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

NL

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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 NL

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:

It was possible to compare all habitats reported by NL between both the Article 17 report and the Natura 2000 database end_2018.

The majority of habitat areas reported in Natura 2000 were reported in the 2 categories: less than or equal to the Article 17 habitat area - 76.9% compared with an EU average of 74.9%. The next largest proportion were reported with a Natura 2000 area of 1 to 1.5 times greater than the Article 17 habitat area (13.5%, EU average 13.1%). The remaining 10% were reported in both categories where the Natura 2000 database area is 1.5 to 2 times greater and more than 2 times greater than the Article 17 reported habitat area.

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

Comparing the Natura 2000 habitat area reported in Article 17 with that in the Natura 2000 database, it is seen that the majority of habitats reported had a larger area in Article 17 (53.9%, EU average 46.2%). This is followed by a Natura 2000 database area of 1 to 1.5 times that reported in Article 17 for the Natura 2000 area (30.8%, EU average 32.7%). 7.7% report a Natura 2000 database habitat area of 2 times the Natura 2000 area reported in Article 17 (EU average 14.2%).

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:

22.2 % of all species records in NL were comparable between the Article 17 database and the Natura 2000 database. The highest comparable proportion among Member States does not exceed 34.3%. The average comparable proportion among Member States is 17 %.

Of this comparable proportion, 77.8 % reported a species population value in Natura 2000 as smaller than or equal with that reported in Article 17, which is almost identical as the EU average (80.6%). The remaining 22.2 % of species reported a Natura 2000 population greater than the Article 17 population, which slightly more than the 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, 22.2 % of species records could be compared between the datasets based on the criteria noted above (EU average: 16.7). Of this comparable proportion, 44.4 % of species report a population in Natura 2000 greater than in Article 17 (EU average 32.5%). The remaining 55.6 % 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 Art. 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 64% 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, 21% 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 in the category of 1 to 1.5 times the Article 12 population (14.5%, EU average 8.3%).

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, a lower proportion of species could be compared: 58.8%.

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%. 35.7% 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 in the category of 1 to 1.5 times the Article 12 population (21.4%, EU average 18.1%). 64.3% report a lower population in Natura 2000 than in Article 12 report, which is higher 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

NL does not report higher than 8.7% missing mandatory information for any habitat group (sclerophyllous scrub, EU average 9.9%). Missing information for the 2 parameters short-term trend of habitat area in good condition and short-term trend inside the network is seen with several habitat groups: bogs, mires & fens, coastal habitats, dune habitats, forests and sclerophyllous scrubs. Short-term trend inside the network is also reported as missing for freshwater habitats.

Where expert opinion is reported as a method used, the highest proportion of reporting is seen with coastal habitats (25%, EU average 23.4%). The highest proportion of insufficient data is seen with sclerophyllous scrubs (12.5%, EU average 15.9%).

Non-bird species

All species groups had a low or very low proportion of missing mandatory values, the highest proportion is seen with mammals (18 %, EU average 19.1%). The parameters for mammals with the highest proportion of missing information are future prospects of habitat for the species (48%, EU average 28.2%), short-term trend in habitat for the species (40%, EU average 34.8%) and short-term population trend (40%, EU average 41.9%).

The highest proportion of reporting expert opinion as the method used is seen with other invertebrates (50%). Insufficient information is seen in the highest proportion with mammals (15.1%, EU average 17.5%).

Bird species

The bird group loons or divers report the highest proportion of missing information across all mandatory fields in the reporting format (45.8%). This is higher than the respective EU average of 22.7%.

The bird group of Loons or divers have the highest missing mandatory information for wintering species (trend information), although 33.3% for both short and long-term trend (EU average 44.7% and 63.8%, respectively). None of the groups have missing information on hunting bags. The highest proportion of missing information on the short-term trend within the SPA network is seen with species group loons or divers (66.7%, EU average 48.4%). The highest reporting of missing information for the long-term trend in breeding population is with swifts & nightjars (50%, EU average 43.8%). There is minimal reporting of missing information for the short-term trend.

There is minimal reporting of expert opinion across species groups. Those indicated with 'insufficient data' in the methods field are loons or divers (47%, EU average 76%).

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

There is no use of either expert opinion or insufficient/no data for the area parameter for any habitat group in NL.

