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AND NATURAL HABITATS

**Standing Committee**

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**REPORTING GUIDELINES - EXPLANATORY  
NOTES FOR THE PERIOD 2019-2024**

**IN SUPPORT TO THE REPORTING FORMAT REFERRED  
TO IN RESOLUTION No. 8 (2012)**

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## GENERAL INTRODUCTION AND STRUCTURE OF THE REPORT FORMAT

The Bern Convention will carry out the second reporting under Resolution No. 8 (2012) on the conservation status of species and habitats. The reporting format reflects largely the format of the EU reporting under Article 17 of the Habitats Directive. The objective of keeping both reporting formats aligned is to enable the comparison of data reported by EU Contracting Parties and analyse at pan-European level.

The Resolution No. 8 (2012) format consists of five distinct Parts (A–E):

**Part A** – General report: gives an overview of the implementation and general measures taken under the Bern Convention.

**Part B** – Reporting format on species, except birds, listed in Resolution No. 6 (1998): gives background information for assessment of the conservation status of selected species.

**Part C** – Assessing conservation status of a species (Species evaluation matrix): the evaluation matrix used assesses the conservation status of a species using the information provided in the Part B of the report. The assessment conclusions for each species are also reported in the respective Part B report.

**Part D** –Reporting format on habitat listed in Resolution No.4 (1996) with a 1 to 1 relationship with habitat types of the Annex I of the Habitats Directive: gives background information for the assessment of the conservation status of a habitat.

**Part E** – Assessing conservation status of a habitat type (Habitat type evaluation matrix): the evaluation matrix assesses the conservation status of a habitat type using the information included in the Part D of the report. The assessment conclusions (i.e. for each parameter and the overall assessment) for each habitat type are also reported in the respective Part D report.



## PART A - GENERAL REPORT FORMAT

The general report or ‘Part A’ uses a very brief structured format aimed at summarising the most important facts and figures on the general implementation of the Recommendation No. 16 (1986) and Resolution No. 5 (1998) on the Emerald Network of Areas of Special Conservation Interest (ASCIs), including links to more detailed information sources. It is mainly targeted at the interested public, but also at informing the Bern Convention Secretariat.

Each country is expected to submit one general report covering its entire territory. It includes obligatory information about several provisions of the Bern Convention. In addition, the main achievements under the implementation of Recommendation No. 16 (1986) and Resolution No. 5 (1998), and the main measures taken to ensure the coherence of the Emerald Network should be briefly described. The report should give information of relevance for the period 2019–2014.

Language – the report will be given using English. However, the Report format tries to minimise the difficulties of using the English language by requesting numerical information wherever possible.

All Internet addresses in the reporting fields should be given in full, including the initial ‘http://’ or ‘https://’, if applicable.

### 0 Country

Select the two-digit code for your country from ISO 3166, in accordance with the list to be found on the Reference Portal<sup>1</sup>.

### 1 Main achievements under Recommendation No. 16 (1986) and Resolution No. 5 (1998)

This section aims to inform the interested public about the main achievements under Recommendation No. 16 (1986) and Resolution No. 5 (1998) and the Emerald Network in the respective country during the reporting period. The information should be given in English

#### 1.1 Text in English or French

Describe briefly the main achievements during the reporting period, with a special emphasis on the Emerald Network. This can include, for example:

- demonstrated benefits for different habitats and species;
- experiences with new or improved management techniques;
- positive changes in public acceptance of biodiversity protection;
- improved cooperation between authorities, nature conservationists and other interest groups;
- initiatives to combine establishment of Emerald sites and the local economy;
- measures taken and their effect (achievements);
- success factors, outlook and the role of the Emerald Network;
- success stories of habitat types and/or species showing genuine improvements.

Provision of a ‘success story’ gives the opportunity for the countries to show an example of how the Emerald Network is working in their country. Each success story should be based on a single habitat or

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<sup>1</sup> <http://www.coe.int/en/web/bern-convention/emerald-network-reference-portal>

species experiencing a genuine improvement in conservation status and / or overall trend in conservation status during the reporting period. The improvements described should be conservation measure driven and should concern the current reporting period but may well include measures that started at an earlier point in time. Proposed structure:

- Indicate habitat type & code / species, biogeographical region
- Background on the habitat/species, past developments & their reasons (pressures, etc.), conservation challenges
- Measures taken & their effect (achievements)
- Role of the Emerald Network (if applicable)
- Success factors

The text should be kept to a maximum of two pages. When no main achievements under Recommendation No. 16 (1986) and Resolution No. 5 (1998) have been identified, countries should indicate it.

## **1.2 Translation into national language (optional)**

This field offers the possibility of adding the information in the own language.

## **1.3 Name and code of feature(s) in success stories**

These fields are to be completed when one or more habitats or species are described in the form of a success story.

Select the a) habitat type code and name and b) the biogeographical / marine regions and/or the c) species code and name and d) biogeographical / marine region it occurs in.

Multiple habitats and species can be selected individually.

## **2 General information sources on the implementation of the Recommendation No. 16 (1986) and Resolution No. 5 (1998) – links to information sources of the country**

This section aims to inform the interested public where they can find information relating to the Emerald Network of the country. In general, only links to Internet addresses are required. However, free text can also be used where there is a need to explain how to access the information source, e.g. in the case of multiple sources of information. All of the following fields should be completed.

### **2.1 General information on the Recommendation No. 16 (1986) and Resolution No. 5 (1998)**

Provide links to general information on the implementation of Recommendation No. 16 (1986) and Resolution No. 5 (1998).

### **2.2 Information on the Emerald Network in the country (Proposed, Candidate and Adopted Sites) in the country**

Provide links to general information on the Emerald Network (e.g. an online database of Emerald Network sites, publications presenting the network).

### **2.3 Monitoring schemes (Resolution No. 8 (2012))**

Provide links to general information on monitoring (e.g. portal presenting national monitoring scheme(s), monitoring guidelines, etc.).

#### **2.4 Protection of Emerald Candidate sites (Recommendation No. 157 (2012))**

Provide links to general information on the necessary protection and conservation measures taken, in order to maintain the ecological characteristics of Emerald Candidate sites as provided in Recommendation No. 157 (2011).

#### **2.5 Impact of measures on the conservation status of habitats listed in Resolution No. 4 (1996) and species listed in Resolution No. 6 (1998)**

Provide links to general information on the implementation of conservation measures within the Emerald sites and their impact on conservation status.

#### **2.6 Process of national designation or other measures for Adopted Emerald Network sites (Resolution No. 8 (2012), paragraph 1)**

Provide links to general information on national designation of Emerald sites.

#### **2.7 Measures taken to ensure the coherence of the Emerald Network**

This section is for a general description of the main measures taken to ensure the coherence of the Emerald network. Give an overview at national level of activities taken (including legal measures, or systematic studies); do not give detailed site-by-site descriptions. If relevant, give references to published reports, scientific papers or websites.

When there are no measures in place to contribute to the connectivity among Emerald Network sites, or to the overall coherence of the Emerald Network, countries should state it.

## PART B – REPORTING FORMAT ON SPECIES, EXCEPT BIRDS (ANNEX F), LISTED IN RESOLUTION No. 6 (1998)

### Species to be reported

In general, each country should report all species listed in Resolution No. 6 (1998) of the Bern Convention for every biogeographical or marine region in which they occur. This includes all regularly occurring species (PRE), marginal (MAR), and occasional (OCC) species, species that started to occur only recently (newly arriving species, ARR) and species extinct after the Bern Convention came into force (Exa). The report is optional for species with a scientific reserve (SCR), extinct prior to entry into force of the Bern Convention (Exp) or species taxonomically dubious (TAX).

For the reporting period 2019-2024 countries will only report on an agreed selection of species, which excludes bird species. A checklist of those selected species and their occurrence per biogeographical or marine region and country will be available on the Reference Portal.

### Taxonomical changes

Since the publication of the Bern Convention and its Appendices in 1979 and the Resolution No. 6 (1998), there have been taxonomical revisions of several of the taxa listed. Several species are now considered to be two or more species and conversely, other species listed in Resolution No. 6 (1998) are now included in other newly defined species, often losing their specific or even subspecific status.

Wherever feasible (e.g. the species can be determined in the field), when the Emerald Network species is now considered to be two or more species, there should be one Resolution No. 8 report for each currently recognised species. In cases where a species listed in Resolution No. 6 is now included in other newly defined species, countries should consider the interpretation of the species at the time when the Resolution No. 6 (1998) was drafted and provide a report under Resolution No. 8 (2012) corresponding to the meaning of the species name back in 1998. Where two species listed in the Resolution No. 6 (1998) were merged into one currently recognised species a joint report including both species should be provided using the currently valid species name (provided in the species checklist). Joint reports for species is no longer permitted where the groupings ‘all others’ and ‘complex’ were used as part of the reporting concept.

For some species, the taxonomy remained unclear or was ambiguous at the time the Resolution No. 6 (1998) was drafted. For these species, the link between the currently recognised valid names and the names listed in the Resolution No. 6 (1998) is not implicit. A few species listed are currently considered to be taxonomical errors. An overview of the taxonomy related categories used in the species checklist with an indication of whether a report is expected or not is provided in Table 1.

**Table 1: Taxonomy related categories used in the species checklist**

Species category (code)	Report
<b>Taxonomical uncertainty (TAX)</b> The taxonomy of the species remains unclear or was ambiguous at the time Resolution No.6 (1998) was drafted.	Mandatory
<b>Taxonomical error (NTAX)</b> Species listed in the Resolution No.6 (1998) is currently proved to be a taxonomical error. This does not apply to species which were recognised as such in the past and which are now included under other taxa.	No report

### Names to be used for reporting

The countries are requested to use the species names and codes as indicated in the species checklist, which will be available on the Reference Portal for the Reporting under Resolution No. 8 (2012). This list will be updated for the reporting period 2019–2024 following available scientific knowledge, the updated Emerald Species Data Dictionary (2022)<sup>2</sup> and considering recommendations from the Contracting Parties. Since there is no up-to-date single taxonomical reference covering all species groups, proposed/recommended species names are based on available scientific literature and available information such as global taxonomical references (e.g. Catalogue of Life, Fauna Europea and Eur+Med PlantBase).

### Species with marginal or irregular occurrence, extinct species

In some situations, it is impossible to provide a complete assessment of the conservation status (within a country biogeographical or marine region) using the methods outlined in the evaluation matrix and this guidelines document. This is particularly the case for irregularly occurring or marginal species, whose conservation status depends on the status in the neighbouring main population, and for extinct species. To reflect the problems of reporting in these situations the species checklist distinguishes several categories of species (or more correctly, several categories of species occurrence). In general, for these categories it is often not necessary (and not possible) to fill in a complete report. An overview of the categories, indicating whether a report is expected, and which parts of the report remain mandatory, is provided in Table 2. A more detailed definition of species categories can be found in the updated version of the Guidelines on concepts and definitions.

