

Joint Task Force on Environmental Indicators

Fourth session

UNECE

Geneva, 18–20 October 2011

Threatened and protected species

Trends in the number and distribution of selected species

EEA, UNEP-WCMC, ECNC, PEBLDS Partnership

SEBI2010 Indicator Fact Sheets

Ivonne Higuero
Programme Coordinator and Ecosystems
Management sub-programme regional coordinator
UNEP Regional Office for Europe



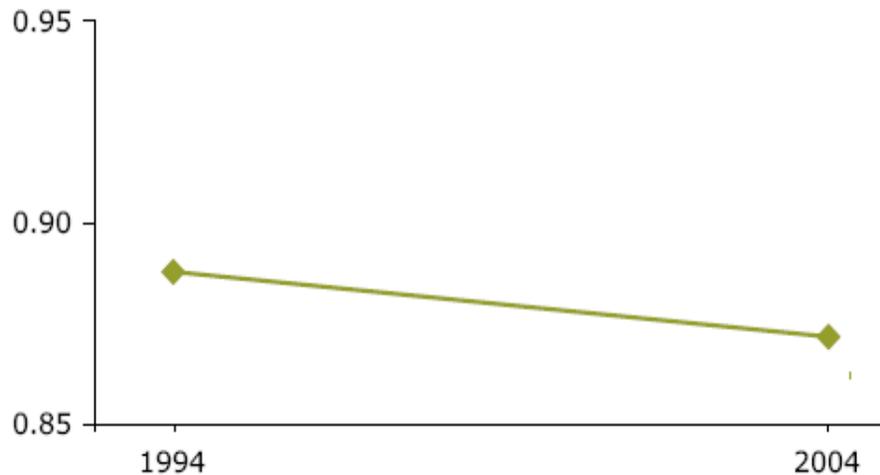
Headline indicator: change in status of threatened and/or protected species

Indicator 1: Red List Index for European species

- **Key policy question:** Has the risk of extinction for European birds changed?
- **Key message:** To date, the Red List Index has been calculated only for bird species at a European level, so the information in the current indicator is limited to European birds. The overall risk of extinction among Europe's birds has generally been on the rise over the last decade. While the status of some species has due to conservation action, many more have deteriorated because of worsening threats and/or declining populations.

Red List Index (RLI) for European birds based on pan-European extinction risk in 1994–2004

Red List Index of species survival



Note: How to read the graph: the smaller the RLI is, the greater the number of European bird species with an increased extinction risk.

n = 522 species.

Source: BirdLife International, 2008.

The IUCN Red List categorizes species as 'Extinct', 'Extinct in the Wild', 'Critically Endangered', 'Endangered', 'Vulnerable', 'Near Threatened', 'Least Concern', 'Data Deficient' and 'Not Evaluated'. The RLI is calculated from the number of species that moved from one category to another between assessments owing to a genuine improvement or deterioration in status (i.e. category changes owing to revised taxonomy or improved knowledge are excluded).

Assessment

- Extinction risk overall is increasing for European bird species. In the previous figure, for example, the decrease from a value of 0.89 to 0.87 reflects the balance between 19 species (out of a total of 522) improving in status during 1994–2004 but 51 species deteriorating in status.
- All European groups of countries show a consistent decline, except possibly the Caucasus. The EU-25 shows a continuing decline, from a starting point that was already lower than in other sub-regions, indicating that species in the EU-25 are more threatened overall.

