



Data quality coherence check

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

Table of contents

1. Coherence check of nature reporting data with data reported under Natura 2000
 - 1.1 *Habitats: comparison of Article 17 and Natura 2000 habitat areas*
 - 1.2 *Non-bird species: comparison of Article 17 and Natura 2000 species population*
 - 1.3 *Bird species: comparison of Article 12 and Natura 2000 species population*
2. Analysis of specific fields in Article 12 & Article 17 reporting formats
 - 2.1 *Data quality and completeness*
 - 2.2 *Conclusion of the parameters*
 - 2.3 *Use of the 'change and reason for change' field*
 - 2.4 *Conservation measures*
 - 2.5 *Favourable reference values*
 - 2.6 *Comparison of habitat condition area with total habitat area*
3. Further analysis of habitats
 - 3.1 *Analysis of land area, sealed area, Article 17 terrestrial Annex I habitat area & Natura 2000 habitat area*

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 Article 17 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 purposes¹:

- 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 HU

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:

The majority of habitats reported by HU were comparable between Article 17 and the Natura 2000 database (95.7%).

Of these comparable habitats, the majority were reported in 2 groups: where habitat area was less than or equal to the national area reported in Article 17 (37.8%, EU average 74.9%) or where the Natura 2000 area was more than 2 times greater than the Article 17 habitat area (35.6%, EU average 9%). The remaining were reported with an area of 1 to 1.5 times the Natura 2000 habitat area (22.2%, EU average 13.1%) or 1.5 to 2 times greater (4.4%, EU average 3%).

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

With regards the comparable proportion of Natura 2000 area reported in Article 17 and the Natura 2000 database, 40% had an area of more than 2 times greater than the Article 17 area (EU average 14.3%) followed by an area of 1 to 1.5 times greater than the Article 17 area (37.8%, EU average 32.7%). 17.8% report a Natura 2000 database area of less than the Natura 2000 area in Article 17 (46.2%).

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:

Only 15.2 % of all species records in HU were comparable between the Article 17 database and the Natura 2000 database. The average comparable proportion among Member States is 17 %. The highest comparable proportion among Member States does not exceed 34.3%.

Of this comparable proportion, 50 % reported a species population value in Natura 2000 as smaller than or equal with that reported in Article 17, which is lower than the EU average (80.6 %). The remaining 50 % of species reported a Natura 2000 population greater than the Article 17 population, which is 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, 15.2 % of species records could be compared between the datasets based on the criteria noted above (EU average 16.7%). Of this comparable proportion, 52.8 % of species report a population in Natura 2000 greater than in Article 17 (EU average 32.5%). The remaining 44.4 % of species report a population in Natura 2000 smaller than that in Article 17 (EU average 64.5%). 2.8 % of all species reported by HU 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 29% 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, 28.9% report a larger population in Natura 2000 than the national population reported in Article 12, which is higher than the EU average of 20%.

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: 28.2%.

Of this comparable proportion, none of the species reported an equal population in Natura 2000 and Art 12, lower to the EU average of 3.2%. 53.7% 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%. 46.3% report a lower population in Natura 2000 than in Article 12 report, which is 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 highlights 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

HU report a minimum of missing mandatory information fields for habitats in general. It is only seen with forests (4%, EU average 8.9%), grasslands (0.7%, EU average 9.8%) and heath & scrub habitats (4.3%, EU average 10.6%).

All 3 habitat groups report missing information for the parameter short-term trend inside the network: forests (46.2%, EU average 39.7%), grasslands (8.3%, EU average 41.5%) and heaths & scrub (50%, EU average 30.7%). Both forests and heath & scrubs also report missing information for the parameter short-term trend of habitat area in good condition: forests-46.2%, EU average 33.4%, heaths & scrubs-50%, EU average 35.6%.

Expert opinion as the method used to estimate the parameter values is reported only for the habitat groups referred to above: forests (35.6%, EU average 22.4%), grasslands (26%, EU average 24.4%) and heaths & scrubs (37.5%, EU average 25.1%). For forests and grasslands this method is combined with extrapolation to form the majority of methods reported, whereas heath & scrub it is reported with complete survey.

Non-bird species

There is a high proportion of missing mandatory information spotted in other invertebrates (33.3 %). This is the same as EU average (33.4 %).

Amphibians (4.9 %, EU average 16.3%), fish (4.6 %, EU average 13%), non-vascular plants (1.5 %, EU average 22.1%), reptiles (3.1%, EU average 18.9%) and vascular plants (4.6%, EU average 10.5%) had the lowest proportion of missing mandatory information. Where 100% of information was missing for a parameter this is seen with hunting bags for mammals (100%, EU average 45%) but also with several parameters for other invertebrates (7 parameters with 100% missing information out of 24).

The highest proportion of expert opinion as the method was reported for mammals (38 %, EU average 26.8%). Insufficient data was reported mostly with arthropods (7.2%, EU average 19.3%).

Bird species

The bird groups cranes, rails, gallinules & coots and swifts & nightjars are those which report the highest proportion of missing information across all mandatory fields in the reporting format (23.3% and 20% of all fields, respectively). This is higher than the respective EU averages of 17.1%, and 18.9%.