**Table 2: Categories of species occurrence within the biogeographical/marine region and indication of the expected content of the report under Resolution No. 8 (2012)**

Species category	Report	Mandatory information for report
<b>Present regularly (PRE)</b>	Mandatory	Full report.
<b>Occasional (OCC)</b>	Mandatory partial report	Whenever possible provide information for any of the fields listed below: <ul style="list-style-type: none"> <li>• Distribution map (field 2.3)</li> <li>• Actual range – surface area (field 5.1)</li> <li>• Population – size estimate (field 6.2), date (field 6.1) and method used (field 6.6)</li> <li>• any other relevant information, e.g. whether a species had been recorded during the reporting period or an explanation why a species is treated as an occasional species (field 13.3).</li> </ul>
<b>Newly arriving species (ARR)</b>	Mandatory partial report	Whenever possible provide information for any of the fields listed below: <ul style="list-style-type: none"> <li>• Distribution map (field 2.3)</li> <li>• Actual range – surface area (field 5.1)</li> <li>• Population – size estimate (field 6.2), date (field 6.1) and method used (field 6.6)</li> <li>• Any other relevant information, e.g. information related to the potential range expansion or an explanation of why a species is treated as a newly arriving species (field 13.3).</li> </ul>

<sup>2</sup> [Data Dictionary - Vocabulary \(europa.eu\)](https://europa.eu)

<b>Marginal (MAR)</b>	Mandatory partial report	<p>Whenever possible provide information for any of the fields listed below:</p> <ul style="list-style-type: none"> <li>• Distribution map (field 2.3)</li> <li>• Actual range – surface area (field 5.1)</li> <li>• Population – size estimate (field 6.2), date (field 6.1) and method used (field 6.6)</li> <li>• Information on occurrence of main population (field 13.3).</li> </ul>
<b>Species extinct after entry into force of the Bern Convention (EXa)</b>	Mandatory	<ul style="list-style-type: none"> <li>• Section 11 ‘Conclusions’. The overall conservation status is ‘unfavourable-bad’.</li> </ul>
<b>Species extinct prior to entry into force of the Bern Convention (EXp)</b>	Mandatory for species with restoration project and for species of particular interest with recent signs of recolonisation	<p>Whenever possible provide information for any of the fields listed below:</p> <ul style="list-style-type: none"> <li>• Distribution map (field 2.3)</li> <li>• Actual range – surface area (field 5.1)</li> <li>• Population – size estimate (field 6.2), date (field 6.1) and method used (field 6.6)</li> <li>• Section 11 ‘Conclusions’</li> <li>• Any other relevant information, e.g. information on reintroduction project or information related to recolonisation (field 13.3).</li> </ul>
<b>Scientific reserve (SCR)</b>	Optional	<ul style="list-style-type: none"> <li>• Any other relevant information, e.g. information on survey conducted or related to probability that the species will/will not be refound in the region (field 13.3).</li> </ul>

## Geographical exceptions from the Annex of the Resolution No. 6 (1998) ('#'-sign)

For a number of species in Resolution No. 6 (1998), a geographical exception was asked by a country. In this case a report should be submitted for those species, as they are species of European interest, and in addition, it is needed in order to understand and assess the European-wide/biogeographical situation of such species., The Secretariat needs information on the status of the species in all Contracting Parties where the species occurs (including the countries with geographical restrictions).

## Hybrid populations

- If hybrids between two species listed in Resolution No. 6 (1998) occur, then the hybrid population(s) should be taken into account in the reports of both species concerned.
- If a hybrid is between a species listed in Resolution No. 6 (1998) and a native species which is not listed in Resolution No. 6 (1998), the hybrid population should be considered part of the population in the biogeographical region if hybridisation is a part of species evolutionary history (e.g. syntopic populations of *Triturus montandoni* and *T. vulgaris* hybridise and introgression of genes resulting from hybridisation may play a role in natural selection).
- If hybridisation between a species listed in Resolution No. 6 (1998) and a native species not listed in Resolution No. 6 (1998) represents a threat to the species listed in Resolution No. 6 (1998) (e.g. loss of fertility), in this case, the hybrid population should be excluded, and hybridisation should be considered as a threat or pressure to species populations.
- If a hybrid is between a species listed in Resolution No. 6 (1998) and an alien species or a feral population, the report should not cover the hybrid population, but where appropriate this should be noted as a threat or pressure. For example, many fish species (such as *Alburnus albidus*) are threatened by hybridisation with introduced species (in this case with congeneric *A. arborella*) or wild cat populations are threatened by hybridisation with feral cats.

## Explanatory notes for completing 'Part B' species reports

To be completed for each species of the Resolution No. 6 (1998) present. For the first reporting period 2019-2024, a limited number of species is agreed<sup>5</sup> on. The species Report format ('species report') comprises 12 sections. Sections 1 and 2 should be provided at national level; the remaining sections are to be provided at the level of biogeographical or marine region.

### NATIONAL LEVEL

1. General information
2. Maps

### BIOGEOGRAPHICAL LEVEL

4. Biogeographical and marine regions
5. Range
6. Population
7. Habitat for the species
8. Main pressures and threats
9. Conservation measures
10. Future prospects
11. Conclusions
12. Emerald Network coverage for Resolution No. 6 (1998) species

### 13. Complementary information

In general, all sections should be completed for each species of the Resolution No. 6 (1998) present<sup>3</sup>.

Even though not all data used in the report will be collected during the reporting period, the report should give information of relevance for the period 2019–2024.

Any free-text information has to be written in English, to facilitate the use of the information by the assessors during the analysis and to allow a wider readership.

## NATIONAL LEVEL

The information below is to be provided at national level.

### 1 General information

The following information should be provided for each species.

#### 1.1 Country

Select the two-digit code of your country from ISO 3166, in accordance with the list to be found on the Emerald Reference Portal<sup>4</sup>.

#### 1.2 Species code

Use codes (four-character sequential code) as given in the species checklist available on the Reporting Reference Portal. New codes will be allocated if necessary to ensure that all Resolution No. 6 (1998) species are covered and in consistency with the Article 17 Checklists.

#### 1.3 Species scientific name

Use the scientific name as listed in the species checklist ('recommended name'). The checklists of the reporting under Resolution No.8 (2012) will be available on the Reporting Reference Portal.

#### 1.4 Alternative species scientific name (optional)

If the scientific name given under field 1.3 differs from the one used nationally, countries may enter an alternative name here. Similarly, if the name of a species used in the Resolution No. 6 (1998) differs from the name used in the species checklist on the Reference Portal, e.g. due to recent taxonomical changes, then the alternative name may be entered here.

#### 1.5 Common name (optional)

If countries wish to enter the common (vernacular) name of the species (or subspecies) used nationally, they may do so here. This could be useful if the draft report is circulated for comments to people who may not be familiar with the scientific name, or when communicating the report with the public.

### 2 Maps

This section contains information on maps to be submitted together with the tabular information as a part

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<sup>3</sup> A checklist for the reporting period 2019-2024 of selected species thought to be present in each country and for which a report is expected will be available at the reference portal.

<sup>4</sup> <http://www.coe.int/en/web/bern-convention/emerald-network-reference-portal>



of the report under Resolution No. 8 (2012). Apart from the mandatory distribution maps, other kinds of maps with information relevant for understanding the assessment of conservation status can also be provided.

## 2.1 Sensitive species

Some species are particularly sensitive subject to, for example, illegal collecting, and making information on their distribution widely available may be detrimental to their conservation. Where information on distribution is considered ‘sensitive’, this can be indicated by entering ‘Yes’ in this field.

If a species is marked as ‘sensitive’, the Bern Convention Secretariat and the EEA will not disclose its distribution to the public (for instance, by posting this information on a publicly available database or Internet-based site).

## 2.2 Year or period

Enter the year (e.g. 2021) or period (e.g. 2019–2024) when the distribution was last determined.

Many reports will involve periods, because a mapping of the species distribution in most cases involves several years of fieldwork and may extend beyond the limits of the current reporting period (2019–2024). The year or period reported should cover the actual period during which the data were collected.

In some cases, the distribution map will be elaborated based on data from the previous reporting period or using older distribution data that has been updated with the results of regular monitoring or using data from online-systems for collecting data. The year or period reported should be that which the reported distribution relates to.

More detailed information on year or period of data used for the distribution map can be provided in field 2.5 ‘Additional information’.

## 2.3 Distribution map

Submit distribution grids, together with the relevant metadata (projection, datum, scale). The standard is:

**10 x 10 km ETRS89 grid, projection ETRS LAEA 5210**

The distribution map should provide information about the actual occurrences of the species, which should preferably be based on the results of a comprehensive national mapping or inventory of the species wherever possible (see Section ‘1.4 Maps’ in the Guidelines of concepts and definitions). If field data on actual occurrences of the species are not sufficient, modelling and extrapolation should be used whenever feasible<sup>7</sup>. The distribution map will be composed of grids with both the actual (mapped) and presumed species occurrences.

The distribution map will consist of 10 x 10 km ETRS89 grid cells in the ETRS LAEA 5210 projection<sup>5</sup>. The gridded dataset will consist only of the 10 km grid cells where the species is recorded or estimated as occurring; the use of attribute data to indicate the presence or absence of a species in a grid cell is not permitted. The period over which the distribution data were collected should be included in the metadata, following the INSPIRE guidelines<sup>6</sup>. The technical specifications for distribution maps are given on the Reference Portal.

<sup>5</sup> European Terrestrial Reference System 1989; Lambert Azimuthal Equal Area Latitude of origin 52N, Longitude of origin (central meridian) 10E

<sup>6</sup> For the period 2019-2024 it is not expected to provide the Resolution No. 8 (2012) spatial dataset compliant with INSPIRE requirements

If more precise maps giving more detailed species distribution are available, these can be submitted as additional maps.

In some exceptional cases, such as widely ranging but poorly known cetaceans, it may be relevant to submit maps using a 50 x 50 km grid. For smaller countries, a 1 x 1 km grid (or 5 x 5 km) is allowed; these will then be aggregated by the ETC/BE to 10 x 10 km for visualisation at pan-European level.

The grids for individual countries are available for download from the Reporting Reference Portal.

## **2.4 Method used**

Method used for obtaining the distribution map. Contracting Parties can choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. a dedicated mapping or survey or a robust predictive model with representative sample of occurrence data, calibration and satisfactory evaluation of its predictive performance using good data on environmental conditions across entire species range);
- b) based mainly on extrapolation from a limited amount of data (e.g. other predictive models or extrapolation using less complete sample of occurrence and environmental data);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

The 'Method used' should be reported as '(d) Insufficient or no data available' if the reported distribution map obtained as a result of comprehensive mapping, modelling or extrapolation or, exceptionally, expert interpretation covers less than 75 % of the presumed actual species distribution (i.e. the resulting map is incomplete in relation to the presumed species distribution).

## **2.5 Additional maps (optional)**

Countries may also submit additional maps, for example giving more detailed distribution data (e.g. at higher resolution) or a range map (see '1.5 Range in the Guidelines on Concepts and Definitions' for further information). Any additional maps must be accompanied by the relevant metadata and details of the projection used. Note that this is an optional field and does not replace the need to provide a map in field 2.3.

Maps at a resolution other than 10 x 10 km or with grids other than the ETRS89 LAEA 5210 grid, or close to 10 x 10 km, may be reported here.

## **2.6 Additional information (optional)**

This field is optional and allows Countries to report, as free text, any information which is felt relevant, such as describing the mapping methods in more detail or describing other mapping information uploaded to the Countries' envelopes.

## **3 (Information related to Annex V species (Article 14 of Directive 92/43/EEC))<sup>7</sup>**

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<sup>7</sup> Not applicable for the Reporting under the Resolution No. 8 (2012)

## BIOGEOGRAPHICAL LEVEL

The following sections should be completed for each biogeographical or marine region in which the species occurs. So, for example, if a species occurs in three biogeographical regions within a country, three separate reports are required.

### 4 Biogeographical and marine regions

#### 4.1 Biogeographical or marine region where the species occurs

Biogeographical region or marine region concerned within the country.

Use the following names for biogeographical regions:

Alpine	Black Sea	Macaronesian
Anatolian	Boreal	Pannonian
Arctic	Continental	Steppic
Atlantic	Mediterranean	

Use the following names for marine regions<sup>8</sup>:

Marine Arctic	Marine Black Sea	Marine Macaronesian
Marine Atlantic	Marine Baltic Sea	Marine Mediterranean
Marine Caspian		

Maps and boundaries of biogeographical and marine regions can be found on the Reporting Reference or on the Emerald Network Reference Portal.

