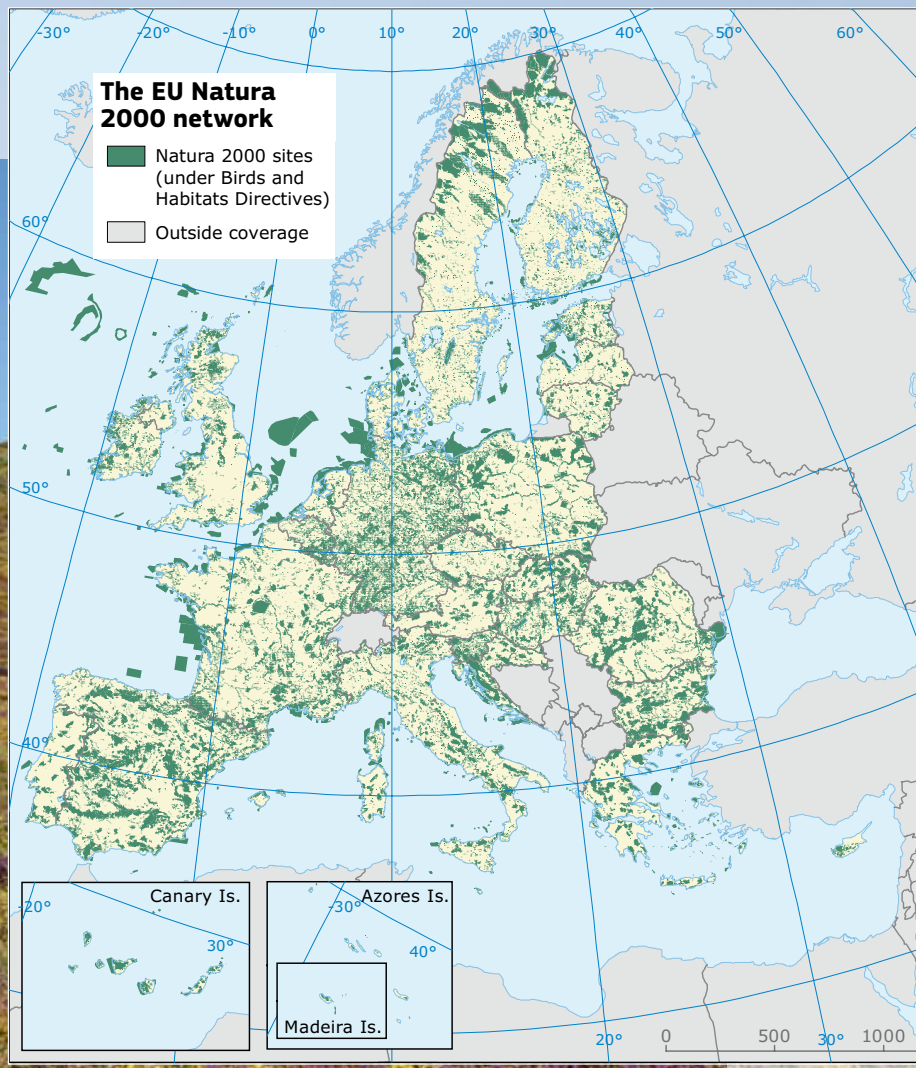


Conservation status trends for habitat types biogeographical region

Pannonian region

Macaronesian region

Boreal region


The EU Natura 2000 network
Natura 2000 sites (under Birds and Habitats Directives)
Outside coverage
-30°
-20°
-10°
0°
10°
20°
30°
40°
50°
60°
60°
50°
40°
Canary Is.
20°
30°
Azores Is.
30°
40°
Madeira Is.
20°
0
500
30°
1000

The role of the Natura 2000 network

At the heart of the two Nature Directives lies a Europe-wide ecological network of nature conservation areas – called the Natura 2000 network. Over 27,000 sites have been included so far. They cover almost a fifth of Europe's land area and an important part of the surrounding seas, making it one of the largest coordinated network of protected areas anywhere in the world.

Once designated, Member States are duty bound to prevent any further deterioration of the habitats and species for which the site has been designated. Where necessary, they must also introduce positive conservation measures to improve their condition within these sites.

The *State of Nature* report indicates that the conservation status of the species and habitats has not yet been significantly influenced by their protection within Natura 2000 sites. Nevertheless, when looking at the habitats and species with an unfavourable status one can detect a positive correlation between the level of Natura 2000 coverage and conservation status trends.