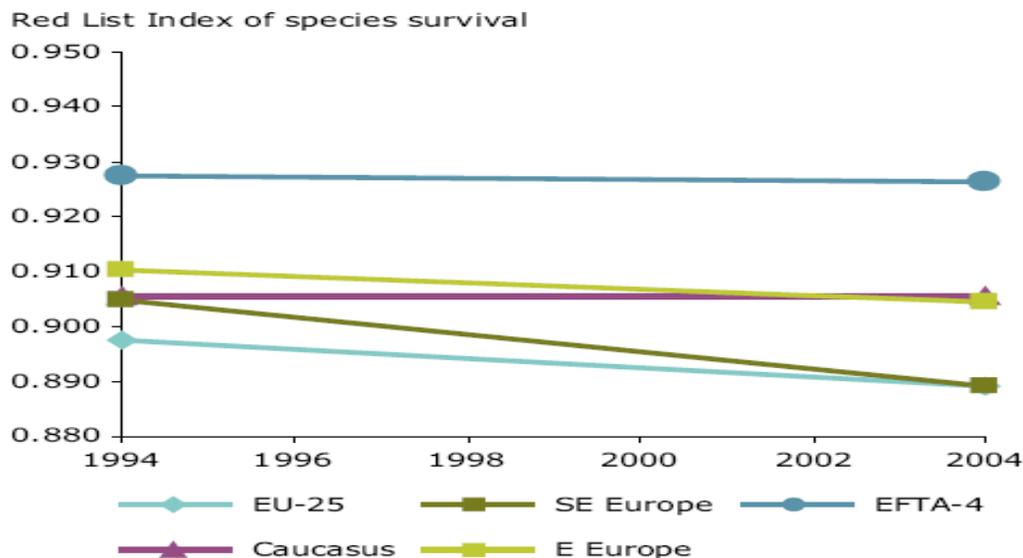
Geographical coverage



Assessment, cont.

- If for more species the extinction risk has increased instead of decreased the RLI goes down. Extinction risk for this indicator is assessed at the European level, i.e. the risk that a species ceases to exist in Europe (even if the species may survive in other regions of the world).
- Decreasing RLI values mean that biodiversity is being lost at an increasing rate. No change in the RLI value means that there are no changes in the expected rate of species extinctions (it does not mean that biodiversity loss has stopped, or that the biodiversity will remain unchanged). Increasing RLI values mean that there is a decrease in the expected future rate of species extinctions (i.e. a reduction in the rate of biodiversity loss).

Red List Indices (RLIs) for birds in the EU-25, EFTA-4, Eastern Europe, the Caucasus and South-Eastern Europe during 1994–2004, based on their extinction risk at pan-European level



Note: n = 522 species

How to read the graph: a lower value means a lower chance of survival (increased extinction risk).

Country groupings: EU-25 (Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden and the United Kingdom); EFTA (Iceland, Liechtenstein, Norway and Switzerland); Caucasus (Armenia, Azerbaijan and Georgia); Eastern Europe (Belarus, Republic of Moldova, Russian Federation, Ukraine); South-Eastern Europe (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, Romania, Serbia, the Former Yugoslav Republic of Macedonia and Turkey).

Source: BirdLife International.



Indicator 2: Species of European interest

Key policy question: What is the conservation status of species of Community interest?

Key message

- Around half of the species of Community interest (those species which, within the territory of the European Union are listed in Annexes II, IV and V of the Habitats Directive) have an unfavourable conservation status, with variation across biogeographic regions (3). There are still significant gaps in knowledge, especially for marine species.