More information on marine regions and on species which should be reported in marine regions can be found in the updated version of the Guidelines on concepts and definitions.

#### 4.2 First time reporting (optional)

If the species is reported in the Contracting Party for the first time, this should be indicated. This field can be used for species which are e.g. newly arriving or where they were previously listed as scientific reserve in the checklist. Some fields in the reporting format may not be applicable for species reported for the first time e.g. when indicating the change and reason for change since the last reporting period.

#### 4.3 Additional information (optional)

This field allows Countries to report, as free text, any information which is felt relevant, such as why the species is being reported for this first time i.e. a newly recorded species or otherwise. Any other additional information on this section is optional.

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<sup>8</sup> For the reporting period 2019-2024, the species selection will not contain marine species.

## 4.4 Sources of information

For information from published sources related to Sections 4 to 6 (including the published sources related to distribution maps, on which the range calculation is based) and Sections 8 to 13, provide bibliographic references or links to an Internet site(s). Use the order: author, year, title of publication, source, volume, number of pages, web address.

All Internet addresses in the reporting fields should be given in full, including the initial 'http://' or 'https://', if applicable.

## 5 Range

This section provides information on range surface area, range trends and favourable reference range.

Range is defined as 'the outer limits of the overall area in which a habitat type or species is found at present' and it can be considered as an envelope within which areas actually occupied occur.

The range should be calculated based on the map of the actual distribution using a standardised algorithm. A standardised process is needed to ensure repeatability of the range calculation in different reporting rounds.

It is not necessary to submit a map of the range, but the area of the range and trend in the area are required to assess this parameter. However, a map can be submitted in field 2.5 'Additional maps'.

Complementary information and methods for range calculation can be found in the updated version of the Guidelines on concepts and definitions.

### 5.1 Surface area

This is the total surface area (in km<sup>2</sup>) of the current range (outer limits of the species distribution) within the biogeographical or marine region concerned. The range in the biogeographical or marine region concerned is represented by grids (10 x 10 km) which occur entirely or partly within the region (i.e. grids intersected by the boundaries of the biogeographical or marine regions are counted under both regions). In general, the surface area is provided in 10 x 10 km resolution and the minimum area should be 100 km<sup>2</sup>. For localised species with a very small range, it is possible to report using a finer resolution; for example, for species restricted to a single location, the range is the area of a locality where species occurs, which can be sometimes several square metres. Decimals are allowed, as the range of some species can be very small.

The method for estimating the surface area of range is described in the updated version of the Guidelines on concepts and definitions.

### 5.2 Change and reason for change in surface area of range (optional)

This field is used to indicate if there is any change since the previous reporting period (2013–2018) in the range surface area reported and, if so, to describe the nature of this change.

First answer the question: 'Is there a change between reporting periods?'. (If yes, more than one option b) to f) can be chosen<sup>9</sup>).

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<sup>9</sup> In some cases, the actual value reported for range surface area has increased, reflecting both a genuine increase in range (positive range trend) and better knowledge or data. Both options ('genuine change' and 'improved knowledge or more accurate data') above should be selected. In other situations the actual value reported for range surface area has increased since the previous period due to better knowledge or data. Nevertheless, it may still be clear that the species range is actually declining, based on analyses of data

- a) no, there is no change
- b) yes, due to genuine change
- c) yes, due to improved knowledge/more accurate data
- d) yes, due to the use of a different method
- e) yes, but there is no information on the nature of change
- f) yes, due to other reasons

Finally, indicate whether any difference is mainly due to (select one option):

- genuine change
- improved knowledge or more accurate data
- the use of a different method
- other reasons

If a country wishes to give further information (e.g. cases where range surface area does not change, but its borders are shifting), this can be done in field 5.10 ‘Additional information’. If the field ‘yes due to other reasons’ is ticked, it must be further specified in ‘Additional information’. This field should be used only in very limited cases.

Since for Resolution No. 8 (2012) reporting the checklist is not stable nor the countries participating in the process, this field is optional and may be filled in only by those countries participating in the previous reporting round.

### 5.3 Short-term trend- Period

Give the dates for the beginning and end of the period for which the trend has been reported. The short-term trend should be evaluated over a period of 12 years (two reporting cycles). Therefore, for the 2019–2024 reports, this means the period 2013–2024 or a period as close as possible to this should be considered. Thus, some flexibility is permitted, so that while trends would ideally be reported for 2013–2024, data from e.g. 2010–2021 will be accepted if the best available data relate to surveys in those years. For newly arriving species, ideally the trends would be reported with the start year as the first year after the species was first observed. E.g. if the species was first observed in 2018 then the short-term trend period would be 2018-2024.

Further guidance is given in the updated version of Guidelines on concepts and definitions.

### 5.4 Short-term trend- Direction

A trend is a (measure of a) directional change of a parameter over time. The range trend shows changes in the overall extent of species distribution. Although rare for range, a fluctuation (or oscillation) is not a directional change of a parameter, and therefore fluctuation is not a trend. Indicate if range trend over the period reported in field 5.2 was (select one of the following):

- a) stable
- b) increasing
- c) decreasing
- d) uncertain
- e) unknown

Report ‘uncertain’ if some data are available but are not enough to accurately determine the direction. Use ‘unknown’ where there are no data available.

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from sites. The option ‘improved knowledge or more accurate data’ above should be selected. Field 5.13 ‘Additional information’ allows a country to provide further details on why a range estimate has increased, even though a range decline is reported.

The short-term trend information is used in the evaluation matrix to undertake the conservation status assessment. Any large-scale deviation from this should be explained in field 5.14 'Additional information'.

If there is an apparent change in direction of the trend resulting from a change in monitoring methodology or improved knowledge about species distribution, it should not be considered as genuine change in trend. This apparent change should be indicated in field 5.2 'Change and reason for change in surface area of range'.

Further guidance is given in the updated version of the Guidelines on concepts and definitions.

## **5.5 Short-term trend- Magnitude (optional)**

If possible, quantify the percentage change (with range at the beginning of the reporting period as 100 %) over the period reported in field 5.3. Where a pre-defined range is used, please select among the given intervals 0-12%, 13-25%, 26-50%, 51-100%, >100%.

Choose from the following options:

- a) estimated minimum
- b) estimated maximum
- c) pre-defined range
- d) x unknown

- Where magnitude is available as a range (e.g. 20–30 %), this should be reported in '(a) estimated minimum' and '(b) estimated maximum'.
- Where magnitude is available as a precise value, the same value should be reported in '(a) estimated minimum' and '(b) estimated maximum'.
- Where only a minimum value is known, this should be reported in '(a) estimated minimum' and '(b) estimated maximum' and indicated as 'minimum' in 5.6 Short-term trend magnitude – type of estimate. Conversely, where only the maximum value is available, this should also be entered into both the (a) 'estimated minimum' and (b) 'estimated maximum' fields with 'best estimate' indicated in the 5.6 'Type of estimate' field and precisising that maximum is entered in 5.14 Additional information (optional). Where a less accurate range is available, field c) pre-defined range can be used.
- Negative magnitude values should be reported (i.e. include the '-' sign) for all negative trend magnitudes, including cases where the direction is already indicated as 'decreasing'. Nevertheless, to avoid unnecessary data entry, it is not necessary to include the '+' sign for positive trends (i.e. a trend magnitude of '15' will be assumed to represent +15%). In the case of negative trends, note that the 'Minimum' and 'Maximum' fields relate to minimum and maximum values mathematically (not minimum and maximum declines). The pre-defined ranges will be provided with a positive or negative sign.

This field does not need to be completed for 'stable' or 'unknown' trend reported in 5.4. However, if the 'Uncertain' trend is reported, this suggests that some data are available and that a trend magnitude could be estimated. This should be reported with the 'type of estimate' field completely accordingly.

## **5.6 Short-term trend magnitude – Type of estimate (optional)**

The type of estimate for the reported interval in fields 5.5 a) and b) or the pre-defined interval in field 5.5 c) should be outlined here. The options for reporting this are: best estimate, multi-year mean, 95% confidence

interval, minimum or pre-defined range:

- best estimate – the best available single figure which can be based on modelling or expert opinion but for which the 95 % confidence interval could not be calculated. Whether a best estimate comes from the monitoring data, modelling or an expert opinion, it should be entered in field 5.7;
- multi-year mean – average value or interval where the trend magnitude is monitored/assessed several times during the period provided in field 5.3;
- 95 % confidence interval – estimates derived from surveys or a model in which 95 % confidence limits could be calculated;
- minimum – where insufficient data exist to provide even a loosely bounded estimate, but where a magnitude is known to be above a certain value, or where the reported interval estimates come from a survey or monitoring projects which probably underestimate the real magnitude;
- pre-defined range – where the exact minimum and maximum values could not be estimated (fields 5.5 a) and b)), but where a reliable estimate can be made within the pre-defined range increments provided.

The type of estimate field is used for both the trend direction (5.4) and the short-term trend magnitude fields (5.5) as these two fields are part of the one assessment and should both be addressed here. No type of estimate is required if both trend and magnitude are ‘unknown’.

### **5.7 Short-term trend – Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. comparing two range maps based on accurate distribution data, or a dedicated monitoring of a species’ distribution with good statistical power);
- b) based mainly on extrapolation from a limited amount of data (e.g. trends derived from species occurrence data collected for other purposes, or from data collected from only a part of the geographical range of a species, or trends based on measuring some other predictors of species distribution, such as land-cover changes or prey availability);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

The methods used field is used for both the trend direction (5.4) and the short-term trend magnitude (5.5) fields as these two fields are part of the one assessment and should both be addressed here.

### **5.8 Long-term trend- Period (optional)**

The long-term trend should be evaluated over a period of 24 years (four reporting cycles). For the 2019–2024 reports, this means the period is 2000–2024 or a period as close as possible to this. Indicate the period in this field. For the 2019–2024 reports, this information and the associated fields 5.9 and 5.11 is optional. For newly arriving species, the start date for the long-term trend would fall within the last two reporting periods (i.e. 2013 to 2024).

Further guidance is given in the updated version of the Guidelines on concepts and definitions.

### **5.9 Long-term trend- Direction (optional)**

See field 5.4 Short-term trend direction.

### **5.10 Long-term trend- Magnitude (optional)**

If possible, quantify the percentage change (with range at the beginning of the reporting period as 100 %) over the period reported in field 5.8. It can be given as estimated minimum and maximum value in fields 5.10(a) and (b) (e.g. 27% and 55%), or where a precise value is known, enter the same value in the minimum and maximum field (e.g. 27%). For additional guidance see field 5.5 Short-term trend – magnitude (optional).

### **5.11 Long-term trend- Method used (optional)**

See field 5.7 Short-term trend direction- Method used.

### **5.12 Favourable reference range**

Favourable reference range (FRR) is the range within which all significant ecological variations of the species are included for a given biogeographical region and which is sufficiently large to allow the long-term survival of the species. This information is needed to evaluate the conservation status using the matrix in Part C. In many cases, it is not possible to estimate a value for favourable reference range (option a) but it is clear that the favourable reference range is greater (or much greater) than the present-day value. If the favourable reference range is smaller than the present-day value, the favourable reference range is expected to be provided in a precise number. Using the pre-defined range increments (option b) the range is ‘approximately equal to the favourable reference range (less than 2% smaller)’, ‘between 2 and 10% smaller’, ‘between 11 and 50% smaller’, ‘between 51 and 100% smaller’ allows flexibility in reporting when the exact value is not known. It is also preferable to report a parameter as ‘unknown’ (option c).