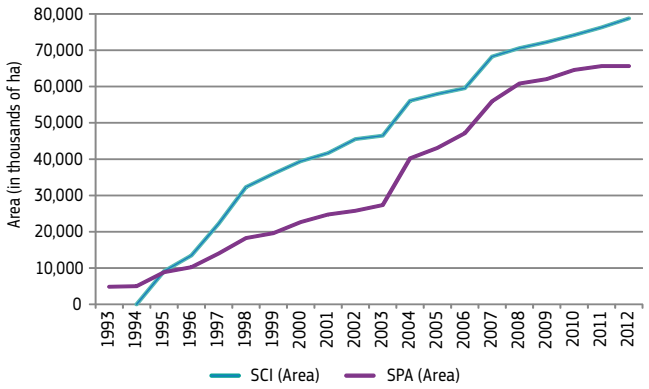
LEFT *Hiker in heathland, Cap Frehel, Brittany, France.*

Building up the network

The Natura 2000 network has grown steadily since the mid-1990s. In 1995 it covered just 18.7 million ha. But by 2012 it had reached almost seven times that size representing an area equivalent in size to France, Germany and Italy combined.

Much of this increase was due to the further expansion of the EU. Ten new eastern and southern European countries joined in 2004, and Bulgaria and Romania joined in 2007 bringing the total up to 27 countries by the end of the second reporting period in 2012.

The terrestrial part of the Natura 2000 network is now considered largely complete, but there is still work to be done to complete its marine component, particularly for offshore sites where progress has been severely hampered by the lack of knowledge with which to select sites. Today there are just over 3,000 marine sites in Natura 2000, representing around 4% of the EU's marine waters.



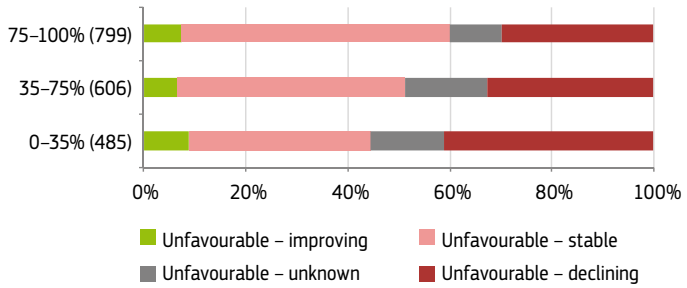
Cumulative surface area of the Natura 2000 network from 1993–2012

The influence of Natura 2000 on species and habitat types under the **Habitats Directive**

In order to determine the influence of Natura 2000 on the conservation status and trends of species and habitats, it is important to know how much of their total area or population is included within the Natura 2000 network. One would expect that the greater the coverage under Natura 2000, the more likely it is that this will influence their conservation status.

The *State of Nature* report indicates that the overall conservation status of species and habitats listed in the Habitats Directive is not significantly associated with Natura 2000 coverage. This may be due to the fact that the necessary conservation and restoration measures have not yet been implemented for the majority of sites or have not had enough time to have a real influence.

Nevertheless, looking at the habitats and species with an unfavourable status one can detect a positive correlation between the level of Natura 2000 coverage and conservation status trends. For instance, a significantly greater proportion of habitats with 75–100% coverage within the Natura 2000 network have a stable conservation trend compared to those with less than 35% of their range in Natura 2000.

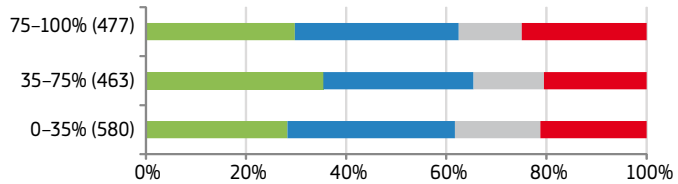


Trends in conservation status of Annex I habitats assessed by Member State, according to Natura 2000 covered

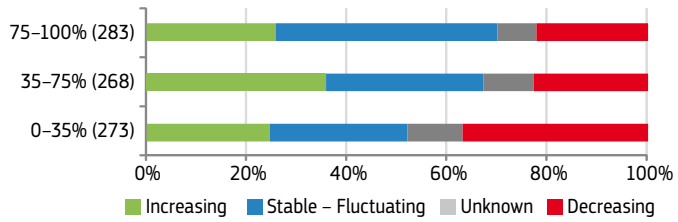
The influence of Natura 2000 on birds under the **Birds Directive**

For Annex I bird species, there is no significant association between population status and trends and Natura 2000 coverage classes. However, for the non-Annex I SPA trigger species, the Natura 2000 coverage class is significantly associated with the population trend. The species in the lowest coverage class (0–35%) seem more likely to have decreasing population trends than species in the other coverage classes (35–75%, and 75–100%).

