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

SK

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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 SK

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 SK were comparable between the Article 17 database and the Natura 2000 database end_2018.

47% of the reports report a Natura 2000 habitat area less than or equal to that reported in Article 17. This is lower than the EU average of 74.9%. For the remaining habitat reports, 22.7% report a Natura 2000 area of 1 to 1.5 times greater than Article 17 (EU average 13.1%), 18.2% of greater than 2 times the Article 17 area (EU average 9%) and 12.1% of 1.5 to 2 times the Article 17 area (EU average 3%).

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

As with the analysis above, it was possible to compare all Natura 2000 areas reported in the Article 17 report with the Natura 2000 database end_2018 area. Of these reports, the majority are greater than 2 times the Article 17 habitats area (37.9%, EU average 14.2%). The next largest proportion is reported as 1 to 1.5 times the Article 17 area (28.8%, EU average 32.7%). 18.2% report an area as less than reported in Article 17 (below the EU average of 46.2%) while the remainder report the area as 1.5 to 2 times greater than Article 17 (15.2%, EU average 5.5%).

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:

Among Article 17 species only 22% of records reported in the Natura 2000 database were comparable with an equivalent record in the Article 17 report.

SK data are at the level of European mean. 8,7% records exceed more than twice the value of Natura 2000 population; 10.8% records exceed the value 1-2x greater. Four species, two bats and two vascular plants fall into the first, most exceeding category. The maximum exceeding value is in *Miniopterus schrebersi*, where the value is 21.7 times higher. The other exceeding categories comprise other 4 vascular plant species and one bat. The possible clarification of this status could be the fluctuation of populations, esp. in bats, together with outdated data in SDF.

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 reveals the same proportion of comparable values: 22%.

The proportion of categories of the exceeded values is under European mean, 10.9% of Natura 2000 records is more than twice higher than the Article 17 values, 13% percent exceed the values 1-2x. The inequality of values is observed by the same species, as above, 4 species of bats, 6 species of vascular plants, the extreme difference of 29.4 times higher value in the case of *Miniopterus schrebersi.* Population values of *Lynx* differ only non-significantly.

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 38% 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, 22.7% report a larger population in Natura 2000 than the national population reported in Article 12, the majority of records reporting a higher population are reported as >2 times the Article 12 population (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, 30.5% of species records could be compared: 30.5%.

62.3% of species reported a larger population in Natura 2000 compared with the Natura 2000 population in the Article 12 report, the majority of records reporting a higher population are reported as 1 to 1.5 times greater than Article 12 (31.2%, EU average 18.1%). A significant proportion also reported a population of >2 times the Article 12 population (21.35, EU average 14.3%). 37.7% has a population lower than that reported in Article 12 (37.7%, EU average 56.4%).

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 highest proportion of missing mandatory information is seen with dune habitats (26.1%, EU average 8.5%). The 2 parameters with no mandatory information provided for most habitat groups are short-term trend of habitat in good condition and short-term trend inside the network. Rocky habitats report 92.9% missing mandatory information for these 2 parameters.

The highest proportion of reporting expert opinion as the method used to calculate the parameters is with dune habitats (25%, EU average 28.2%). Extrapolation is the main method reported for the parameters.

Non-bird species

The highest proportion of missing mandatory information was spotted in fish (12%, EU average 13%), followed by amphibians and mammals. Highest proportion of missing mandatory information for fish is the hunting bags (100% missing, EU average 50%) and short-term trend inside the network (44.4%, EU average 36.8%), although a high proportion of missing information was reported for the short-term trend parameters in general for fish (and for most other groups). Both parameters short-term trend of habitat for the species and short-term population trend showed some of the highest proportions of missing information across the species groups

Reptiles, other invertebrates and vascular plants had a very low proportion of missing obligatory values.

Overall, the highest proportion of expert opinion is with mammals (20.3%, EU average 26.6%). Insufficient data is reported only minimally for fish and arthropods.

Within the mammal group, the highest proportion of expert opinion is with population size in mammals (53.1%).

Bird species

The bird groups waders, gulls & auks, grebes and hawks & eagles are those which report the highest proportion of missing information across all mandatory fields in the reporting format (14.2%, 8.3% and 7.8% of all fields, respectively). This is lower than the respective EU averages of 15.4%, 14.1% and 12.5%.

Two bird groups with primarily missing mandatory information for wintering species (trend information) are the falcons, hawks and eagles, and grebes. None of the groups have missing information on hunting bags. Where there is missing information on the short-term trend within the SPA network is seen with species group waders, gulls and auks (50%, EU average 40.1%), and to a lesser degree ducks, geese and swans, hawks and eagles, and passerines. Groups which report missing information for either long-term or short-term trend in breeding population are: bustards, ducks, geese & swans, grebes, and waders, falcons, hawks and eagles, gulls & auks, owls and passerines).