The following information is requested:

- a) area in km<sup>2</sup>; or
- b) if a precise favourable reference range is unknown. Indicate if the range is:
  - approximately equal to the favourable reference range (less than 2% smaller)
  - between 2 and 10% smaller than the FRR
  - between 11 and 50% smaller than the FRR
  - between 51 and 100% smaller than the FRR
- c) if the favourable reference range is unknown, use ‘x’ for the reference range; and
- d) indicate the method used to set the reference value (free-text field).

The methods can be:

- Model-based approach
- Reference-based approach
- Expert opinion
- Other

More than one method can be selected. If the ‘Model-based approach’ or the ‘Reference-based approach’ are selected then the quality of the available information should be indicated as high, moderate or low. If ‘other’ method is selected, elaborate on this method in field 5.14 ‘Additional Information’.

The field ‘indicate method used’ (d) is mandatory if (a) area is provided, but countries are encouraged to describe the method used also when (b) operators were used.



The use of (b) range increments should help to reduce the use of ‘unknown’ to a minimum:

- if a range increment (b) is used, then there is no need to insert a value in relation to the current value provided in field 5.1 ‘Surface area (of range)’;
- if the value is provided for area in km<sup>2</sup> (a) the range increments should not be used.

When the species was reported in the previous Resolution No. 8 (2012) reporting round and the reference value has changed in comparison to the previous reporting period, this should be explained in field 5.14 ‘Additional Information’.

Favourable reference values are discussed in more detail in Section 1.3 ‘Favourable reference values’ in the Guidelines on Concepts and Definitions.

### **5.13 Range when the Resolution No. 8 (2012) came into force (optional)**

The surface area of range at the time the Resolution No.8 came into force, i.e. 2012, can be provided in this field, which is an optional and free text field to see progress regarding the current range reported.

### **5.14 Additional information (optional)**

Additional information to help understand the information given on range can be reported here (for example, details on the use of old distribution data, use of data from the previous reporting period, use of different gap distance or range calculation method than that recommended, changes in favourable reference value).

## **6 Population**

This section provides information on population size, population trends and favourable reference population. Population and favourable reference population information should ideally be reported in the same unit as these properties are interconnected. The unit for all is the value for field 5.2 population size (with some exceptions to this outlined below).

### **6.1 Year or period**

Enter the year or period during which the population size was last determined: YYYY (for year) and YYYY–YYYY (for period).

Many reports will involve more than one reporting period, because species inventories in most cases involve several years of fieldwork and may extend beyond the limits of the current reporting period (2013–2018). The year or period reported should cover the actual period during which the data were collected.

In some cases, the population size will be estimated based on a complete species census or inventory which took place during the current reporting period (2019–2024) or even before and that has been updated with the results of regular monitoring. The year or period reported should be that which the reported estimate of population size relates to.

More detailed information on year or period of data used for the population size can be provided in field 6.20 ‘Additional information’.

### **6.2 Population size (in reporting unit)**

This field refers to the total population in the biogeographical region or marine region of the country concerned. The reporting unit specified in the checklist is individuals for some groups, 1 x 1 km grids for others and agreed units for a sub-sets within these groups. The summary of reporting units for each group is provided in the updated Guidelines on concepts and definitions.

Contracting Parties should use the most suitable unit for their monitoring of individual species, they should, if necessary, convert this unit into a ‘reporting’ unit to be reported in field 6.2, which will be used later for biogeographical assessments. If a Party wishes to report population size using a different unit this can be reported in field 6.5. Parties shall make best efforts to report data in the reporting units as set out in the checklist (for example individuals) and where needed transform their data from the units used in the monitoring programmes (for example grids) into the reporting units and then report relevant values in both fields 6.2 and 6.5. If no information is available to fill in field 6.2, it should be left blank (this is a numerical field), and Parties are encouraged to provide information in field 6.5 at least.

- For invertebrate and non-vascular plant species occurring only in one Country, any unit can be used for reporting. For vascular plant species occurring in one Country either individuals or m<sup>2</sup> are used as the reporting units. For vertebrates occurring in one Country the reporting unit to be used is individuals.
- If a species occurs in several biogeographical regions the same unit should be used across all regions.

Further information on reporting units is provided in Part B on concepts and definitions and the list of population size units to be used in field 6.2 ‘Population size’ is available on the Reference Portal.

The population size can be reported as an interval (for example, minimum and maximum value from repeated census) and/or as a best available single value. The interval size estimate (fields 6.2(b) and (c) should be given as minimum and maximum numbers. Minimum and maximum should always be entered together, i.e. not only the minimum or only the maximum.

There is also a ‘best single value’ field (6.2(d)) where a single value (a precise value or an estimate) can be entered. In a situation where only a minimum (or maximum) value of the population size is known (e.g. through expert opinion) this should be entered in the ‘(d) Best single value’ field and NOT the ‘(b) Minimum’ or ‘(c) Maximum’ fields. The source of this estimate can then be clarified in field 5.3 (see below). The numbers reported should not be rounded.

There is an option to report a size class in 6.2 e) where a precise value cannot be provided. The class number (1 – 14) is inserted into the field corresponding to the estimated population size.

Class	Population size
1	0-50
2	50-100
3	100-500
4	500-1000
5	1000-5000
6	5000-10 000
7	10 000-50 000
8	50 000-100 000
9	100 000-500 000
10	500 000-1 000 000
11	1 000 000-5 000 000
12	5 000 000-10 000 000
13	10 000 000-50 000 000

Both interval and best single value can be provided together, for example where the interval coming from the survey data is quite large (e.g. minimum and maximum values) and an expert evaluation of the actual population size is available. An expert evaluation of survey data can result in a more accurate single value to be used in the pan-European assessments. In other situations, the point estimate (best single value) is available, and the country wishes to provide the confidence limits. The confidence interval can be entered in the minimum and maximum fields. If both, interval and best single values, are provided this should be explained in field 6.20 ‘Additional information’.

If the population size reported in field 6.2 was estimated by converting the information reported in field 6.5, information on the conversion should be given in field 6.20 ‘Additional information’.

For wide-ranging highly mobile marine species (e.g. whales, dolphins, turtles), use population estimates from i) regional marine Agreements such as ACCOBAMS and ASCOBANS; ii) Regional Sea Conventions (OSPAR, Helsinki, Barcelona, Bucharest); or any other estimates made in cooperation between countries sharing the same population (e.g. SCANS<sup>10</sup>) if available. Each country should report the results for their territory (i.e. a respective proportion of the regional population). Complementary information about assessment of transboundary species populations can be found in Section ‘Transboundary populations’ (in ‘Definitions and methods for species reporting’).

### 6.3 Type of estimate

The type of estimate for the reported interval in fields 5.2(b) and (c) or the best single value in field 5.2(d) should be outlined here. The options for reporting on this are: best estimate, multi-year mean, 95 % confidence interval, or minimum:

- best estimate – the best available single figure (including where only the maximum value of the population size is available) or interval, derived from e.g. a population census, a compilation of figures from localities, modelled population size based on population densities and distribution data or expert opinion, but for which 95 % confidence interval could not be calculated. Whether a best estimate comes from the monitoring data, modelling or an expert opinion should be entered in field 6.6;
- multi-year mean – average value or interval where population size is monitored several times during the period provided in field 6.1;
- 95 % confidence interval – estimates derived from sample surveys or a model in which 95 % confidence limits could be calculated;
- minimum – where insufficient data exist to provide even a loosely bounded estimate, but where a population size is known to be above a certain value, or where the reported interval estimates come from a sample survey or monitoring project which probably underestimates the real population size.

If both interval (field 6.2(b) ‘Minimum’ and field 6.2(c) ‘Maximum’) and a single value (field 6.2(d) ‘Best single value’) are provided, field 6.3 ‘Type of estimate’ should correspond to the more accurate estimate. This should be noted in field 6.20 ‘Additional information’.

### 6.4 Quality of extrapolation to reporting unit (optional)

Where information provided in field 6.2 on population size has been converted from a different unit to the reporting unit, the quality of this extrapolation can be indicated in field 6.4. This can refer to the unit reported in field 6.5 Additional population size and converted to the data in field 6.2 Population size, or

<sup>10</sup> Hammond et al., 2013.

to other units used at national level not indicated in field 6.5.

The options to report are:

- High (conversion is associated with a small margin of error)
- Moderate (conversion is associated with a medium margin of error)
- Low (conversion is associated with a high margin of error)

If more information is available on the margin of errors, this can be indicated in field 6.20 Additional information. If the extrapolation is based on a unit not included in the reporting format (field 6.5) please explain further in the field 6.20.

### **6.5 Additional population size (optional)**

This field allows the country to report population size using units other than the unit given in the species checklist. The guidance on reporting the numbers is the same as for field 6.2.

Under certain circumstances, the unit in this field can be used to set favourable reference population. This is further described in field 6.18.

Abundance/ density related units can also be used. In this case countries are encouraged to provide the occupied habitat component of such a unit in the field for 'Additional information' 6.20.

If the population size reported in field 6.2 was estimated by converting the information reported in field 6.5, give information on the conversion in field 6.20 'Additional information'. Field 6.5 is not a substitute for field 6.2.

The list of population size units will be available from the Reporting Reference Portal.

### **6.6 Type of estimate (optional)**

See instructions for field 6.3.

### **6.7 Population size – Method used**

This field is used to describe the methodology used for calculating population size in field 6.2 or the additional population size reported in field 6.5 (in a situation where the population size in field 6.2 is converted from the value in field 6.5). Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. repeated direct counts of entire population; repeated counting based on indices of species presence; from previous complete inventory updated with robust monitoring data on trends);
- b) based mainly on extrapolation from a limited amount of data (e.g. based on mark-recapture methods; using models based on abundance and distribution data; using extrapolation from sample surveys of parts of the population; or from previous inventory updated with good trend data);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

If both interval (field 6.2(b) 'Minimum' and field 6.2(c) 'Maximum') and a single value (field 6.2(d) 'Best single value') are provided, field 6.7 'Method used' should correspond to the more accurate of both estimates. This should be noted in field 6.20 'Additional information'.

### **6.8 Change and reason for change in population size (optional)**

This field is used to indicate if there is any change since the previous reporting period (2013–2018) in the

population size reported and, if so, to describe the nature of this change.

First answer the question: ‘Is there a change between reporting periods?’ (If yes, more than one option b) to f) can be chosen<sup>11</sup>)

- a) no, there is no change
- b) yes, due to genuine change
- c) yes, due to improved knowledge/more accurate data
- d) yes, due to the use of a different method
- e) yes, but there is no information on the nature of change
- f) yes, due to other reasons

Finally, indicate whether any difference is mainly due to (select one option):

- genuine change
- improved knowledge or more accurate data
- the use of a different method
- unknown
- other reasons

If a country wishes to give further information this can be done in field 6.20 ‘Additional information’. If the field ‘yes due to other reasons’ is ticked, it must be further specified in ‘Additional information’. This field should be used only in very limited cases. Since for Resolution No. 8 (2012) reporting the checklist is not stable nor the countries participating in the process, this field is optional and may be filled in only by those countries participating in the previous reporting round.

## **6.9 Short-term trend- Period**

Give the dates of the beginning and end of the period for which the trend has been reported. The short-term trend should be evaluated over a period of 12 years (two reporting cycles). For the 2019– 2024 reports, this means the period is 2013–2024 or a period as close as possible to this. Thus, some flexibility is permitted, so that while trends would ideally be reported for 2013–2024, data from e.g. 2010–2021 will be accepted if the best available data related to surveys in those years. For newly arriving species, ideally the trends would be reported with the start year as the first year after the species was first observed e.g. if the species was first observed in 2018 then the short-term trend period would be 2019 – 2024.

Further guidance is given in the updated version of the Guidelines on concepts and definitions.