The frequency of the stable population trend in the highest coverage class (75–100%) is higher than expected, and similarly the frequency of increasing trends is higher than expected in the middle coverage class (35–75%).



Short-term population trends of SPA trigger species listed in Annex 1, according to N2000 covered



Short-term population trends of SPA trigger species not listed in Annex 1, according to Natura 2000 covered

European hamster, *Cricetus cricetus*

Conservation-friendly farming

Green Hawker, *Aeshna viridis*

Case study 7
Eurasian Crane, *Grus grus*

The Eurasian Crane, *Grus grus*, has an extensive range stretching from Northern Europe to the far east of Russia. Its European breeding population underwent a major decline up until the 1980s, largely as a result of habitat loss and degradation due to the drainage of wetlands and the expansion of agriculture.

The EU population of the Eurasian crane has increased sixfold in the last 27 years.

However, thanks to the protection of over 2,800 important staging, roosting and wintering sites for the species under Natura 2000, the West European population has since undergone a large increase, from around 45,000 individuals in 1985 to around 300,000 in 2012.

The increase is evident in the breeding as well as the wintering population. For example, in the main wintering area in Spain, the number of cranes increased from fewer than 15,000 individuals in 1980 to more than 150,000 individuals in 2007. The species has also recolonised previous breeding areas in a number of countries.

Another key factor contributing to its population growth is the availability of additional sources of food thanks to certain intensive agricultural practices such as maize cultivation. This has, however, resulted in conflicts with farmers which have since been resolved in a number of countries through targeted agri-environment schemes funded under the EU's RDP, as well as site-specific management plans and compensation schemes.

Case study 8
Calcareous grasslands

Semi-natural dry grasslands and scrubland on calcareous substrates are among the most species-rich habitats in Europe in terms of the number of plant species they support per unit area. The calcareous grasslands of North-west Europe, for instance, host up to 80 plant species/m^2, including a wide variety of orchids in some areas.

The conservation of calcareous grasslands in Poland has helped the recovery of the rare Spotted Souslik, Spermophilus suslicus.

Pressure on grassland habitats has however been steadily increasing over the years, mainly due to abandonment or change in use. In the areas where the habitat is still present, the lack of management means they continue to degrade despite being protected.

In Poland, 80–90% of these calcareous grasslands are now protected under the Natura 2000 network. The habitat here has recently witnessed an improvement in status thanks to the implementation of conservation measures in Natura 2000 sites that included removing shrubs, mowing and in some cases extensive grazing.

These actions, largely funded by the European Regional Development Fund, have led to a gradual increase in the area of this grassland habitat as well as reduced fragmentation. This, in turn, has helped the recovery of the rare Spotted Souslik, *Spermophilus suslicus*, which is also protected by the Habitats Directive. Its population is now almost entirely located within Natura 2000 sites in Poland.

Smooth Snake, *Coronella austriaca*

Sei Whale, *Baelenoptera borealis*

Woodland management


60207
67

Pressures and threats

Living in one of the most densely populated regions of the world, and with a long history of land use, European society has had a profound impact on nature.

This has led to diverse cultural landscapes that are home to a rich fauna and flora. However, developments, particularly during the 20th century, have also resulted in large-scale destruction of nature. By the mid-1980s, Europe had already lost two-thirds of its wetlands and almost three-quarters of its sand dunes and heaths through a combination of land-use change, infrastructure developments, pollution and urban expansion.

In order to gain a better understanding of the underlying pressures and threats on the species and habitats protected under the two Nature Directives, Member States were asked to report on what they considered to be the principal causes of wildlife loss and habitat degradation.

For terrestrial ecosystems, the most frequently reported pressures and threats are **agriculture** (including both intensification and abandonment) and the **modification of natural conditions** (e.g. hydrological conditions). The most important pressures and threats for marine ecosystems are **use of living resources** (particularly for species), followed by **modification of natural conditions** (especially for habitats), and **pollution**.

