European Environment Agency
European Topic Centre on
Biological Diversity

Data quality coherence check

Summary of results checking quality of data collected under the Nature Directives

Fact sheet

RO

Table of contents

Summary of task

Reporting under Articles 12 of the Birds Directive, Article 17 of the Habitats Directive and reporting on Natura 2000 sites are the most comprehensive and regularly updated and coordinated datasets on biodiversity in the European Union. These datasets are used in support to EU biodiversity policies (through generation of maps, indicators and other statistics) and also by the academic world and stakeholders. It is essential that the data are of the highest quality as possible. This task sets out to highlight critical gaps or inconsistencies in Article 12 and Article17 reporting to guide Member States to improve data quality for the nature reporting period 2019 – 2024. The task additionally addresses inconsistencies in reporting Natura 2000.

For which purposes are the data used at the European level?

The data collected under the nature directives have to be 'fit' for the following main purposes[1]:

- assessing and enhancing completeness of the Natura 2000 network (Natura 2000 sufficiency assessments)

[1] The list is not exclusive

preparation of the Union Lists (sites designated under the Habitats Directive by biogeographical region)
- quantification of restoration needs and prioritization in the PAFs
- providing a regular assessment of the State of Nature in the EU
- informing on progress towards the EU biodiversity strategy to 2030
- providing the biodiversity component of "The European Environment – State and Outlook report" (SOER)
- underpinning outreach products such as the "Natura 2000 Barometer and Viewer"

Furthermore, the information reported on species and habitats distribution, conservation status and trends, as well as on threats and pressures is highly relevant to assess cross-sectoral policy impacts.

The following analyses are better understood when seen together with the relevant dashboards. A description of the methodologies used in the following analyses and the dashboards can be found in links below. In some cases, the numbers of reported habitat types or species are small and this makes the calculated percentages for these particular cases not statistically robust. Therefore, attention should be paid to these values. Where possible, the number of observations has been placed in brackets next to the percentages. The analysis below is based on Member State level. Some of the online dashboards may contain a filter for biogeographic/marine region should the user wish to further investigate. The EU average refers to EU28.

Summary of the results for RO

1. Coherence check of nature reporting data with data reported under Natura 2000

For the analysis comparing values in Natura 2000 with those reported in the Article 12 and 17 reports, 'comparable' records are those which could be linked between the 2 datasets based on a combination of fields for habitats (Member State, biogeographic/marine region, habitat code, area), non-bird species (Member State, biogeographic/marine region, species code, population unit, population value), and bird species (Member State, species code, season, population unit, population value). Where one or more of these links could not be made, the record was 'non-comparable'.

It must be noted that this is not a validity check of the reported habitat area and species population values.

1.1 Habitats: comparison of Article 17 and Natura 2000 habitat areas

There should be coherence in data between the Natura 2000 database and the information provided in the Article 17 report, e.g. for a given habitat type, the combined area reported in Natura 2000 sites in the Member State's Natura 2000 database should not exceed the national area reported in the Article 17 report. Additionally, the combined Natura 2000 habitat area reported in the Natura 2000 database should be the same (or similar) to the Natura 2000 habitat area submitted in the Article 17 report.

Article 17 area and Natura 2000 area from the Natura 2000 database:

All habitat reports submitted by RO were comparable between Article 17 and the Natura 2000 database end_2018. Almost all of these reported a Natura 2000 database area as equal to or less than the Article 17 habitat area (97.7%, EU average 74.9%). The remaining 2.3% report a Natura 2000 database area as greater than 2 times the Article 17 habitat area.

Natura 2000 area reported in Article 17 and Natura 2000 area from the Natura 2000 database:

With regards comparing the Natura 2000 area reported in Article 17 with the Natura 2000 end_2018 area, only 67.8% of these records could be compared.

Of this comparable proportion, the majority (96.6%, EU average 46.2%) reported a Natura 2000 database area as less than the Natura 2000 area in the Article 17 report. The remaining 3.5% (EU average 14.2%) of habitats report a Natura 2000 database area of greater than 2 times the Natura 2000 area reported in Article 17.

For further details see the online statistics here.