## **6.10 Short-term trend- Direction**

Trend is a (measure of a) directional change of a parameter over time. The trend in population size shows changes in the overall numbers of individuals in the biogeographical population of a species. Fluctuation (or oscillation) is not a directional change of a parameter, and therefore fluctuation is not a trend.

Indicate if the population trend over the reported period in field 6.9 was (select one of the following):

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<sup>11</sup> In some cases, the actual value reported for population size has increased, reflecting both a genuine increase in size (positive population trend) and better knowledge or data. Both options (‘genuine change’ and ‘improved knowledge or more accurate data’) above should be selected. In other situations, the actual value reported for population size has increased since the previous period due to better knowledge or data. Nevertheless, it may still be clear that the species population is declining based on analyses of data from sites. The option ‘improved knowledge or more accurate data’ above should be selected. Field 6.20 ‘Additional information’ allows a Country to provide further details on why a population size estimate has increased, even though a population decline is reported.

- a) stable
- b) increasing
- c) decreasing
- d) uncertain
- e) unknown

Report 'uncertain' if some data are available but they are not enough to accurately determine direction. Use 'unknown' where there are no data available.

The short-term trend information is used in the evaluation matrix to assess the conservation status. Any large-scale deviation from this should be explained in field 6.20 'Additional information'.

If there is an apparent change in direction of the trend resulting from a change in monitoring methodology or improved knowledge about the size of a species population, it should **not** be considered a trend. This apparent change should be indicated in field 6.8 'Change and reason for change in population size'.

Further guidance is given in the updated version of the Guidelines on concepts and definitions.

### 6.11 Short-term trend- Magnitude

If possible, quantify the percentage change (with range at the beginning of the reporting period as 100 %) over the period reported in field 6.9 Short-term trend period. It can be given as a min/max estimate in fields 6.11(a) and (b). If a precise figure is available give the same value under 'minimum' and 'maximum' (fields 5.10(a) and (b)). Where a precise value is not known, please select a pre-defined banded interval in field 6.11(c) (pre-defined intervals are 0 – 12%, 13 - 25%, 26 - 50%, 51 – 100%, >100%). If the trend magnitude is unknown, indicate by using 'x' in field (d).

Choose from the following options:

- a) estimated minimum
- b) estimated maximum
- c) pre-defined range
- d) x = unknown

- Where magnitude is only available as a range (e.g. 20–30 %), these two values should be reported in '(a) Minimum' and '(b) Maximum'.
- Where magnitude is available as precise value, the same value should be reported in 'a) estimated minimum' and 'b) estimated maximum'.
- Where only a minimum value is known, this should be reported in 'a) estimated minimum' and 'b) estimated maximum' and indicated as 'minimum' in 6.12 Short-term trend magnitude-type of estimate. If a precise figure (e.g. 27%) is available, this should be entered in 'c) Best single value'. Conversely, where only the maximum value is available, this should also be entered into both the 'a) estimated minimum' and the 'b) estimated maximum' fields with 'best estimate' indicated in 6.12 Type of estimate field and precisising that maximum is entered in 6.20 Additional information.
- Where a less accurate range is available, field 'c) pre-defined range' can be used.
- Negative magnitude values should be reported (i.e. include the '-' sign) for all negative trend magnitudes, including cases where the direction is already indicated as 'decreasing'. Nevertheless, to avoid unnecessary data entry, it is not necessary to include the '+' sign for positive trends (i.e. a trend magnitude of '15' will be assumed to represent +15%). In the case of negative trends, note that the 'Minimum' and 'Maximum' fields relate to minimum and maximum values mathematically (not

minimum and maximum declines). The pre-defined ranges will be provided with a positive or negative sign.

This field does not need to be completed for 'stable' or 'unknown' trends reported in 6.10. 'Uncertain' trends suggest that some data are available, and this should be reported on with the 'type of estimate' field completed accordingly.

### **6.12 Short-term trend Magnitude – Type of estimate**

The type of estimate for the reported minimum and maximum in fields 6.11(a) and (b), or the pre-defined range (c) should be outlined here. The options for reporting this are: best estimate, multi-year mean, 95 % confidence interval, minimum or pre-defined range:

- best estimate – the best available single figure or interval, derived from e.g. a population census, a compilation of figures from localities, modelled population trends or expert opinion, but for which 95 % confidence interval could not be calculated;
- multi-year mean – average value or interval where population size is monitored several times during the period provided in field 6.10;
- 95 % confidence interval – estimates derived from sample surveys or a model in which 95 % confidence limits could be calculated;
- minimum – where insufficient data exist to provide even a loosely bounded estimate, but where a trend magnitude is known to be above a certain value, or where the reported interval estimates come from a sample survey or monitoring project which probably underestimates the real trend;
- pre-defined range – where some data exist but it is not sufficient to provide an estimated minimum or maximum value.

The type of estimate field encompasses the total assessment i.e. both field 6.10 short-term trend direction and field 6.11 short-term trend magnitude. No type of estimate is required if both direction and magnitude are 'unknown'.

### **6.13 Short-term trend – Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. a dedicated monitoring of a species' populations with good statistical power);
- b) based mainly on extrapolation from a limited amount of data (e.g. trends derived from data collected from a limited number of sample sites; trends extrapolated from data collected for other purposes; trends extrapolated from some other indirect measurements, such as availability of a habitat);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

The method used field encompasses the total assessment i.e. both field 6.10 short-term trend direction and field 4.10 short-term trend magnitude.

### **6.14 Long-term trend- Period (optional)**

The long-term trend should be evaluated over a period of 24 years (four reporting cycles). For the 2019–2024 reports, this means the period is 2000–2024 or a period as close as possible to this. Indicate the period in this field. For the 2019–2024 reports, this information, together with fields 6.14 to 6.16, is

optional. For newly arriving species, the start date for the long-term trend would fall within the last two reporting periods (i.e. 2013 to 2024).

Further guidance is given in the updated version of the Guidelines on concepts and definitions.

### **6.15 Long-term trend- Direction (optional)**

See field 6.10 Short-term trend direction.

### **6.16 Long-term trend- Magnitude (optional)**

If possible, quantify the percentage change (with range at the beginning of the reporting period as 100 %) over the period reported in field 6.14. It can be given as estimated minimum and maximum value in fields 6.16(a) and (b) (e.g. 27% and 55%), or where a precise value is known, enter the same value in the minimum and maximum field (e.g. 27%). If neither a minimum, maximum nor a precise value can be provided, 6.16(c) Confidence interval can be used (if a statistically reliable method was used).

For additional guidance see field 6.11 Short-term trend – magnitude.

### **6.17 Long-term trend – Method used (optional)**

See field 6.13 (short-term trend -Method used).

### **6.18 Favourable reference population**

Favourable reference population (FRP) is the population in a given biogeographical region considered the minimum necessary to ensure the long-term viability of the species. This information is needed to undertake the evaluation of conservation status using the evaluation matrix (Part C).

Favourable reference population should be given in the same units that used for ‘Population’ (field 6.2 or 6.5) The use of grids for defining FRP should be avoided.

In many cases it is not possible to estimate a value for favourable reference population (option a) but it is clear that the favourable reference population is greater (or much greater or, in exceptional situations, lower) than the present-day value. If the favourable reference population is smaller than the actual population the favourable reference range is expected to be provided in a precise number. Using the pre-defined range increments population is ‘approximately equal to the favourable reference range (less than 5% smaller)’, ‘between 5 and 25% smaller than the FRP’, ‘between 26 and 50% smaller than the FRP’, ‘between 51 and 100% smaller than the FRP’, allows flexibility in reporting where the exact value is not known. It is also preferable to reporting a parameter as ‘unknown’ (option c). For example, if the actual population is 1000 individuals and the value is estimated to be 5% to 25% smaller than the FRP, then the FRP would be between 1053 and 1333 individuals. If a pre-defined interval is used to estimate a favourable reference population, it should be used with the minimum population size estimate. The pre-defined range ‘approximately equal to the favourable reference population (less than 5% smaller)’ is not used in situations where the population of the species is significantly decreasing. If the favourable reference population is smaller than the actual population, the favourable reference population is expected to be provided in a precise number and an explanation needs to be given in the field 6.20 ‘Additional information’ on how this is in line with the principles of setting FRVs as described in the Guidelines.

The following information is requested:

- a) population size (with unit); or
- b) *if a precise favourable reference population is unknown indicate if the population is:*



*approximately equal to the favourable reference population (less than 5% smaller)*

*between 5 and 25% smaller than the FRP*

*between 26 and 50% smaller than the FRP*

*between 51 and 100% smaller than the FRP*

- c) if the favourable reference population is unknown, indicate in the field
- d) indicate the method used' to set the reference value

The method can be:

Model-based approach

Reference-based approach

Expert opinion

Other

More than one method can be selected. If the 'Model-based approach' or the 'Reference-based approach' are selected then the quality of the available information should be indicated as high, moderate or low. If 'other' method is selected, elaborate on this method in field 6.20 'Additional Information'.

The field 'indicate method used' (d) is mandatory if (a) population size is provided, but countries are encouraged to describe the method used also when (b) range increments are used.

The use of (b) range increments should help to reduce the use of 'unknown' to a minimum:

- if a range increment (b) is used, then there is no need to insert a value in relation to the current value provided in field 6.2 a) 'Population size';
- if the value is provided for population (a) the range increments should not be used.

Where the reference value has changed in comparison to the previous reporting period, this should be explained in field 6.20 'Additional information'.

Favourable reference values and use of range increments are discussed in more detail in the updated version of the Guidelines on concepts and definitions.

### **6.19 Population size when the Resolution No. 8 (2012) came into force (optional)**

The population at the time the Resolution came into force, i.e. 2012, can be provided in this field. It is an optional and free text field to see progress with regard to the current population reported.

### **6.20 Additional information (optional)**

Additional information to help understand the information given on population can be reported here as free text (for example, any information on connectivity, reproduction, mortality, age structure, and genetic structure and if they deviate from normal, and how they were considered in the assessment of the status of the population).

## **7 Habitat for the species**

This section provides information on sufficiency of habitat for the species and habitat trends.

Habitat for the species refers to the resources necessary at all stages in the life cycle of the species, for example both wintering and summer roosts, plus foraging areas, for bats. The meaning of 'habitat' in 'habitat for the species' is different to 'habitat types' defined under Resolution No. 4 (1996) and 'habitat' for habitat classifications such as EUNIS, which are more correctly biotopes. Habitat quality includes elements like the availability of prey but also fragmentation where appropriate for the species; further guidance will be provided in the updated version of the Guidelines on concepts and definitions.

## 7.1 Sufficiency of area and quality of occupied habitat

Provide information on the sufficiency of both the area and quality of the occupied habitat below:

- a) Is area of the occupied habitat sufficient (for the long-term survival)? YES/NO/Unknown.
- b) Is quality of the occupied habitat sufficient (for the long-term survival)? YES/NO/Unknown.
- c) If 'No', is there a sufficiently large area of unoccupied habitat of suitable quality (for the long-term survival)? YES/NO/Unknown.

The reporting format asks for information on the sufficiency of habitat area and quality. These questions are aimed at identifying species for which habitat area and/or habitat quality is a limiting factor for not achieving a favourable conservation status.