Bird groups with primarily missing mandatory information for wintering species (trend information) are the gannets & cormorants, grebes, herons, pelicans, ibises & spoonbills, owls and falcons. 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 groups grebes, cranes, rails, gallinules & coots and falcons (20% to 40% missing information). Several species groups reported the breeding population trends as field largely missing or unknown (cranes, rails, gallinules & coots, hawks & eagles, herons, pelicans, ibises & spoonbills, kingfishers, rollers, bee-eaters & hoopoe, owls, passerines, storks & flamingo, swifts & nightjars, waders, gulls & auks and woodpeckers), whereas the following just reported missing information for the long-term trends pheasants, partridges & grouse and gannets & cormorants.

Expert opinion is reported in the highest proportions with cranes, rails, gallinules & coots 51% (EU average 31%) and with swifts and nightjars (50%, EU average 48%). Two of those indicated with 'insufficient data' in the methods field are swifts & nightjars (29%, EU average 41%).

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

For the structure and functions parameter, there is a high level of reporting either partial estimate or complete survey across all habitat groups. Expert opinion is reported for 25% of grassland habitats (3 habitats, EU average 16.1%) and for 50% of heaths & scrubs habitats (1 habitat, EU average 19.6%).

The same pattern is seen for the area parameter. Only 1 grassland habitat reports expert opinion as the method used (8.3%, EU average 11.7%).

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 are mammals (62.8 %, EU average: 26.8 %). Absent data was not reported for the species population.

The majority of assessments on habitat of the species are based on complete survey and partial estimate. The species group with the highest share of expert opinion and absent data are mammals (37.2 %, EU average: 55.5 %).

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

No issues were encountered with the reporting of change and reason for change for habitats in HU.

Non-bird species

For arthropods, all parameters showed a high proportion of cases where no reason was filled in (total of 14 cases). For other 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

Most measures are reported as needed and taken. For HU habitats, where measures are reported as needed but none yet taken, this is seen with 100% of sclerophyllous scrubs and dune habitats - although HU only report 1 habitat in each of these groups. 60% of freshwater habitats also report that measures are needed but none are yet taken (EU average 26.8%). No habitats are reported where measures are needed but cannot be identified.

The main purpose of the measures taken are reported to be for maintaining the current range of the habitat. 1 grassland habitat reported the restoration of structure and function as the main reason for the measures.

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 non-vascular plants (100 %, EU average: 33 %), fish (81.8 %, EU average: 40 %) and molluscs (40 %, EU average: 34.8 %).

The majority of measures intend to maintain the current status. The increase the population size or improve dynamics is reported mainly for amphibians and reptiles.

Bird species

Breeding: For the majority of breeding species reported in HU measures were reported as needed and taken. Only 1 breeding species was reported in the category of conservation measures needed but cannot be identified, belonging to the group hawks & eagles.

Wintering: For all the wintering species in HU it was reported that conservation measures were needed and taken.

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

Restoration measures taken for the habitat of the species seem to concern mainly gannets & cormorants, herons, pelicans, ibises & spoonbills and pigeons & doves (100% each, of the total number of records on the main purpose of measures that have been applied, EU average 7.4%, 14.7% and 50%), whereas measures to increase the population size or improve the dynamics concern mostly bustards and pheasants, partridges & grouse (100% for each, EU average 53.3% and 20.5%, respectively). Measures to expand the current range concern mainly ducks, geese & swans (47.8%, EU average 5.3%).

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 the parameter range, the ≈ parameter is used for all rocky habitats and freshwater habitats (5 habitats in both groups, 100%) and also for most of grasslands and forest habitats (11 in each group, 91.7% and 84.6%, respectively) and the bogs, mires & fens habitats (3 habitats, 60%). Beyond this, the more than operator is used for the one sclerophyllous scrub and dune habitat reported by HU. It is also seen with bogs, mires & fens, forests and heath & scrub. the much more than operator is uses for 1 grassland habitat.

For the area parameter, ≈ is used in the highest proportion for habitat groups: coastal (100%) and rocky habitats (100%). Where > is used in more reports this is seen with groups bogs, mires & fens (3 habitats, 60%), all freshwater habitats (5, 100%) and sclerophyllous scrub habitats (1, 100%) and grassland habitats (9 habitats, 75%). The >> operator is used more frequently with the area parameter than the range. Highest reporting is with sclerophyllous scrub and heath & scrubs (although both only 1 habitat).

Non-bird species

For the parameter range, the high share of unknown value (X) was not reported for any groups. The operator >> had a relatively high share among reptiles (16.7 %).

For the favourable reference population, the highest share of unknown value (x) was reported for other invertebrates (100 %). The operator >> had a relatively high share among 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.

The habitats reported by HU in the groups coastal habitats, dune habitats, freshwater habitats, grasslands and rocky habitats all report a habitat condition area as equal to the area covered by the habitat.

For heath & scrub, 50% of habitat reports have an equal habitat condition area to the area covered by the habitat (EU average 55%) and the remaining 50% report a habitat condition area as higher than the area covered by the habitat (EU average 13.8%).

Sclerophyllous scrub habitat group report all habitat condition area as greater than the area covered by the habitat (EU average 21%).

There was no habitat group reporting a habitat condition area as lower than the area covered by the habitat.

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 89% of Annex I habitat area reported by HU is covered by the Natura 2000 network. Annex I habitat area covers about 10% of land area (minus sealed area).

For further details see the online statistics [here](#).