1.2 Non-bird species: comparison of Article 17 and Natura 2000 species population

There should be coherence in data between the Natura 2000 database and the information provided in the Article 17 report e.g. for a given species, the combined population reported in Natura 2000 sites in the Member State's Natura 2000 database should not exceed the national population reported in the Article 17 report. Additionally, the combined Natura 2000 population reported in the Natura 2000 database should be the same (or similar) to the Natura 2000 population submitted in the Article 17 report. However, it must be noted that for Art. 17 reporting, agreed population units are used which is not the case for Natura 2000. Therefore, it is not an obligation for Member States to use the same population units in both reporting flows. This is an added complication for comparing records between the two reporting flows.

Article 17 population and Natura 2000 population from the Natura 2000 database:

There are no comparable records in Romanian data in the Article 17 database and the Natura 2000 database, which is the lowest proportion among member states. Therefore, no detailed commentary is possible. The highest comparable proportion among Member States does not exceed 34.2%.

Natura 2000 population reported in Article 17 and Natura 2000 population from the Natura 2000 database:

The comparison of Natura 2000 species populations reported in Article 17 and Natura 2000 database is also not possible due to the non-existing comparable records.

For further details see the online statistics here.

1.3 Bird species: comparison of Article 12 and Natura 2000 species population

There should be coherence in data between the Natura 2000 database and the information provided in the Article 12 report e.g. for a given bird species, the combined population reported in Natura 2000 sites in the Member State's Natura 2000 database should not exceed the national population reported in the Article 12 report. Additionally, the combined Natura 2000 population reported in the Natura 2000 database should be the same (or similar) to the Natura 2000 population submitted in the Article 12 report. However, it must be noted that for Art. 12 reporting agreed population units are used which is not the case for Natura 2000. This is an added complication for comparing records between the two reporting flows.

Article 12 population and Natura 2000 population from the Natura 2000 database:

For Article 12 bird species, it was found that only 22% of bird records reported in the Natura 2000 database were comparable with an equivalent record in the Article 12 national report. The highest comparable proportion among Member States does not exceed 65%.

Of this proportion of comparable records, 28.2% report a larger population in Natura 2000 than the national population reported in Article 12, which is higher than the EU average of 20%. the majority of records reporting a higher population are reported as >2 times the Article 12 population (13.2%, EU average 8.1%).

Natura 2000 population reported in Article 12 and Natura 2000 population from the Natura 2000 database:

Regarding the comparison of Natura 2000 populations reported in Article 12 and Natura 2000 database, an even lower proportion of species could be compared: 13.8%.

Of this comparable proportion, none of the species reported an equal population in Natura 2000 and Art 12, lower than the EU average of 3.2%. 58.2% of species reported a larger population in Natura 2000 compared with the Natura 2000 population in the Article 12 report, which is above the EU average of 40.5%, the majority of records reporting a higher population are reported in the category of >2 times the Article 12 population (27.7%, EU average 14.3%). 41.8% are reported a lower population in Natura 2000 than in Article 12 report, lower than the EU average of 56.2%.

For further details see the online statistics here.

2. Analysis of specific fields in Article 12 & 17 reporting formats

2.1 Data quality and completeness

Several fields in the Article 17 and 12 reports are highlighted as 'mandatory' and are essential to assessing the status of a habitat or species at both national and EU level. When such fields have been completed with 'unknown' or the values are simply missing, this presents a data quality issue. Moreover, when 'expert opinion' or 'insufficient data' is indicated as method used, this highlight a need for further monitoring effort. This analysis complements the relevant analysis already included in the national summaries of Article 12 and Article 17.

Habitats

The largest proportion of missing mandatory information with RO habitats is seen with heaths & scrubs (8.3%, EU average 10.6%).

The methods used for calculating the parameters are mainly extrapolation and complete survey. Where expert opinion is used, the highest proportion of reporting this method is seen with coastal habitats (12.2%, EU average 23.4%). Where insufficient data is used the highest reporting is with heath & scrub habitats (11.6%, EU average 14.9%).

Non-bird species

The majority of missing mandatory information for any species group occurred with molluscs (40.7% of mandatory fields missing information, EU average 19.7%) and arthropods (20%, EU average 18.9%). Both groups show a high proportion of missing mandatory information across several fields (future prospects, short-term trends, status of parameters). There was no species group which reported 100% missing information for any parameter.

Both vascular plants and non-vascular plants have the least amount of missing mandatory information.

Romanian data are mostly based on extrapolation. Where expert opinion is reported this is seen mostly with fish (15.1%). Where insufficient data is reported, this is also seen mostly with fish (5.5%), although both under the EU average for both groups (22.4% and 12.9%, respectively).