## 7.2 Sufficiency of area and quality of occupied habitat – Method used

Choose one of the following categories:

Area of habitat:

- a) complete survey or a statistically robust estimate (e.g. complete mapping or inventory of habitat for the species, or inventory of a species' habitats, or previous complete inventory updated with information from robust monitoring);
- b) based mainly on extrapolation from a limited amount of data (e.g. using modelling or extrapolation from detailed surveys of parts of the species' distribution);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

Quality of habitat:

- a) complete survey or a statistically robust estimate (e.g. complete mapping or inventory of habitat for the species including assessment of habitat quality, or inventory of a species' habitats combined with robust extrapolation of habitat quality, or previous complete inventory updated with information from robust monitoring)
- b) based mainly on extrapolation from a limited amount of data (e.g. using modelling or extrapolation from detailed surveys of parts of the species' distribution)
- c) based mainly on expert opinion with very limited data
- d) insufficient or no data available

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

## 7.3 Short-term trend- Period

Give the dates of the beginning and end of the period for which the trend has been reported for the Habitat for the species. The short-term trend should be evaluated over a period of 12 years (two reporting cycles). For the 2019–2024 reports, this means the period is 2013–2024 or a period as close as possible to this. Thus, some flexibility is permitted, so that while trends would ideally be reported for 2013–2024, data from e.g. 2015–2021 will be accepted if the best available data relate to surveys in those years. Where a species is 'newly arrived', the start year is the first year after the species was first observed. E.g. if this was in 2018 then the short-term trend period would be 2019–2024.

Further guidance is given in the updated version of the Guidelines on concepts and definitions.

## 7.4 Short-term trend- Direction

A trend is a (measure of a) directional change of a parameter over time. The trend in habitat for the species describes changes in overall area and quality of the occupied habitat. Fluctuation (or oscillation) is not a directional change of a parameter, and therefore fluctuation is not a trend.

Indicate if the trend in habitat for the species over the reported period in field 7.3 was (select of the following):

- a) Stable
- b) Increasing
- c) Decreasing
- d) Uncertain
- e) unknown

The assessment of habitat for the species considers both quality and area. Trend direction should be assessed by using the combinations in Table 3 below (area/quality).

**Table 3: Assessing trend direction of habitat for the species**

Reported trend	Relation to area/quality status
stable	<b>Both trends are stable</b> Area 'stable' /quality 'stable'
increasing	<b>One or both trends are increasing or stable</b> Area 'increasing' / quality 'increasing' Area 'increasing' / quality 'stable' Area 'stable' / quality 'increasing'
decreasing	<b>One or both trends are decreasing</b> Area 'decreasing' / quality 'decreasing' Area 'decreasing' / quality 'stable' Area 'decreasing' / quality 'unknown' Area 'stable' / quality 'decreasing' Area 'unknown' / quality 'decreasing'
unknown	<b>At least one trend is unknown and non-decreasing or there is no dominating trend</b> Area 'unknown' / quality 'unknown' Area 'unknown' / quality 'increasing' Area 'unknown' / quality 'stable' Area 'increasing' / quality 'unknown' Area 'stable' / quality 'unknown' Area 'increasing' / habitat 'decreasing' (if better data are not available) Area 'decreasing' / habitat 'increasing' (if better data are not available)

Note: 'unknown' in the table above includes both 'unknown' and 'uncertain'.

The short-term trend information should be used in the evaluation matrix to undertake the conservation status assessment. Any large-scale deviation from this should be explained in field 7.9 ‘Additional information’.

If there is an apparent change in the direction of the trend resulting from a change in monitoring methodology or improved knowledge about area or quality of habitat for species, it should not be considered a genuine change in trend.

### **7.5 Short-term trend – Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. dedicated monitoring of both habitat area and quality with good statistical power);
- b) based mainly on extrapolation from a limited amount of data (e.g. trends derived from data collected from a limited number of sample sites; trends extrapolated from data collected for other purposes; trends extrapolated from some other indirect measurements);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

### **7.6 Long-term trend- Period (optional)**

The long-term trend should be evaluated over a period of 24 years (four reporting cycles). For the 2019–2024 reports, this means the period is 2000–2024 or a period as close as possible to this. Indicate the period in this field. For the 2019–2024 reports this information is optional. Fields 7.7 and 7.8 are optional as well.

Further guidance will be provided in the updated version of the Guidelines on concepts and definitions.

### **7.7 Long-term trend- Direction (optional)**

See field 7.4.

### **7.8 Long-term trend- Method used (optional)**

See field 7.5.

### **7.9 Additional information (optional)**

Additional information to help understand the information given on habitat for the species can be reported here (for example information on fragmentation).

## **8 Main pressures and threats**

This section provides information on main pressures and threats. The country can list 20 as maximum and for each pressure, a ranking of its impact on the conservation status of species is also required in the form of the timing of the pressure, scope and influence.

Pressures have acted within the current reporting period and they have an impact on the long-term viability

of the species or its habitat(s); threats are future/foreseeable impacts (within the next two reporting periods) that are likely to affect the long-term viability of the species and/or its habitat(s) (see Table 4). Threats are not reported separately, it is understood that a pressure designated as having an impact only in the future is only a threat. The threats should rather represent those issues judged to be reasonably likely (e.g. based on current pressures being reported or on foreseeable development projects). The definition of pressures and threats is given in table 4 below.

**Table 4: Definition of pressure and threat (in the context of reporting under Resolution No. 8 (2012))**

	Period of action/definition	Time-frame
Pressure	Acting now and/or during (any part of or all of) the current reporting period.	Current six-year reporting period.
Threat	Factors expected to act in the future after the current reporting period.	Future two reporting periods, i.e. within 12 years following the end of the current reporting period.

### 8.1 Characterisation of pressures

Provide a list of pressures and list a maximum of 20 pressures.

- For each species: select from the **list** of pressures a maximum of 20 entries for each of **pressures** using the code at the second level of the hierarchical list. The list of pressures will be available on the Reporting Reference Portal;
- For each pressure, indicate the **timing** which is the time frame it is acting in.

Timing	
<b>in the past but now suspended due to measures</b>	For reporting <u>pressures</u> Where selected, there is no need to complete the fields on scope and influence.
<b>ongoing</b>	For reporting pressures.
<b>ongoing and likely to be in the future</b>	For reporting both <u>pressures</u> and <u>threats</u> Where selected, there is no need to complete the fields on scope and influence for the part of the entry concerning the threat but only for the part that concerns the pressure.
<b>only in future</b>	For reporting <u>threats</u> Where selected, there is no need to complete the fields on scope and influence.

- Indicate the **scope** of the population affected for each pressure that is ‘ongoing’ or ‘ongoing and likely to be in the future’.

*Scope (proportion of population affected)	
[*to be completed for ‘ongoing’ and ‘ongoing and likely to be in the future’ timings only. Although the latter also includes threats, the ‘scope’ and ‘influence’ will only address pressures]	
<b>whole (&gt;90%)</b>	more than 90% of the population reported in the country’s biogeographical region is affected by the pressure
<b>majority 50 – 90%</b>	between 50 – 90% of the population reported in the country’s biogeographical region is affected by the pressure

<b>minority &lt;50%</b>	less than 50% of the population reported in the country's biogeographical is affected by the pressure
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d) Indicate for each pressure that is 'ongoing' or 'ongoing and likely to be in the future' the **influence** on the population or the habitat of the species. The influence indicates how the pressure affects the decline of the population and of the habitat of the species (i.e. it is a general assessment for both).

<b>Influence (on population or habitat of the species)</b> [*to be completed for 'ongoing' and 'ongoing and likely to be in the future' timings only. Although the latter also includes threats, the 'scope' and 'influence' will only address pressures]	
<b>High influence</b>	The pressure listed is a highly significant factor contributing to the decline of the species or the habitat of the species. It is an important direct or immediate influence on the population or habitat of the species.
<b>Medium influence</b>	The pressure listed contributes to the decline of the species or habitat of the species but it is not a high influence nor a low influence pressure. It has a medium direct/immediate or indirect influence on the population or habitat of the species.
<b>Low influence</b>	The pressure listed contributes to the decline of the species or habitat of the species, although not the main contributor and in combination with other pressures and/or factors.

The overall impact of the pressure as addressed in fields timing, scope and influence, should reflect the influence of a pressure on the conservation status of the species.

Keep in mind that some species move over quite large areas (or are migratory), therefore status and trends reported in a particular Party may reflect the effects of pressures and threats from outside the country (e.g. the impact of hunting in neighbouring countries on marginal species population) or even from beyond. Likewise, species can be affected by pressures and threats originating from outside the country (e.g. pollution or nitrogen deposition). The list of pressures has codes to address the transboundary effect of pressures and threats: 'XO threats from outside the country' and 'XE threats from outside the Party's territory'.

e) Where Invasive Alien Species (IAS) is selected among pressures, it is obligatory to provide the names of these species. A drop-down list with the species of Bern Convention concern will be available. When a pressure concerns f) 'Other invasive alien species (other than species of Bern Convention concern)' the provision of names of these species should be provided (e.g. IAS included in national lists), although. The field 'Other invasive alien species' is optional. More than one species can be selected for both cases.

As there is no characterisation of threats required in the reporting format but is used for the assessment of the parameter future prospects, an expert-based characterisation of threats can be made by countries, however this is not required to be reported.

## 8.2 Methods used (optional)

The optional methods used field is to provide general information for the pressures reporting and is not required for each specific pressures. Where a specific methodology is used for a specific pressure this information can be provided in field 8.4 Additional information.

Choose one of the following categories:

- complete survey or a statistically robust estimate
- based mainly on extrapolation from a limited amount of data
- based mainly on expert opinion with very limited data
- insufficient or no data available

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

### **8.3 Sources of information (optional)**

Provide sources of information relevant to Section 8 (optional) with URL, metadata, or supporting evidence. If, for example, an expert opinion or partial estimate were indicated in field 8.2, this can be further elaborated on in this field.

### **8.4 Additional information (optional)**

If a country wishes to give additional information on the nature of a certain pressure, this can be provided in this field.

## **9 Conservation measures**

This section concerns information on conservation measures, including management plans, taken to maintain or to restore the species at Favourable conservation status. Reporting on conservation measures is mandatory for all species.

The section contains a list of measures and the evaluation completed in fields 9.1 to 9.5 is an overall assessment, not a measure-by-measure evaluation.

### **9.1 Status of measures**

Select whether measures are needed or not. If the answer is 'Yes, measures are needed', then proceed to select from the following options:

- a) Measures identified but none yet taken
- b) Measures needed but cannot be identified
- c) Part of measures identified and have been taken
- d) Most/all of measure identified and have been taken

Measures may be implemented at different points in time.

If the answer to the question if measures are needed is 'No', then the situation must be explained in the free text field 9.7. 'No measures needed' does not include legal/administrative measures and should always be justified.

### **9.2 Scope of the measures taken (optional)**

Where part of the measures identified have been taken (9.1 c) or most/all of the measures identified have been taken (9.1 d), indicate the scope of these measures, i.e. the proportion of the population they impact.

- a) <50%
- b) 50 – 90%
- c) >90%

### **9.3 Main purpose of the measures taken**

A. Indicate the main purpose of the measures taken. This part should only be filled in if the conservation measures have been taken (field 9.1(c) 'Measures identified and taken' or 9.1(d) Most/all of measures identified and taken are marked 'Yes'). Several purposes can be identified, please indicate only the main

one in terms of implementing the measures.

- a) Maintain the current range, population and/or habitat for the species;
- b) Expand the current range of the species (related to ‘Range’);
- c) Increase the population size and/or improve population dynamics (improve reproduction success, reduce mortality, improve age/sex structure) (related to ‘Population’);
- d) restore the habitat of the species (related to ‘Habitat for the species’).

B. To identify the main purpose of the measures taken, please, indicate if this is to (only one option can be selected):

- Maintain the current state
- Expand the range
- Increase or improve the population
- Restore the habitat

The aim of this field is not to describe the effect of the measures, but rather describe the intended objective of the measures implemented. The response is further elaborated on in field 9.5 below.

#### **9.4 Location of the measures taken**

This field tries to capture where the main focus of the conservation action is taking place. Therefore, choose option (a) if all, or the vast majority, of the conservation measures are restricted to the Emerald Network, option (b) if there is a proportional investment in the implementation of measures inside and outside the Emerald Network, and option (c) if all, or the vast majority, of the measures are taken outside the Emerald Network.