Where expert opinion is reported, the highest proportion is seen with swifts and nightjars (57%, EU average 48%). Where insufficient data is reported, this is seen only with a few groups and the highest proportion is with hawks & eagles (6%, EU average 24%).

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

While partial estimate was the primary method reported for assessing the area and the structure and function parameters, there was a high use of expert opinion for the area parameter for freshwater habitats (73.3%, EU average 18.3%) for the area parameter. The 1 dune habitat reported by SK also referenced partial estimate as the method used for area.

Where expert opinion was the method used for structure and functions, this was seen with only 1 heath & scrub habitat (14.3%).

Non-bird species – methods used

The complete survey is used only partially for the population parameter; frequently (72.2%, EU average 44.9%) for vascular plants. Partial estimate is the most frequent method used for the population parameter across all other species groups (58.5%, EU average 51%). Expert opinion is most frequently used among mammals (53.1%).

This is also seen with the habitat of the species - only 1.9% of assessments for habitat for the species report expert opinion and absent data.

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

The overall trend in conservation status was the parameter with the highest proportion of missing main reason for change of all parameters (47.5% of a total of 202 cases, EU average 40.5%). This is an issue seen in all habitat groups reported. This is followed by overall conservation status (37.6%, EU average 38.5%).

There were no cases where more than 1 reason was filled in for this field, and where the main reason was missing.

Non-bird species

Similar to habitats, the parameter overall trend in conservation status showed the highest proportion of missing the main reason for change of all parameters (58.9% of a total of 382 cases, EU average 39.9%). Only in one species group (mammals) were more than one reason indicated (for the population parameter).

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 SK habitats, the vast majority of measures that have been identified as needed have been taken. Only 2 forest habitats have identified that conservation measures are needed but have not been taken (2 habitats, 6.9%, EU average 22.6%).

Where measures were identified, the main purpose of these was identified as maintaining the current range.

Non-bird species

For SK species, the group with the highest proportion of reporting measures needed but not yet taken is reptiles (60%, EU average 17.5%). For most of the species groups, measures are needed and have been taken.

The vast majority of measures intend to maintain the current status (100% for all groups except fish - 97.2%). The restoration of the habitat for the species as the purpose of the measures is only reported for 1 fish species.

Bird species

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

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

Passage: For the majority species reported in SK it was indicated that measures were not needed, the second most reported category was needed and taken.

Restoration measures for the habitat were not taken for any of the species. Measures to increase the population size or improve the dynamics as well as measures to expand the current range were not taken either for none 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

≈ is mainly used for the range parameter for all habitats with the exception of coastal habitats which mostly report > (66.7%, although only 2 habitats).

For the area parameter the > operator is used more frequently for bogs, mires & fens (75%) and for grasslands (63.6%), whereas the ≈ operator was used mostly for the freshwater habitats (60%), forests (62.1%) and for all heath & scrub, rocky habitats and sclerophyllous scrub. The >> operator is only used for 1 coastal habitat.

Non-bird species

SK used mostly operators, only in 10 species was the actual value given (9 reptiles and 1 mammal species), nevertheless the operator ≈ is in fact also an actual favourable reference value.

The favourable reference range was mostly assessed as ≈ only in fish species was the proportion of > operator higher (60%). Only 2 species (1 reptile, 1 vascular plant) indicated unknown FRR. No actual values were used for favourable reference range.

For most species groups, the favourable reference population was mostly assessed as ≈, especially for fish (90% of cases, which is in contrast with the range assessment). According to this, the insufficient range for fish species apparently hosts sufficient populations. The highest portion (48%) of > reported for (recent) favourable reference population is seen in amphibians.

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.

SK habitat groups with equal reporting between the habitat condition area and the area covered by the habitat range from 100% of dune habitats (EU average 51.5%) to 50% of sclerophyllous habitats (EU average 52.4%). The proportion of habitats in each group where the habitat areas are not equal, the habitat condition is mostly reported as lower than the area covered by the habitat.

Three habitat groups report a habitat condition area as greater than the area covered by the habitat: grasslands (18.2%, EU average 16.5%), rocky habitats (14.3%, EU average 17%) and forests (3.5%, EU average 15.7%).

The forest habitat group only report 6.9% of habitat condition area equal to the area covered by the habitat (EU average 56%), with the remainder (89.7%, EU average 25%) reported with a lower habitat area 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

Data quality fact sheet, prepared by ETC/BD, 2022

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.

42% of the Annex I habitat area reported in SK is covered by the Natura 2000 network. 20% of the land area (minus the sealed area) is covered by Annex I habitat (as reported in 2013 - 2018).

For further details see the online statistics here.