LEFT *Farmer working in a maize field with a vibro-cultivator, Alsace, France.*

Valuing Europe's natural capital

Protecting our natural heritage ensures that the rich diversity of plants, animals and habitats in Europe is maintained for generations to come. It is also essential for our economy and our well-being.

Healthy ecosystems provide society with a wealth of valuable ecosystem services, such as fresh water, carbon storage, pollinating insects etc., protection against floods, avalanches and coastal erosion, as well as ample opportunities for tourism and recreation.

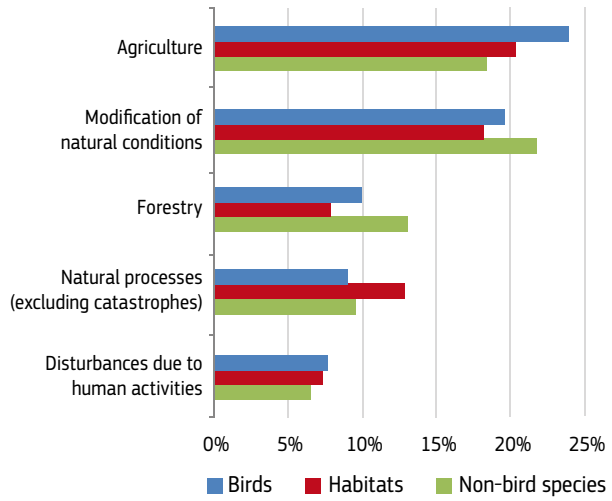
They are also a vital source of income for countless people across Europe who harvest their natural resources in a sustainable manner. Many areas are valuable for nature precisely because of the way they have been managed up to now, and it will be important to ensure that such activities are maintained well into the future.

The benefits that flow from the Natura 2000 network alone are estimated to be worth in the order of €200 to €300 billion/year. Investing in Natura 2000 therefore makes sound economic sense.

Pressures and threats on terrestrial ecosystems

For terrestrial systems, "*agriculture*" and human-induced *"modifications of natural conditions*" are the most prominent problems for all three groups (birds, other species and habitats). For "*agriculture*", the modification of cultivation practices, grazing by livestock (including the abandonment of pastoral systems/lack of grazing), fertilisation and pesticides are the most frequently mentioned pressures and threats.

For "*modifications in natural conditions*", changes in water-body conditions, hydrological regimes, reduction of habitat connectivity and water abstraction are the most frequently reported pressures. This is consistent with the recent assessments carried out under the Water Framework Directive.

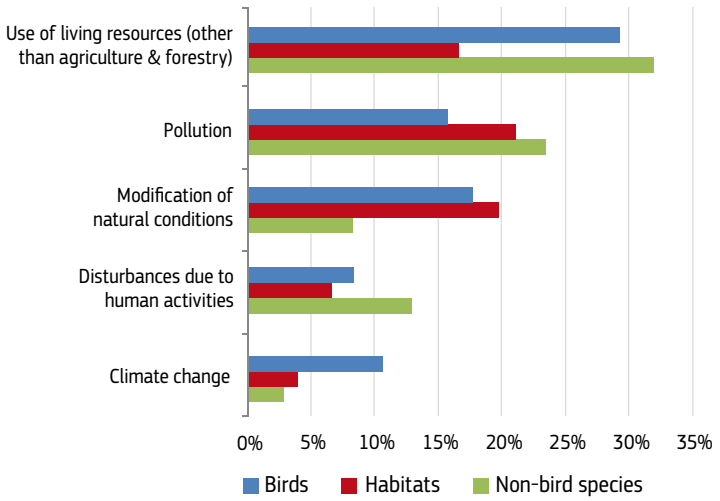


Frequency of pressures and threats on terrestrial habitat types and species

Pressures and threats on marine ecosystems

For marine systems, the "*use of living resources*" and "*pollution*" are the main reported pressures and threats. In the case of the former, this is primarily caused by various fishing activities and the harvesting of other aquatic resources. Marine pollution includes waste products such as plastic bags, styrofoam and non-synthetic compounds, as well as oil spills at sea.

"*Modification of natural conditions*" (dredging, modification of hydrological regimes and coastline management) and "*disturbances due to human activities*" are also identified as significant. For marine birds in particular climate change is beginning to emerge as an important threat.