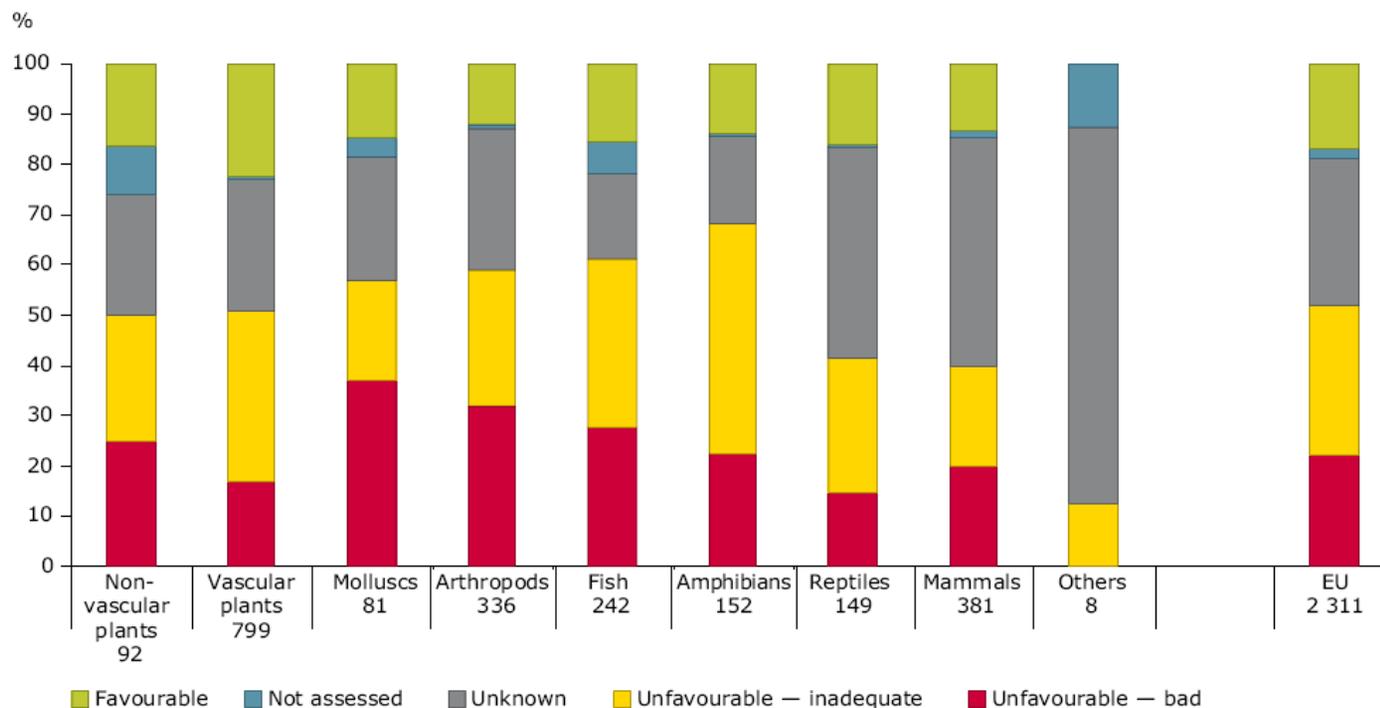
Assessment

- Unfavourable status is most frequently reported for the species in the marine Baltic region and the continental region (100 and 70 %, respectively). The variation amongst species groups is limited, but amphibians appear to be most threatened, with nearly 70 % having an unfavourable conservation status. In most cases, the trend information was not available. For many species, recovery to a favourable conservation status will take considerable time. The next evaluation, due in 2013, will help assess the efficiency of the Directive.

Geographical coverage



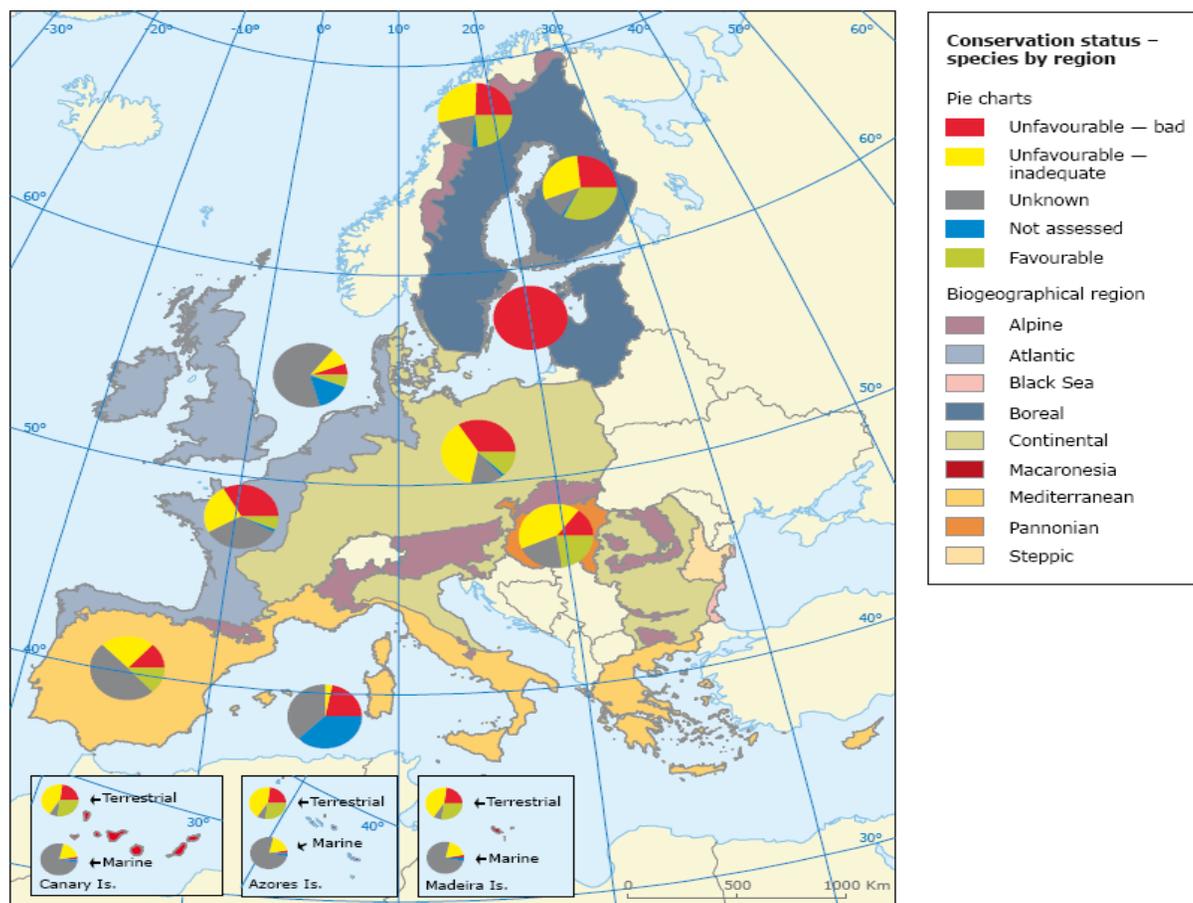
Conservation status — species by taxonomic group



