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

PL

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 PL

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 PL habitat reports in Article 17 could be compared with Natura 2000 database end_2018. The majority of these reports (63%, EU average 74.9%) report a Natura 2000 area of less than or equal to the Article 17 habitat area. This is followed by 22.2% reporting the Natura 2000 area as 1 to 1.5 times the Article 17 area (EU average 13.1%) and 11.1% where the Natura 2000 area is more than 2 times greater than the Article 17 habitat area.

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

When comparing the Natura 2000 area reported in Article 17 with the area from the Natura 2000 database end_2018, is it found that the majority of the Natura 2000 database area reporting is 1 to 1.5 times greater than the Natura 2000 area reported in Article 17 (42.9%, EU average 32.7%). This is

followed by 18% reported in both categories where Natura 2000 database area is equal to the Natura 2000 area reported in Article 17 and the Natura 2000 database area less than the Natura 2000 area reported in Article 17. 14.3% of habitats report a Natura 2000 database area of more than 2 times greater that reported for the Natura 2000 area 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:

Only 13.8 % of all species records in PL were comparable between the Article 17 database and the Natura 2000 database. The average comparable proportion among Member States is 17 %.

Of this comparable proportion, 79.1 % reported a species population value in Natura 2000 as smaller than or equal with that reported in Article 17, which is the same as EU average (80.6 %). The remaining 20.9 % of species reported a Natura 2000 population greater than the Article 17 population, which is the same as EU average (19.4 %).

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

Regarding the Natura 2000 population reported in the Article 17 national report, 13.8 % of species records could be compared between the datasets based on the criteria noted above (EU average: 16.7 %). Of this comparable proportion, 67.5 % of species report a population in Natura 2000 greater than in Article 17 (EU average 32.5%). The remaining 32.6 % of species report a population in Natura 2000 smaller than that in Article 17 (EU average 64.5%). For no species with comparable records the population within the Natura 2000 was equal to the population reported under Article 17 (EU average is 3%).

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 25% 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, 29.1% report a larger population in Natura 2000 than the national population reported in Article 12, which is lower than the EU average of 20%. the majority of records reporting a higher population are in the category of 1 to 1.5 times the Article 12 population.

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: 19.4%.

Of this comparable proportion, 4.2% of species reported an equal population in Natura 2000 and Art 12, lower than the EU average of 3.2%. 27.1% of species reported a larger population in Natura 2000 compared with the Natura 2000 population in the Article 12 report, which is below the EU average of 40.5%, the majority of records reporting a higher population are reported in the category of 1 to 1.5 times the Article 12 population (14.6%, EU average 18.1%). 68.8% report 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 majority of missing mandatory information is seen with groups: bogs, mires & fens (11.9%, EU average 9.7%) and freshwater habitats (11.1%, EU average 12.3%). The short-term trend inside the network is the one parameter for which no information is provided across all habitat groups.

Expert opinion is reported as a method used for all habitat groups, the highest proportion is with bogs, mires & fens (19.4%, EU average 22.3%). Insufficient information, was reported for all habitat groups and the highest proportion with bogs, mires & fens (16.3%, EU average 20.5%).

Non-bird species

A high proportion of missing mandatory information was spotted in reptiles (33.1 %) followed by arthropods (30.3 %), which is higher that the relevant EU average (18.9 % and 18.9 % respectively).

Within the reptiles groups, short-term population trend and short-term trend inside the network both had 100% missing information (EU average 37.3% and 59.4%, respectively), although 83.3% of overall trend in conservation status and 83.3% (EU average 20.5%) of short-term trend of habitat for the species (EU average 27.9%) information were also missing for reptiles. For arthropods, the short-term trend inside the network also had a high proportion of missing information (85.7%).

Other fields missing 100% of mandatory information occurs with short-term trend inside the network (amphibians, EU average 47.1%) overall trend in conservation status and short-term population trend (other invertebrates, EU averages 31.7% and 65.1%, respectively)

Non-vascular plants (3%) and vascular plants (5 %) had a very low proportion of missing obligatory values. The high proportion of expert opinion as method is in population size in Amphibians (32 %) and Fish (26.8 %).

A high proportion of reporting expert opinion as the method used is seen with amphibians (40.5%, EU average 23.5%) and other invertebrates (50%, EU average 39.6%), while insufficient data is reported in the highest proportion with the reptiles group (44.4%, EU average 29.6%).

Bird species

The bird groups cuckoos, swifts & nightjars and passerines are those which report the highest proportion of missing information across all mandatory fields in the reporting format (62.5%, 60% and 58.6% of all fields, respectively). This is higher than the respective EU averages of 12.9%, 16.5% and 13.9%.

Groups with primarily missing mandatory information (i.e. >50% for either short or long-term trends) for wintering species are the gannets & cormorants, grebes, loons or divers, waders, gulls & auks and cranes, rails, gallinules & coots (although missing information also reported in lower proportions with other groups). A group reporting missing information on hunting bags is ducks, geese and swans (12.5%, EU average 20.6%). A high proportion of missing information on the short-term trend within the SPA network is seen with species groups bustards, falcons, loons or divers, pheasants, partridges & grouse and swifts & nightjars (all 100% missing). Several species groups reported the long-term trend in breeding population as field largely missing or unknown (i.e. >50% missing): cranes, rails, gallinules & coots, falcons, grebes, kingfishers, rollers, bee-eaters & hoopoe, passerines, pheasants, partridges & grouse, pigeons & doves, swifts & nightjars and woodpeckers. Where the short-term trend in breeding population is reported as missing, this is seen in the highest proportion (i.e. > 50% missing) with bustards, loons or divers, and swifts and nightjars. For both the short and long-term trend, missing information is also reported in smaller proportions with other species groups.