Frequency of pressures and threats on marine habitat types and species

Motorway

Windfarm

Intensive farming

Case study 9
Boreal Baltic coastal meadows

Estonia's flat coastline provides an ideal environment for the development of Boreal Baltic coastal meadows, a habitat that is unique to this part of the world. Because of its high biodiversity value it was given protection under the Habitats Directive.

The conservation status of Boreal Baltic coastal meadows have stabilised in Estonia.

Coastal meadows were extensively used as pastureland right up until the 1960s, but, with the introduction of Soviet-style collective farms, large areas were abandoned. Soon after they became invaded by scrub.

Having protected most of the remaining areas under Natura 2000, the Estonian authorities launched a large-scale programme to restore the coastal meadows so that they could, once again, be grazed by local farmers.

Thanks to a dedicated Agri-environment Scheme under Estonia's EU Rural Development Programme, farmers were offered various incentives to manage the meadows for their biodiversity as well as economic interest. By 2012, around 950 agreements had been signed covering more than half of the total area of coastal meadows in the country.

Although the habitat still has an unfavourable status, its condition has now stablised and should begin to evolve towards a more favourable status in time.

Case study 10
Marine Natura 2000

One of the biggest difficulties facing marine Natura 2000 site management is the profound lack of knowledge. In Spain an ambitious LIFE project was launched in 2007 at a cost of €15.5 mil (with the EU LIFE fund contributing €7.7 mil) to improve the scientific knowledge of marine habitats and species in Spanish waters.

There is still a significant lack of knowledge on the conservation of EU protected marine species.

The project began by carrying out extensive studies to help identify the most representative marine areas around Spain. This has since led to the designation of ten new marine Natura 2000 sites covering 2.5 million ha.

Thereafter, guidelines were developed for the management and sustainable use of these ten new sites in close consultation with all relevant institutions, NGOs and competent administrations. Particular attention was paid to involving key stakeholder groups, and in particular, fishermen in order to build up a constructive dialogue and consensus between all key socio-economic sectors.

A new methodology was also developed to identify those areas that are targeted by different fishing interests and fishing methods. This so-called footprint is now being used for negotiating zonation schemes within the Natura 2000 site that maximise the benefit of marine biodiversity but minimise the possible impact on fishermen.

Urban sprawl

Drainage works

Commercial fishing

The EU 2020 Biodiversity Strategy

In 2011 The European Commission adopted an EU-wide Strategy to halt the loss of biodiversity and improve the state of Europe's species, habitats and ecosystems by 2020.

The EU Strategy is built around six mutually supportive and inter-dependent targets which address the main drivers of biodiversity loss. Target 1 sets measurable goals in terms of improvements in the conservation status of habitats and species protected under the two EU Nature Directives.

According to the *State of Nature* report, species protected under the Habitats Directive are close to meeting this target but the situation for habitat types and birds is less positive and it is clear that there is still much to be done in order to be able to reach this target.

Target 1 of the Biodiversity Strategy

Target 1 of the EU Biodiversity Strategy reads as follows:

To halt the deterioration in the status of all species and habitats covered by EU nature legislation and achieve a significant measurable improvement in their status so that, by 2020, compared to current assessments:

- ***100% more habitat assessments and 50% more species assessments under the Habitats Directive show a favourable or improved conservation status; and***
- ***50% more species assessments under the Birds Directives show a secure or improved status.***

In practice this means that, by 2020, **34%** of the habitats and **25%** of the species assessments should either have reached a favourable conservation status or shown a significant improvement in their status. Similarly for birds, the aim is for **78%** of bird species to be either secure or improving by 2020.