Bird species

The bird groups pheasants, partridges & grouse, cranes, rails, gallinules and coots and owls are those which report the highest proportion of missing information across all mandatory fields in the reporting format (36.4%, 34.9% and 34% of all fields, respectively). This is higher than the respective EU averages of 14.6%, 17.1% and 16.3%.

The group of passerines has primarily missing mandatory information for wintering species (100% missing for both long-term and short-term trends, EU averages 52.7% and 36.4%, respectively). The groups with missing information on hunting bags are the passerines and pheasants, partridges & grouse (9.1%, EU average 3.5% and 20% EU average 9%, respectively). A high proportion (i.e. over 50%)

of missing information on the short-term trend within the SPA network is seen with species petrels, storm-petrels & shearwaters pheasants, partridges & grouse, waders, gulls & auks, cranes, rails, gallinules & coots, owls, storks & flamingo, herons, pelicans, ibises & spoonbills, gannets & cormorant, hawks & eagles, bustards, kingfishers, rollers, bee-eaters & hoopoe. Several species groups reported the long-term trend in breeding population as field largely missing or unknown (i.e. 100% missing) (cranes, rails, gallinules & coots, cuckoos, kingfishers, rollers, bee-eaters & hoopoe, pigeons & doves, storks & flamingo, and woodpeckers, but missing information is reported in high proportions with other groups as well.

Where expert opinion is reported, the highest is with falcons (54%, EU average 32%). Insufficient data is reported for 51% of pheasants, partridges and grouse (EU average 30%)

For further details see the online statistics here.

2.2 Quality of conclusion of the parameters for assessing conservation status

The 'method used' field can be an indicator of the quality of data used to conclude on the parameters of the habitats and species. A complete survey indicates the best quality information, followed by partial estimate. Expert opinion indicates a lack of data and a reliance on opinion rather than empirical data. This analysis complements the assessments of conservation status delivered from the Member State, which is part of the National Summary and can be found here.

Habitats - methods used

Partial estimates are mainly reported as the method used for both the area and structure and functions parameter. Where expert opinion was used for area, this was seen mainly with heath & scrub habitats (22.2%, 2 habitats, EU average 14.1%) and with coastal habitats (18.8%, 3 habitats, EU average 12.7%).

The most frequent use of expert opinion for structure and functions is seen with forests (20.8%, EU average 12.7%). Absent data was also reported for this parameter: heath & scrub (44.4%, EU average 20.9%), forests (33.3%, EU average 12.7%) and coastal habitats (12.5%, EU average 22.3%).

Non-bird species – methods used

The complete survey is frequently used in both plant groups for the population and habitat parameters (maximal value population of non-vascular plants, 71.4%, EU average 21.7%). Partial estimate is the most frequent method used for the population parameter and habitat of the species across all other species groups (maximum value 100% in both parameters in amphibians, other invertebrates and reptile population, well above EU average values). Expert opinion is most frequently used among fish habitat and population (17.1%, 12.6% habitat; EU average 8%, resp. 1.2%).

For further details see the online statistics here.

2.3 Use of the 'change & reason for change' field

The 'change and reason for change' field as reported in Article 17 is an important field that shows whether a change in conservation status or trend is a genuine change (i.e. an improvement or deterioration) or a non-genuine change (change of methodology, knowledge etc). Species and habitats which report genuine changes in status and trends are used to assess improvement.

Habitats

There are issues seen with reporting the main reason for change between reporting periods for habitats in RO. This is mainly seen where no main reason is submitted and is seen with forests and heath & scrub habitats (130 cases). For the forest habitats, this issue is seen with 14.2% (EU average 24.4%) of reports for area covered by the habitat, 40.7% (EU average 34.7%) of reports for overall conservation status, and overall trend in conservation status and with 4.5% (EU average 4%) of reports for range. For the heath & scrub habitat this issue is seen with the area covered by the habitat for 5.9%

(EU average 7.3%) of reports, for overall conservation status for 52.9% (EU average 46.3%) of reports and for overall trend in conservation status for 41.2% (EU average 46.3%) of reports.

Where more than 1 reason for change was given (and the main change could not be determined) this is seen with 1 forest habitat report.

Non-bird species

For all species groups, no reason for change was reported in approximately a quarter of records in all the assessed parameters (total of 141 cases). That is in overall status and overall trend under the EU average (32,1%, 39,9%), in the population and in the range above this value (15,7%; 12,3%). These cases comprise mostly mammal species, 1 species of fish and 1 vascular plant.