#### **9.5 Response to the measures**

Provide an estimate of when the measures taken will start, or are expected to start, to neutralise the pressure and to produce positive effects (with regard to the main purpose of the measures indicated in field 8.2). Choose one option from:

- a) short-term results (within the current reporting period, 2019–2024);
- b) medium-term results (within the next two reporting periods, 2025–2036);
- c) long-term results (after 2036).

#### **9.6 List of main conservation measures**

List a maximum of 20 conservation measures using the code that will be provided on the Reporting Reference Portal.

More detailed guidance on the use of conservation measures will be provided in the updated version of the Guidelines on concepts and definitions and in the list of conservation measures available from the Reference Portal on Reporting.

#### **9.7 Additional information (optional)**

Additional information to help understand the information given on conservation measures can be reported here.

## **10 Future prospects**



This section provides information on the future prospects of three parameters (Range, Population and Habitat of the species). Future prospects indicate the direction of expected change in conservation status in the near future based on a consideration of the current status, reported pressures and threats, and measures being taken for each of the other three parameters (Range, Population and Habitat of the species). More information is provided in the updated version of the Guidelines on concepts and definitions.

### 10.1 Future prospects of parameters

For each parameter (Range, Population and Habitat of the species) indicate if the prospects are ‘good’, ‘poor’, ‘bad’ or ‘unknown’. Future prospects of each of the three parameters should principally reflect the future trends which are the result of the balance between threats and conservation measures. The future prospects should be assessed in relation to the current conservation status. For example, the impact of future improvement on the assessment of future prospects of a parameter will be different if the current status is ‘favourable’ or ‘unfavourable-bad’.

An evaluation method is provided in updated version of the Guidelines on concepts and definitions.

### 10.2 Additional information (optional)

Additional information to help understand how future prospects were assessed can be reported here.

## 11 Conclusions

This section includes the assessment of conservation status at the end of the reporting period in the biogeographical region or marine region concerned. It is derived from the matrix in Part C of the reporting format.

Give the result of the assessment for each parameter of conservation status using the four categories available: ‘favourable’ (FV), ‘unfavourable-inadequate’ (U1), ‘unfavourable-bad’ (U2) and ‘unknown’ (XX).

The conservation status of parameters is assessed using the criteria in the evaluation matrix (Part C of the Report format). Sections 11.1 to 11.5 provide an overview of the assessment criteria for each of the parameters of conservation status. In addition, several complementary assumptions and criteria are outlined in these guidelines which aim at harmonising and facilitating the assessment of conservation status. For each parameter these complementary assumptions and criteria are summarised under the heading ‘Complementary remarks’

### 11.1 Range

Give the result of the assessment of the status for Range using the four categories available: ‘favourable’ (FV), ‘unfavourable-inadequate’ (U1), ‘unfavourable-bad’ (U2) and ‘unknown’ (XX).

Conservation status	Assessment criteria
---------------------	---------------------

Favourable (FV)	<p>According to the evaluation matrix (Part C) the status of Range is ‘favourable’ if:</p> <ul style="list-style-type: none"> <li>• the trend is stable (loss and expansion in balance) or increasing; and</li> <li>• range surface area (field 5.1) is not smaller than the favourable reference range (field 5.12).</li> </ul> <p>Complementary remarks:</p> <ol style="list-style-type: none"> <li>1. The trend over the short-term trend period (field 4.2) should be used for the status assessment.</li> <li>2. The status of Range should not be favourable if any large-scale changes resulting from human pressures but not impacting the range surface area (e.g. shifts of range boundaries) were recorded.</li> </ol>
Unfavourable-inadequate (U1)	<p>According to the evaluation matrix (Part C) the status of Range is ‘unfavourable-inadequate’ if:</p> <ul style="list-style-type: none"> <li>• any other combination (other combination of criteria than for ‘favourable’ or ‘unfavourable-bad’)</li> </ul> <p>Complementary remarks:</p> <ol style="list-style-type: none"> <li>1. The evaluation matrix does not include explicit criteria for ‘unfavourable-inadequate’ status of Range. However, taking into account the criteria for ‘favourable’ and ‘unfavourable-bad’, the status of Range should be considered as ‘unfavourable-inadequate’ if: <ul style="list-style-type: none"> <li>• a decline equivalent to a loss of less than 1 % per year; or</li> <li>• range surface area (field 5.1) is less than 10 % below favourable reference range (field 5.12).</li> </ul> </li> <li>2. The trend over the short-term trend period (field 5.3) should be used for the status assessment.</li> </ol>
Unfavourable-bad (U2)	<p>According to the evaluation matrix (Part C) the status of Range is ‘unfavourable-bad’ if:</p> <ul style="list-style-type: none"> <li>• a large decline equivalent to a loss of more than 1 % per year within the period specified by the country; or</li> <li>• range surface area (field 5.1) is more than 10 % below favourable reference range (field 5.12).</li> </ul> <p>Complementary remarks:</p> <p>The trend over the short-term trend period (field 5.3) should be used for the status assessment.</p>
Unknown (XX)	<p>According to the evaluation matrix (Part C) the status of Range is ‘unknown’ if:</p> <ul style="list-style-type: none"> <li>• there is no or insufficient reliable information available.</li> </ul>

## 11.2 Population

Give the result of the assessment of the status of Population using the four categories available: 'favourable' (FV), 'unfavourable-inadequate' (U1), 'unfavourable-bad' (U2) and 'unknown' (XX).

Conservation status	Assessment criteria
Favourable (FV)	<p>According to the evaluation matrix (Part C) the status of Population is 'favourable' if:</p> <ul style="list-style-type: none"> <li>• population size (fields 6.2 or 6.5) is not smaller than the favourable reference population (field 6.18); and</li> <li>• the age structure, mortality and reproduction are not deviating from normal.</li> </ul> <p>Complementary remarks:</p> <ol style="list-style-type: none"> <li>1. Age structure, mortality and reproduction not deviating from normal are those of a natural, self-sustaining population (for example, with no recorded or anticipated problems with recruitment).</li> <li>2. Although the evaluation matrix does not explicitly mention population trend as a criterion for 'favourable' status (unlike for two other parameters), situations where the population trend is negative and the population status is still 'favourable' will be rare. A population decline often reflects a negative impact of pressures on mortality and/or reproduction. For a species to be in a 'favourable status', the population trend should not be declining unless the actual population size is safely above the favourable reference population size. As for the remaining parameters, the trend over the short-term trend period (field 6.9) should be used for the status assessment.</li> <li>3. Although the evaluation matrix does not explicitly mention the genetic variability of the species, the requirement for long-term maintenance of a species suggests that the genetic variability should be that of a self-sustaining population.</li> </ol>
Unfavourable-inadequate (U1)	<p>According to the evaluation matrix (Part C) the status of Population is 'unfavourable-inadequate' if:</p> <ul style="list-style-type: none"> <li>• any other combination (other combination of criteria than for 'favourable' or 'unfavourable-bad').</li> </ul> <p>Complementary remarks:</p> <ol style="list-style-type: none"> <li>1. The evaluation matrix does not include explicit criteria for 'unfavourable-inadequate' status of Population. However, taking into account criteria for 'favourable' and 'unfavourable-bad', the status of Population should be considered 'unfavourable-inadequate' if: <ul style="list-style-type: none"> <li>• a moderate decline equivalent to a loss of less than 1 % per year and equal to or below 'favourable reference population'; or</li> <li>• a large decline equivalent to a loss of more than 1 % per year and above or equal to 'favourable reference population'; or</li> <li>• population size (fields 6.2 or 6.5) is less than 25 % below favourable reference population (field 6.18); or</li> <li>• age structure somehow different from a natural, self-sustaining population.</li> </ul> </li> <li>2. The trend over the short-term trend period (field 6.9) should be used for the status</li> </ol>

	assessment.
Unfavourable-bad (U2)	<p>According to the evaluation matrix (Part C) the status of Population is ‘unfavourable- bad’ if:</p> <ul style="list-style-type: none"> <li>• a large decline equivalent to a loss of more than 1 % per year within the period specified by the Country and below ‘favourable reference population’; or</li> <li>• population size (fields 6.2 or 6.5) is more than 25 % below favourable reference population (field 6.18); or</li> <li>• reproduction, mortality and age structure are markedly different from normal.</li> </ul> <p>Complementary remarks:</p> <ol style="list-style-type: none"> <li>1. Reproduction, mortality and age structure markedly different from normal should be interpreted as markedly different from a natural, self-sustaining population (for example, a higher than normal proportion of old individuals or a lack of reproducing adults or a lack of offspring).</li> <li>2. The trend over the short-term trend period (field 6.9) should be used for the status assessment.</li> </ol>
Unknown (XX)	<p>According to the evaluation matrix (Part C) the status of Population is ‘unknown’ if:</p> <ul style="list-style-type: none"> <li>• there is no or insufficient reliable information available.</li> </ul>

### 11.3 Habitat for the species

Give the result of the assessment of the status of Habitat for the species using the four categories available: ‘favourable’ (FV), ‘unfavourable-inadequate’ (U1), ‘unfavourable-bad’ (U2) and ‘unknown’ (XX).

Conservation status	Assessment criteria
Favourable (FV)	<p>According to the evaluation matrix (Part C) the status of Habitat for the species is ‘favourable’ if:</p> <ul style="list-style-type: none"> <li>• area of the habitat is sufficiently large (field 7.1); and</li> <li>• area of the habitat is stable or increasing; and</li> <li>• habitat quality is suitable for the long-term survival of the species (field 7.1).</li> </ul> <p>Complementary remarks:</p> <ol style="list-style-type: none"> <li>1. The area of habitat can be considered ‘sufficiently large’ and habitat quality ‘suitable’ if any of the questions under field 7.1 ‘Sufficiency of area and quality of occupied habitat’ are answered ‘Yes’ (‘Are area and quality of the occupied habitat sufficient for long-term survival?’ And ‘If no, is there a sufficiently large area of unoccupied habitat of suitable quality for long-term survival?’). If the answer to any of these questions is ‘Yes’, it is likely that the habitat availability or quality is not a limiting factor for the long-term viability of the species.</li> <li>2. The trend in habitat for the species used for the assessment of the status (field 7.4) has both a qualitative and quantitative component, so the status can only be ‘favourable’ if there is neither decline in habitat area nor deterioration of habitat quality.</li> <li>3. The trend over the short-term trend period (field 7.3) should be used for the status</li> </ol>

	<p>assessments.</p> <p>4. Although the evaluation matrix does not mention fragmentation of habitat, this should not be having a negative impact on the functioning of population. As such, fragmentation should be considered when evaluating the quality of the habitat.</p>
Unfavourable-inadequate (U1)	<p>According to the evaluation matrix (Part C) the status of Habitat for the species is 'unfavourable-inadequate' if:</p> <ul style="list-style-type: none"> <li>any other combination (other combination of criteria than for 'favourable' or 'unfavourable-bad').</li> </ul> <p>Complementary remarks:</p> <p>The evaluation matrix does not include explicit criteria for 'unfavourable-inadequate' status of Habitat for the species. However, taking into account criteria for 'favourable' and 'unfavourable-bad', the status of Habitat for the species should be considered 'unfavourable-inadequate' if:</p> <ul style="list-style-type: none"> <li>area of habitat is not sufficiently large in some way to ensure the long-term survival of the species; or</li> <li>habitat quality is not adequate, in some way not allowing long-term survival of the species; or</li> <li>habitat area is declining or habitat quality is deteriorating.</li> </ul>
Unfavourable-bad (U2)	<p>The status of Habitat for the species is 'unfavourable-bad' if:</p> <ul style="list-style-type: none"> <li>the area of habitat is clearly not sufficiently large to ensure the long-term survival of the species; or</li> <li>habitat quality is bad, clearly not allowing long-term survival of the species.</li> </ul>
Unknown (XX)	<p>According to the evaluation matrix (Part C) the status of Habitat for the species is 'unknown' if:</p> <ul style="list-style-type: none"> <li>there is no or insufficient reliable information available.</li> </ul>

#### 11.4 Future prospects

Give the result of the assessment of the status of Future prospects using the four categories available: 'favourable' (FV), 'unfavourable-inadequate' (U1), 'unfavourable-bad' (U2) and 'unknown' (XX).