LEFT *Young children playing on beach, UK.*

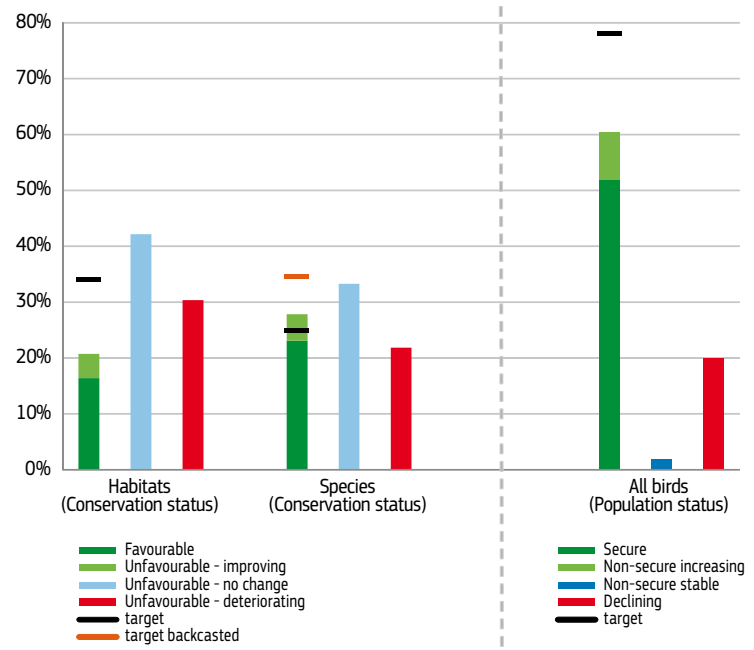
Progress in meeting Target 1 of the EU Biodiversity Strategy

The *State of Nature* report concludes that very little progress has been made in reaching the Biodiversity Strategy target so far.

- At this stage, only 20% of habitat assessments are Favourable (16%) or improving (4%) compared to the 34% target set for 2020. On the other hand 30% of all habitats are still deteriorating and 42% have not changed since 2006.

- For species, the situation appears, at first glance, to be much more positive. Altogether, 28% of species assessments are favourable (23%) or improving (5%), which is already above the 25% target set for 2020. However, much of this change is due to improvements in data and methodology. Taking this into account, the actual increase in favourable assessments for species is very small (1–2%), while 22% of species are still deteriorating and 33% have not changed since 2006.

- Similarly there has been little progress towards Target 1 for birds (78% in 2020) with no increase in the number of secure assessments. When considering all bird assessments, 8.5% are non-secure but increasing, 2% are non-secure and stable and 20% show a further decline.



Progress towards Target 1 of the Biodiversity Strategy

BELOW *Breathing Spaces project – children and volunteers planting trees and shrubs, Swansea, Wales.*

Other actions required under Target 1

The EU Biodiversity Strategy identifies a number of key actions that are considered vital to achieving Target 1. It calls in particular for the effective management of the Natura 2000 network. This not only requires the establishment and timely implementation of Natura site management plans and conservation measures but also necessitates a significant investment of funds in the coming years.

However, according to the *State of Nature* report, so far only 50% of the sites were reported as having comprehensive management plans. It also appears that investment has been insufficient in some Member States and that the opportunities offered by, for example, the Common Agricultural Policy, the Common Fisheries Policy and the EU Regional Policy have not been fully realised.

Looking to the future

The *State of Nature* report provides an important snapshot of the current situation as regards conservation status and trends for over 2,000 species and habitat types protected under the two EU nature Directives. From this it is clear that, while there is still a long way to go to reach to 2020 target, the Directives are managing to 'hold the line' across a significant part of Europe's biodiversity.

This is reflected in the fact that some of the species and habitats protected by the directives are beginning to show modest signs of improvement. These positive trends, illustrated by success stories from across Europe, provide a first indication that the legislation may well be starting to have an impact and that targeted conservation action, if done on a large enough scale, can deliver substantial results on the ground.

However, the overall EU status of species and habitats has not significantly changed over the last six years, with many habitats and species still in unfavourable status and a significant proportion of them continuing to deteriorate.

Some species groups, such as freshwater fishes, and habitats, such as grasslands or wetlands, are of particular concern. Significant pressures and threats from changes in agricultural practices and continuing modifications of hydrological conditions, as well as over-exploitation and pollution of the marine environment, need to be tackled to reverse these trends.

The Natura 2000 network has a major role to play in this respect. Covering almost a fifth of the EU's land area as well as a significant part of its marine waters, the effective management and restoration of Natura 2000 sites is central to achieving the overall objectives of the Directives.

In many parts of Europe conservation objectives, and measures to implement them, are still being developed. From the trends data one can see that the network is already starting to have an effect. However, these conservation efforts will need to be further reinforced and expanded if we are to achieve the 2020 biodiversity target.

The next report, covering the period 2013–2018 will let us know if these efforts are sufficient or not to enable significantly more species and habitats to improve their conservation status.

BELOW *Walker with dog on a moorland footpath, Exmoor National Park, Somerset, England.*

Further reading

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LEFT *Loggerhead Turtle,* Caretta caretta, *with a shoal of Pilot Fish,* Naucrates ductor, *Pico, Azores, Portugal.*

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