However, the structure and function parameter report the highest proportion of expert opinion for dune habitats (41.7%) and coastal habitats (37.5%), as well as reporting for bogs, mires & fens and grassland habitats in a smaller proportion. Where there is insufficient or no data available, this is reported for the habitat groups bogs, mires & fens, coastal habitats, dune habitats and forests (12.5% to 16.7%) and also 1 sclerophyllous scrub habitat.

Non-bird species – methods used

The majority of the assessments for the species population are based on completely survey or partial estimate. The species group with the highest share of expert opinion for the population parameter is fish (27.3 %, EU average 18.4 %). 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 other invertebrates (100 %), mammals (68 %), non-vascular plants (66.7 %), fish (63.6 %) and molluscs (50 %).

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 no issues seen with reporting the main reason for change between reporting periods for any parameter with habitats reported by NL.

Non-bird species

All species groups and all parameters showed no issue.

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

The status of the conservation measures for NL habitats is mostly needed and taken. Where measures are needed but none are yet taken, the highest proportion of reports are seen with the habitat groups: bogs, mires & fens (14.3%, EU average 21.7%) and forests (14.3%, EU average 22.6%). Where measures are needed but cannot be identified, this is mostly seen with heath & scrub habitats (50%, EU average 1.8%), forests (28.6%, EU average 1%) and dune habitats (25%, EU average 2.7%).

Where measures have been taken, the restoration of structure and functions is seen with all heath & scrub habitat reports and sclerophyllous habitat reports, and also a high proportion of freshwater habitat reports (85.7%, EU average 27.5%) and coastal habitat reports (66.7%, EU average 34%).

Non-bird species

The majority of information on the status of the measures was reported as "needed and taken", needed but none yet taken" and "not needed".

The groups with the highest percentage of measures "needed but none yet taken" are fish (60 %, EU average: 40 %), arthropods (35.7 %, EU average: 20.2 %) mammals (34.8 %, EU average: 12.5%) and molluscs (33.3 %, EU average: 34.8 %).

The majority of measures intend to maintain the current status. The increase the population size or improve dynamics is reported for arthropods, fish and mainly mammals. The restoration of the habitat for the species is reported for arthropods, vascular plants, molluscs and mainly amphibians.

Bird species

Breeding: For the majority of breeding species reported in NL, measures were reported as not needed; the second most reported category was needed but not taken. Only 1 breeding species was reported in the category of conservation measures needed but cannot be identified, belonging to the group of woodpeckers.

Wintering: For most wintering species in NL it was reported that conservation measures were not needed. The second most reported case was needed and taken.

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

Restoration measures taken for the habitat of the species seem to concern mostly passerines and waders, gulls & auks (33.3% and 75% of the total number of records on the main purpose of measures that have been applied, EU mean 15.2% and 11.1 respectively), whereas measures to increase the population size or improve the dynamics concern ducks, geese & swans (100%, 33.3% and 25%, EU mean 16.2%, 12.1% and 21%, 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

Where the >> operator is used for favourable reference range, this is seen mainly with bogs, mires & fens (28.6%) and freshwater habitat (28.6%), this amounts to 1 habitat from each group. > is reported with bogs, mires & fens, forests and grasslands - again just 1 habitat from each group.

For favourable reference area, the use of >> is seen in the highest proportion with grasslands (87.5% and heath & scrub (50%). Where the > operator is used this is seen mainly with forests (71.4%), heath & scrub (50%) and freshwater habitats (42.9%).

Non-bird species

For the parameter range, the high share of unknown value (X) was not reported for any groups. The operator >> had a high share among arthropods (46.7 %).

For the parameter population, the high share of unknown value (X) was not reported for any groups too. The operator >> had a high share among fish (63.6 %), vascular plants (40 %), arthropods (40 %) and reptiles (33.3%).

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.

In NL, all habitats within the groups coastal, heath & scrub and sclerophyllous scrub report an equal habitat condition area to the area covered by the habitat. The lowest proportion of equality reporting is seen for the freshwater habitat group (57.1%, EU average 50.6%).

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.

Just over 85% of Annex I habitat area in NL is covered by the Natura 2000 network. The Annex I habitat area covers 11.5% of the land area (minus the sealed area).

For further details see the online statistics here.