For further details see the online statistics here.

2.4 Conservation measures

Where habitats and species are in an unfavourable conservation status or with a deteriorating trend it is necessary to understand if there are conservation measures in place to improve their status or if conservation measures have been identified but are not yet in place. Where conservation measures are needed but have neither been implemented nor identified, this can give an indication of a critical gap. This analysis complements the relevant analysis already included in the national summaries of Article 12 *and* Article 17*.*

Habitats

For all RO habitat reports the status of the measures is either needed and taken or not needed.

Where needed and taken, the main purpose is to maintain the current range of the habitat.

Non-bird species

Among species, the measures needed but cannot be identified are just reported in one species of fish. The groups with the highest percentage of measures needed but not yet taken are fish (14.4%, EU mean 40%) and one arthropod species.

The majority of measures intend to maintain the current status (in plants, arthropods nearly 100%). The restoration of the habitat for the species is reported only for 2 fish records; the increase of population size is planned only in 7 fish records. Measures were taken also to expand the current range, in 8 mammal species and 2 vascular plants.

Bird species

Breeding: For the majority of breeding species reported in RO, measures were reported as needed but not taken.

Wintering: For all wintering species in RO it was reported that conservation measures were needed but not taken.

Passage: For the majority of species reported in RO it was indicated that measures were needed but not taken.

Restoration measures were not taken for the habitat of none of the species, whereas measures to increase the population size or improve the dynamics concern only falcons, herons, pelicans, ibises & spoonbills and kingfishers, rollers, bee-eaters and hoopoe (50% the first and 100% the last two species groups, EU mean 33.9%, 27.3% and 37.5%, respectively). Measures to expand the current range were not taken for any of the species.

For further details see the online statistics here.

2.5 Favourable reference values

The operators are used for reporting on favourable reference values when information on actual values is limited or missing completely. Operators are used as a rough estimation and highlight an issue with data gathering and monitoring. Apart from the 'unknown' the operator 'much bigger than (>>)' is particularly problematic as there is no indication of its upper values.

Habitats

For all habitat groups, the majority of habitats reported the ≈ operator (58.3% to 100%) for the range parameter. Where the > operator was reported the highest proportion was with bogs, mires & fens (41.7%). Where the FRA is unknown this was seen with freshwater habitats (6.7%) and forests (6.3%)

A similar pattern is seen with the area parameter although there is a higher proportion of reporting the > operator for certain habitat groups than seen for the range parameter: heath & scrub (44.4%), bogs, mires & fens (41.7%) and forests (33.3%). The only reporting of unknown is with forests (4.2%).

Non-bird species

RO used operators very frequently for range. The actual values were available for favourable reference range of 10 vascular plants and 1 arthropod, nevertheless the operator ≈ (in fact also an actual favourable reference value) was frequently used. Unknown values were used for favourable reference range of 30% fish and 26.1% mammals.

Favourable reference population was set as actual value in most of the cases, in plants, reptiles and amphibians completely (100%). The operator ≈ was frequently used among the rest of the groups, except for fish with 82% of unknown values in the favourable reference population.

For further details see the online statistics here.

2.6 Comparison of habitat condition area with total habitat area

For the coherence of areas reported it is expected that the combined habitat condition area (as reported under structure and functions) and the total habitat area would be the same.

RO has a high proportion reporting a lower habitat condition area to the area covered by the habitat - from 100% of bogs, mires & fens habitats (EU average 28.5%) to 12.5% of coastal habitats (EU average 18.4%).

The habitat groups reporting the highest equality between habitat condition and area covered by the habitat are forests (50%, EU average 56%) and heath & scrub (44.4%, EU average 59.8%).

There is no equality between these 2 areas reported for the habitat groups: bogs, mires & fens, coastal habitats, dune habitats or grasslands.

For further details see the online statistics here.

3 Further gaps in habitats

3.1 Analysis of Land area, sealed area, Article 17 Annex I terrestrial habitat type area and Natura 2000 habitat area

The combined Natura 2000 habitat area should not exceed the total Annex I habitat area. None of them should be bigger than the land area or land sealed area.

The Annex I habitat area reported by RO exceeds the land area (303,002 km2 versus 238,369 km2. This is clearly an error which was also present in the reported Article 17 data from the 2007 - 2012 reporting period. No further comparison is undertaken on this dashboard.

For further details see the online statistics here.