Note: The EU column shows the total of the assessments in all other columns.

⁽³⁾ The reporting format uses three classes of Conservation Status. 'Good' (green) signifies that the species or habitat is at Favourable Conservation Status (FCS) as defined in the Directive and the habitat or species can be expected to prosper without any change to existing management or policies. In addition, two classes of 'Unfavourable' are recognised: 'Unfavourable-Bad' (red) signifies that the habitat or species is in serious danger of becoming extinct (at least locally) and 'Unfavourable-Inadequate' (amber) is used for situations where a change in management or policy is required but the danger of extinction is not so high. The unfavourable category has been split into two classes to allow improvements or deterioration to be reported. (Assessment, monitoring and reporting under Article 17 of the Habitats Directive: Explanatory Notes & Guidelines DRAFT 2 January 2006).

Conservation status — species by biogeographical region



Headline indicator: trends in abundance and distribution of selected species

Indicator 1: Abundance and distribution of selected species

Key policy question: Have declines in common species in Europe been halted?

Key message

- Overall, Europe's common bird populations reduced by around 10 % since 1980. Common farmland birds declined most severely (around 50 %) but common forest birds also declined by some 9 %. Falls have levelled off since the late 1990s. Europe's grassland butterflies have declined dramatically (60 %) since 1990 and this reduction shows no sign yet of levelling off.
- An increase in the population index means that there are more species with populations increased than species with populations decreased: it does not necessarily mean that the population of all species has increased. It can be due to expansion of some species (typically, generalists) at the expense of other species (typically, specialists). It must also be noted that populations fluctuate on a yearly basis. In the absence of the information on abundance, information on the distribution of species can help assess species status. However, at a European level, this type of information is still weak for other groups of species.

Assessment

- For some populations of European common birds, downward trends appear to have slowly levelled off but it needs to be borne in mind that significant losses had already happened by 1980. Of the more common bird species, farmland birds have declined. The initial steep decline of farmland birds was associated with increasing agricultural specialisation and intensity in some areas, and largescale marginalisation and land abandonment in others.
- The falling trend has levelled off since the late 1990s, partly because of stabilising inputs of nutrients and pesticides and the introduction of set-aside in the EU-15, and partly because of drastically lower nutrient inputs in the EU-10 as a result of political reforms and the resulting economic crisis in the agricultural sector. An increase in agricultural production in eastern Europe, if linked to higher inputs of nutrients and pesticides, combined with further land abandonment in some parts of Europe and the proposed abolition of set-aside, may lead to a new decline.

Geographical coverage



Birds

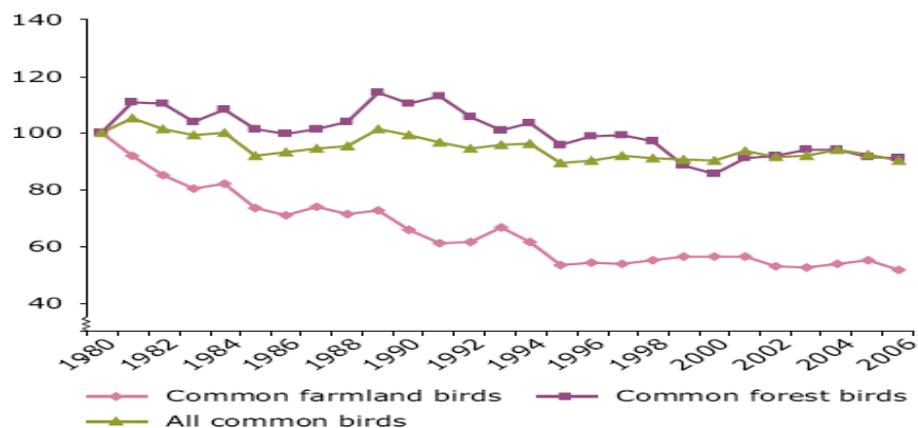


Butterflies

Assessment, cont.

