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

CZ

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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)
  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

[1] The list is not exclusive

- 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 CZ

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 CZ could be compared with an equivalent report in the Natura 2000 database. Of these, a high proportion (88.3%, EU average 74.9%) reported a habitat area in the Natura 2000 database as equal to or lower than the Article 17 reported area. 10% (EU average 13.1%) report a habitat area in the Natura 2000 database as 1 - 1.5 times greater than the overall national area of the habitat reported in Article 17. A small proportion (1.7%, EU mean 9%) report a habitat area greater than 2 times the Article 17 area.

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

Equally, all habitat reports for the area within the Natura 2000 network could be compared between Article 17 and Natura 2000 database based on information provided on biogeographical/marine region, habitat code and habitat area.

None of areas within the Natura 2000 network for any habitat report was the same between both datasets. 53.3% (EU average 46.2%) report a Natura 2000 area in the Natura 2000 database as lower than that reported in Article 17. The area in the Natura 2000 database was greater than Article 17 area

for 40% of reports as 1 to 1.5 times greater (EU average 32.7%) and a combined 6.6% for both categories 1.5 to 2 times greater and > 2 times greater than 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:

22.7% of all species reported in CZ were compared between the Article 17 database and the Natura 2000 database. The highest comparable proportion among Member States does not exceed 34.2%.

Of this comparable proportion, 82.9% reported a species population value in Natura 2000 as smaller than or equal with that reported in Article 17, which is similar to the EU average of 80.5%. The remaining 17.1% of species reported a Natura 2000 population greater than the Article 17 population, which slightly lower than the EU average of 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, 22.7% of species records could be compared between the datasets based on the criteria noted above.

Of this small comparable proportion, 22.9% of species report a population in Natura 2000 greater than in Article 17, percentage that is lower than the EU mean of 32.5%. The remaining 77.4% of species report a population in Natura 2000 smaller than that in Article 17, which is higher than the EU mean of 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, 2.8% report a larger population in Natura 2000 than the national population reported in Article 12, which is lower 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, a lower proportion of species could be compared: 53.6%.

Of this comparable proportion, none of the species reported an equal population in Natura 2000 and Art 12, similar to the EU average of 3.2%. 20% of species reported a larger population in Natura 2000 compared with the Natura 2000 population in the Article 12 report, which is below of the EU average of 40.5%, whereas 80% report a lower population in Natura 2000 than in Article 12 report, EU average 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 highest proportion of missing mandatory information for habitats reported by CZ is seen with rocky habitats - 5.5%. This is well below the EU average for this group - 10.7%.

No particular parameter across all habitat groups stood out as being problematic. The highest proportion of missing information was seen for the status of structures and functions for sclerophyllous scrubs (50%, EU average 17.2%) and for heath and scrub (42.9%, EU average 27.6%) , the short-term trend in range for rocky habitats (46.2%, EU average 9.9%) and freshwater habitats (42.9%, EU average 12.3%).

The highest proportion of expert opinion as the method used is seen with rocky habitats (30.6%, EU average 26.2%). Insufficient data as the method reported is only seen with forest habitats.

Non-bird species

The majority of missing mandatory information for any species group occurred with non-vascular plants (15.7% of mandatory fields missing information). This is higher than the EU average of 22.1% for non-vascular plants.

For non-vascular plants, the highest proportion of missing information is seen with the parameters short-term population trend (41.7%, EU average 39.2%), followed by future prospects of habitat for the species, future prospects of population, future prospects of range, short-term range trend and short-term trend of habitat for the species (all 33.3% missing information). Missing information on short-term population trend is also reported with the highest proportion of missing information for groups, albeit below the EU average in all cases: molluscs (8.3%, EU average 39.1%), reptiles (27.3%, EU average 37.3%) and vascular plants (14.3%, EU average 20.9%). It is also seen in significant proportions (i.e a parameter with one of the highest proportion of missing information of all parameters) with: arthropods (9.7%, EU average 38.7%) and mammals (16.9%, EU average 41.9%).

Molluscs (0.4%, EU average 19.7%), amphibians (0.3%, EU average 16.3%) and other invertebrates (0%, EU average 33.4%) had a very low proportion of missing obligatory values of all species groups

The largest reporting of expert opinion as a method used for the parameters is seen with non-vascular plants (59.3%, EU average 32.5%). Insufficient data is only minimally reported in groups arthropods, mammals, molluscs, vascular plants and fish.

Bird species

The bird groups loons or divers, waders, gulls & auks and cranes, rails, gallinules & coots are those which report the highest proportion of missing information across all mandatory fields in the reporting format (50%, 21.3% and 21.1% of all fields, respectively). This is higher than the respective EU averages of 22.7%, 15.4% and 17.1%.