The largest proportion of reporting expert opinion is with owls (18%, EU average 36%). The largest proportion of reporting insufficient data in the methods field are swifts & nightjars (71.4%, EU average 41%), although also seen in high proportions with cuckoos, falcons, passerines and pigeons & doves (all above 60%).

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

For the area parameter, the most used method is partial estimate. Where expert opinion is the method used for assessing, the highest proportion is seen with freshwater habitats (23.1%, EU average 18.3%) and bogs, mires & fens (15.4%, EU average 4.7%).

Structure and functions also report the use of expert opinion to assess the parameter: seen in the highest proportion with dune habitats (33.3%, EU average 17.9%) and coastal habitats (10%, EU

average 18.8%). Absent data is reported for 1 habitat in the bogs, mires and fens habitat group. The majority of the assessments is based on partial estimate.

Non-bird species – methods used

The majority of the assessments for the species population are based on partial estimate. The species group with the highest share of expert opinion for the population parameter is amphibians (32 %, EU average 19.3 %). Absent data was not reported for the species population.

The majority of assessments on habitat of the species are based on partial estimate or expert opinion. The species groups with the highest share of expert opinion and absent data are amphibians (100 %), other invertebrates (100 %), Reptiles (83.3 %), mammals (64.7 %) and arthropods (47.4 %).

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 some discrepancies with not reporting a main reason for change and where there was reporting of more than 1 reason for change with 2 habitats in PL. This is seen with the overall conservation status (1170 in MBAL) and with range (8210 in ALP).

Where a main reason was inserted, there are no issues seen with a lack of coherence between the main reason and the options selected for this field.

Non-bird species

Only in one species group (mammals) and one report were no reason filled in (for the population parameter).

The species groups where more than one reason filled in for some parameters are fish (range, one report) and mammals (overall CS trend one report and population one report).

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

Most habitat reports list the status of conservation measures as needed and taken. Where the status is needed but none yet taken the highest proportion is seen with freshwater habitats (15.4%, EU average 26.8%). Where measures are needed but cannot be identified, the highest proportion is seen with bogs, mires & fens reports (15.4%, EU average 2.3%). There are only 2 habitat reports in each of these latter 2 groups, respectively.

Where measures have been taken, the restoration of structure and functions was seen for all (2) sclerophyllous habitats and for a small proportion of bog, mires & fens habitats, dune habitats, forests and rocky habitats. The majority of habitat reports list maintaining the current range as the main purpose of the measures.

Non-bird species

The majority of information on the status of the measures was reported as "needed and taken" and "not needed".

Species where measures are “needed but none yet taken” are mostly found with the groups: molluscs (37.5 %, EU average: 34.8 %) and vascular plants (17.9 %, EU average: 27.5 %).

The vast majority of measures intend to maintain the current status.

Bird species

Breeding: For the majority of breeding species reported in PL, measures were reported as needed and taken, the second most reported category was not needed.

Wintering: For the majority of wintering species in PL it was reported that conservation measures were needed and taken.

Passage: For most of the species reported in PL it was indicated that measures were needed and taken.

Restoration measures taken for the habitat of the species seem to concern only ducks, rails, gallinules & coots, hawks & eagles, herons, pelicans, ibises & spoonbills, passerines and woodpeckers (2.4%, 7.1%, 10%, 9.1% and 2.5% of the total number of records on the main purpose of measures that have been applied, EU mean 2.8%, 2.3%, 14.7%, 15.2% and 11.1%), whereas measures to increase the population size or improve the dynamics concern ducks, geese & swans, grebes and hawks & eagles (2.4%, 16.7% and 14.3%, respectively, EU mean 16.2%, 12.1% and 33.5%). Measures to expand the current range concern ducks, geese & swans, hawks & eagles and passerines (2.4%, 7.1% and 4.5%, EU mean 5.3%, 6.3% and 3.9%).

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 both the range and the area parameters, ≈ is used to report the favourable reference value for the majority of habitat reports in all groups.

Unknown species are also reported in a small proportion for the range parameter (one habitat out of the bogs, mires & fens, coastal habitats and freshwater habitat groups).

The favourable reference area also uses the > operator: the highest proportion is seen with grasslands (30%). As with favourable reference range, unknown is reported for the same habitat groups in addition to heath & scrub.

For 1 bogs, mires & fens habitat (7120 degraded raised bogs still capable of natural regeneration) the < operator is used where the conclusion is assessed as unfavourable (U). This is an error

Non-bird species

For the parameter range, the highest share of unknown value (X) was reported for arthropods (43.9% of the values for the species group) and fish (31 %).

For the favourable reference population, the highest share of unknown value (X) was reported for arthropods (57.9 %), mammals (47.9 %), fish (41.4%) and molluscs (30 %). The highest reporting of >> was seen with reptiles (16.7 %).

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.

For PL, the consistency of reporting a equal habitat condition area to the area covered by the habitat ranges from 100% for sclerophyllous scrubs (EU average 52.5%) to 50% for both bogs, mires & fens (EU average 49%) and rocky habitats (EU average 52.5%).

The highest proportion of reporting a higher habitat condition area is seen with bogs, mires & fens (33.3%, EU average 20.3%), whereas the highest proportion of reporting a lower habitat condition area is seen with the heath & scrub habitat group (33.3%, EU average 22.6%).

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.

About 49% of the reported Annex I habitat area for PL is covered by the Natura 2000 network. Annex I habitat area covers just over 8% of the land area (minus sealed area).

For further details see the online statistics here.