- Conservation measures adopted under the EU Birds Directive have proven effective in the recovery of threatened bird populations (Donald *et al.*, 2007) but not in the case of more widespread bird species, where different recovery mechanisms are now required. Well-designed agri-environment measures have been shown to reverse bird declines at local levels. The challenge now is to deploy the Birds Directive conservation measures or others widely enough to help populations recover at national and European scales. Trends in species in Europe are also driven by pressure outside Europe, e.g. for migratory bird species, and a comprehensive response would need to be effective beyond European territory.
- Grassland butterflies are declining severely; their populations have declined by 60 % since 1990 and there is no sign of levelling off. Intensification is the most important threat to butterflies across the relatively flat areas of western Europe: ranging from the eastern half of the United Kingdom, over the north of France, Belgium, the Netherlands, Northern Germany and Denmark — as well as flat areas in other parts of Europe. By contrast, abandonment and lack of sustainable grazing is the chief threat in southern and eastern Europe, in mountainous areas or areas with relatively poor soils.

Common birds in Europe population index (1980 = 100)



Note: How to read the graph: since 1980 the number of common farmland birds has declined by around 50 %.

For common farmland bird species, n = 36; for common forest bird species, n = 29; for all common bird species (this line includes the farmland and forest birds as well as other common species that are not primarily associated with either of these habitats), n = 135.

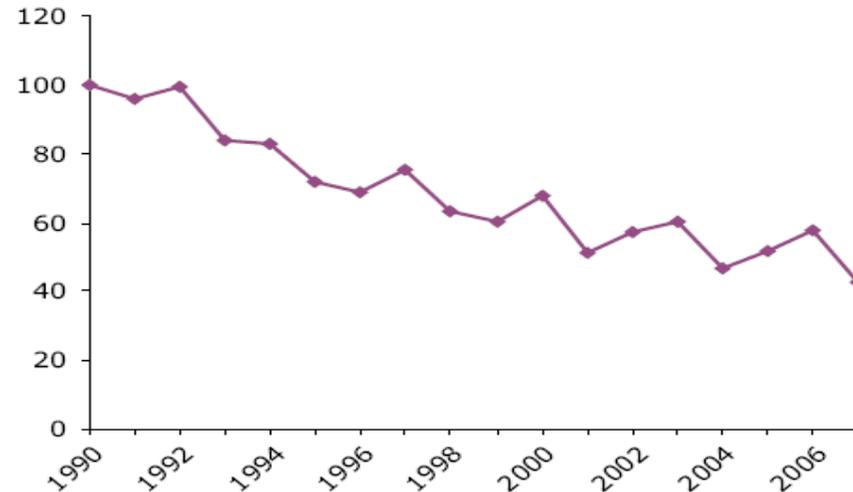
Country coverage (i.e. reflecting the availability of high-quality monitoring data from annually-operated common bird monitoring schemes, employing generic survey methods and producing reliable national trends): Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, France, Finland, Germany, Hungary, Ireland, Italy, Latvia, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland and the United Kingdom. See www.ebcc.info for more technical information on the calculation of the index.

It should be underlined that the methodology for calculating the farmland bird index has recently changed. The new index presents a much sharper drop around the years of 1995 and 1996. While the new index is recognised as integrating better expertise in terms of species selection, further investigation is necessary to explore what is behind this drop. In addition, the influence of including both new species and the new Member States in the selection, and the starting year of monitoring schemes in some countries should be further investigated. In any case, the trend from 1996 onwards is consistent with the previous methodology and shows the index to be fairly stable.

Source: EBCC/RSPB/BirdLife International/Statistics Netherlands, 2008.



Grassland butterflies — population index (1990 = 100)



Note: How to read the graph: since 1990, grassland butterflies have declined by 60 %.

For this graph, the data used for grassland butterfly species were from Butterfly Monitoring Schemes in nine countries: Belgium – Flanders (1991–2004); Estonia (since 2004); Finland (since 1999); France (since 2005); France – Doubs region (2001–2004); Germany (since 2005); Germany – Nordrhein Westfalen (since 2001); Germany – Pfalz region (*Maculinea nausithous* only, 1989–2002); Jersey (since 2004); Portugal (since 1998); Spain – Catalunya (since 1994); the Netherlands (since 1990); and the United Kingdom (since 1976).

Source: De Vlinderstichting/Butterfly Conservation Europe/ Statistics Netherlands, 2008.