The bird groups with primarily missing mandatory information for wintering species (trend information) are the falcons, loons or divers and owls (100% missing information). None of the groups have missing information on hunting bags. Where information is missing information on the short-term trend within the SPA network, this is seen in the highest proportion with: loons or divers (100%, EU average 22.7%), ducks, geese & swans (85.7%, EU average 12.1%) and waders, gulls & auks (85.7%, EU average 15.4%), but also with groups: cranes, rails, gallinules & coots, falcons, hawks & eagles, kingfishers, rollers, bee-eaters & hoopoe, herons, pelicans, ibises & spoonbills, passerines and storks & Flamingos. . Several species groups reported the long-term trend in breeding population as field largely missing or unknown: bustards (100%, EU average 21.4%), swifts & nightjars (100%, EU average 43.8%), and cranes, rails, gallinules & coots (87.5%, EU average 38.8%). It was also missing to a degree with other groups: falcons, herons, pelicans, ibises & spoonbills, kingfishers, rollers, bee-eaters & hoopoe, pheasants, partridges & grouse, waders, gulls & auks and woodpeckers. The short-term trend was also 100% missing for bustards (EU average 35.7%) and swifts and nightjars (EU average 34.8%).

Where expert opinion was reported as the method used, the highest proportion was seen with owls (32%, EU average 36%). The highest proportion of reporting 'insufficient data' is seen with the group loons or divers (40%, 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

For the area parameter, complete survey is the method used for all habitats within all habitat groups except freshwater habitats, where 2 habitats report partial estimate and 1 habitat reports expert opinion.

This pattern is also seen for the structure and function parameter: 2 freshwater habitats report partial estimate as a method used and 2 rocky habitats relied on expert opinion.

Non-bird species – methods used

The highest proportion of complete survey as method is in population size in amphibians and reptiles (100%) and other invertebrates (100%). Complete survey is mostly used also for the habitat of the species.

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 CZ reporting of change and reason for change for any habitat parameter.

There are no cases where no main reason for change was completed in the format for habitats in CZ. There are no issues where the main reason highlighted is inconsistent with the reasons selected in this field.

Non-bird species

The parameter overall trend in conservation status showed the highest proportion of missing the main reason for change of all parameters (37% of the 27 cases, EU average 39.9%). There were 3 cases that more than one reason was filled in.

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

All dune habitats in CZ (2 habitats, EU average 23.6%) report that conservation measures are needed but have not yet been taken. This is followed by freshwater habitats (78.6%. EU average 26.8%). There are no habitat groups that report measures needed but not yet identified.

The main purpose of the measures for all habitats is to maintain the current range.

Non-bird species

For CZ species, the group with the highest proportion of reporting measures needed but not yet taken is fish (80%, EU average 40%). For most of the species groups, measures are needed and have been taken. For species, the group with the highest proportion of reporting measures not needed is reptiles (90%, EU average 57%).

There are several measures taken for the increase of the population size and/or improve dynamics but also to restre the habitat of the species.

Bird species

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

Wintering: For the majority of wintering species in CZ it was reported that conservation measures were not needed.

Passage: For all species reported in CZ it was indicated that measures were not needed.

Restoration measures were not taken for the habitat of any of the species, whereas measures to increase the population size or improve the dynamics concern mostly falcons, pheasants, partridges & grouse and waders, gulls & auks (100% for each, EU mean 33.9%, 20.5% and 21% respectively). Measures to expand the current range concern mostly owls (100%, EU mean 5.8%).

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

The actual favourable reference values were not reported in any habitat report in CZ.

≈ was the main qualifier reported for both the range and area parameters for all habitat groups. 1 grassland habitat reports > for both parameters.

For the area parameter, all coastal habitats (2) report >>. The freshwater habitat group also reports >> for 1 habitat and both freshwater and bogs, mires & fens report > for 3 and 1 habitats, respectively.

Non-bird species

The favourable reference range was mostly assessed as approximately equal. Only 11 species (2 arthropods and 9 mammals) indicated unknown FRR. One mammal has missing information for range parameters and one arthropod, one mammal and two fish have missing information for population parameters.

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 habitat group sclerophyllous scrubs report all habitat condition areas as equal to the area covered by the habitat. The remaining habitat group reports show equality between the habitat condition area and the area covered by the habitats from bogs, mires & fens, coastal habitats, dune habitats (50%, EU averages 49%, 58% and 52%, respectively) to freshwater habitats (79%, EU average 51%). Dune habitats have the highest percentage of reports with a habitat condition area lower than the area covered by the habitat (50%, EU average 20%) and coastal habitats have the highest percentage of cases where the habitat condition area is higher than the area covered by the habitat (50%, EU average 18.4%).

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.

23% of Annex I habitat area reported by CZ is covered by the Natura 2000 network. Overall, Annex I habitat area reported is around 19% of the land area of CZ (minus the sealed area).

For further details see the online statistics here.