Conservation status	Assessment criteria
Favourable (FV)	<p>According to the evaluation matrix (Part C) the status of Future prospects is 'favourable' if:</p> <ul style="list-style-type: none"> <li>main pressures and threats to the species are not significant and species will remain viable in the long-term.</li> </ul> <p>Complementary remarks:</p> <p>The Future prospects should be assessed as 'favourable' if all parameters have good prospects (field 10.1), or if prospects of one parameter are 'unknown' while the other parameters have good prospects.</p>

Unfavourable-inadequate (U1)	<p>According to the evaluation matrix (Part C) the status of Future prospects is ‘unfavourable-inadequate’ if:</p> <ul style="list-style-type: none"> <li>any other combination (other combination of criteria than for ‘favourable’ or ‘unfavourable-bad’).</li> </ul> <p>Complementary remarks:</p> <p>The evaluation matrix does not include explicit criteria for ‘unfavourable-inadequate’ status of Future prospects. However, taking into account the method for assessing the Future prospects proposed in these guidelines, the status should be considered ‘unfavourable-inadequate’ if the prospects of one or more parameters (field 10.1) are poor, none has bad prospects and there is at most one parameter with ‘unknown’ prospects.</p>
Unfavourable-bad (U2)	<p>According to the evaluation matrix (Part C) the status of Future prospects is ‘unfavourable-bad’ if:</p> <ul style="list-style-type: none"> <li>there is severe influence of pressures and threats to the species, prospects for its future are very bad and long-term viability is at risk.</li> </ul> <p>Complementary remarks:</p> <p>The Future prospects should be assessed as ‘unfavourable-bad’ if one or more parameters have bad prospects (field 10.1).</p>
Unknown (XX)	<p>According to the evaluation matrix (Annex C) the status of Future prospects is ‘unknown’ if:</p> <ul style="list-style-type: none"> <li>there is no or insufficient reliable information available.</li> </ul> <p>Complementary remarks:</p> <p>The Future prospects should be assessed as ‘unknown’ if two or more parameters have ‘unknown’ prospects and no parameter has bad prospects (field 10.1).</p>

### 11.5 Overall assessment of conservation status

Give the result of the overall assessment of conservation status using the four categories available: ‘favourable’, ‘unfavourable-inadequate’, ‘unfavourable-bad’ and ‘unknown’, based on the evaluation matrix for assessing conservation status for a species.

Status of parameters	All ‘favourable’, or three ‘favourable’ and one ‘unknown’	One or more ‘inadequate’, but no ‘bad’	One or more ‘bad’	Two or more ‘unknown’ combined with ‘favourable’ or all ‘unknown’
Overall assessment of CS	‘favourable’	‘unfavourable-inadequate’	‘unfavourable-bad’	‘unknown’

## 11.6 Overall trend in conservation status

If the overall assessment of conservation status reported in field 11.5 is ‘favourable’, ‘inadequate’ or ‘bad’, indicate its trend (qualifier) as follows (one option can be selected):

- a) improving
- b) deteriorating
- c) stable
- d) unknown

The qualifier should be based on individual trends (for Range, Population and Habitat for the species) over the reporting period (2019–2024). As the trends over the reporting period are often not available, short-term trends can be used to assess the trend in the conservation status, unless there is evidence that the trend during the reporting period is different than a measured short-term trend (e.g. if after past decline of a species population over the reporting period 2013–2018 the population trend has stabilised, the qualifier should be assessed as ‘stable’ even though the population trend is ‘decreasing’; this should be explained in field 11.8 ‘Additional information’). The (short-term) trends should be combined using Table 5 below. For instance, the number 3 in the column increasing means that the three individual short-term trends: range, population and habitat of the species have increasing short-term trend, while 1 in the column stable means that only one individual short-term trend is stable.

**Table 5: Assessing overall trend in conservation status of a species by combining trends for parameters**

Short-term trend of parameters (Range, Population, Habitat for the species)				Overall trend in CS
Number increasing	Number stable	Number decreasing	Number unknown	
3	0	0	0	<b>Improving</b>  <i>(Only increasing and stable trends)</i>
2	1	0	0	
1	2	0	0	
0	3	0	0	<b>Stable</b>  <i>(Only stable trends or stable and increasing dominates (there is at least one increasing and only one unknown or decreasing)).</i>  <i>* Trend magnitude should also be considered. The overall trend in CS is stable only in case of moderate declines (&lt; 1 % per year).</i>
2	0	1	0	
2	0	0	1	
0	2	0	1	
1	1	1*	0	
1	1	0	1	
0	0	3	0	<b>Deteriorating</b>  <i>(Decreasing trends dominate)</i>  <i>* Trend magnitude should also be considered. The overall trend in CS is declining only in case of important declines (&gt; 1 % per year).</i>
1	0	2	0	
0	1	2	0	
0	0	2	1	
0	2	1	0	
1	1	1*	0	
0	1	1	1	
0	0	0	3	
1	0	0	2	<b>Unknown</b>

0	1	0	2	<i>(Unknown trends dominate)</i>
0	0	1	2	
1	0	1	1	

Note: 'unknown' in the table above includes both 'unknown' and 'uncertain'. The above has been provided as a general guide, some combinations of trends for the parameters may not be accounted for.

### **11.7 Change and reasons for change in conservation status and conservation status trend (optional)**

This field is used to indicate if there is any change since the previous reporting period (2013–2019) in conservation status and/or in trend in conservation status and, if yes, the reason for this change.

Indicate which of the following options apply (separately for the overall assessment of conservation status and overall trend in conservation status). It is possible to reply 'Yes' to more than one of the options b-f, but at least one option 'Yes' must be selected for options b-f. The fields to be completed are:

- a) no there is no difference
- b) yes, due to genuine change
- c) yes, due to improved knowledge/more accurate data
- d) yes, due to the use of different method (including taxonomical change or use of different thresholds)
- e) yes, but nature of change is unknown
- f) yes, due to other reasons

If the field 'yes, due to other reasons' is ticked, it must be further specified in field 11.8 'Additional information'. This field should be used only in very limited cases.

Finally, indicate (separately for overall assessment of conservation status and overall trend in conservation status) whether any difference is mainly due to (select only one option):

- genuine change
- improved knowledge or more accurate data
- the use of a different method
- unknown
- other reasons

Only one option should be chosen for the main reason for change.

Since for Resolution No. 8 (2012) reporting the checklist is not stable nor the countries participating in the process, this field is optional and may be filled in only by those countries participating in the previous reporting round. If a country wishes to give further information, this can be done in field 11.8 'Additional information'.

### **11.8 Additional information (optional)**

Additional information to help understand the information in fields 11.1 to 11.7.

## **12 Emerald Network (Proposed, Candidates and Adopted Sites) coverage for species listed in Resolution No. 6 (1998)**



This section provides information on population size and population trend within the Emerald Network. The requested information should cover the proposed Emerald Sites, Emerald Candidate Sites and Adopted Sites within the biogeographical/marine region concerned.

The information relates to all Emerald sites where Resolution No. 6 (1998) on species is present, not only those sites where the species is declared as a target species or a conservation objective.

See background information in the updated version of the Guidelines on concepts and definitions.

### **12.1 Population size inside the Emerald Network**

Indicate the population size within the network in the biogeographical or marine region concerned, including all sites where the species is present. Use the same unit as in field 6.2 'Population size (in reporting unit)' and follow the same guidance as for the population size estimates in field 6.2.

Some species are mainly present inside the network during a period of the year (e.g. wintering or reproducing) and largely outside the network for the rest of the year (bats in particular). As Emerald Network sites are often the most important sites for these species, the population size within the Emerald Network should include populations which are only present within sites for part of the year.

Similarly, different Emerald Network sites can cover different life stages (there are sites with hibernating or reproducing populations, but also sites which only include foraging habitats). The population size within the Emerald Network should include all sites proposed for reproducing, hibernating or foraging/staging populations or individuals.

### **12.2 Type of estimate**

The type of estimate for the interval reported in fields 12.1(b) and (c) or the best single value in field 11.1(d) should be outlined here. The options for reporting this are: best estimate, multi-year mean, 95 % confidence interval, or minimum.

Follow the same guidance as for the 'Type of estimate' for the Population size (field 6.3).

### **12.3 Additional population size (optional)**

This field allows the countries to report population size using units other than the unit given in the field 6.2.

The population size can be reported as an interval (for example, minimum and maximum value from repeated census) and/or as a best available single value. The interval size estimate (fields 12.3(b) and (c) should be given as minimum and maximum numbers. Minimum and maximum should always be entered together, i.e. not as only the minimum/only the maximum.

There is also a 'best single value' field (12.3(d)) where a single value (a precise value or an estimate) can be entered. In a situation where only a minimum (or maximum) value of the population size is known (e.g. through expert opinion) this should be entered in the '(d) Best single value' field and NOT the '(b) Minimum' or '(c) Maximum' fields. The source of this estimate can then be clarified in field 12.4 (see below). The numbers reported should not be rounded.

Both interval and a best single value can be provided together, for example where the interval coming from the survey data is quite large (e.g. minimum and maximum values) and an expert evaluation of the actual population size is available.

## **12.4 Type of estimate (optional)**

The type of estimate for the interval reported in fields 12.3(b) and (c) or the best single value in field 12.3(d) should be outlined here. The options for reporting this are: best estimate, multi-year mean, 95 % confidence interval, or minimum.

Follow the same guidance as for the ‘Type of estimate’ for the Population size (field 6.3).

## **12.5 Population size inside the network – Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. repeated direct counts of entire population; repeated counting based on indices of species presence; from previous complete inventory updated with robust monitoring data on trends);
- b) based mainly on extrapolation from a limited amount of data (e.g. based on mark-recapture methods, or using models based on abundance and distribution data, or using extrapolation from sample surveys of parts of the population, or from previous inventory updated with good trend data);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

Follow the same guidance as for the ‘Method used’ for the Population size (field 6.7).

## **12.6 Short-term trend of population size within the network – Direction**

A trend is a (measure of a) directional change of a parameter over time. The trend in population size informs on changes in overall numbers of specimens within the Emerald sites. Fluctuation (or oscillation) is not a directional change of a parameter, and therefore fluctuation is not a trend.

Indicate whether the trend of population size is (select only one option):

- a) stable
- b) increasing
- c) decreasing
- d) uncertain
- e) unknown

Short-term trend within the Emerald Network should be assessed over the period indicated in field 6.9. See instructions for field 6.10 ‘Short-term trend direction’.

## **12.7 Short-term trend of population size within the network – Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. dedicated monitoring of a species’ populations with good statistical power);
- b) based mainly on extrapolation from a limited amount of data (e.g. trends derived from data collected from a limited number of sample sites; trends extrapolated from data collected for other purposes; trends extrapolated from some other indirect measurements, such as availability of a habitat);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

### **12.8 Short-term trend of habitat for the species within the network – Direction**

Trend is a (measure of a) directional change of a parameter over time. The trend in habitat of the species informs on changes in overall size and quality within the Emerald Network sites. Fluctuation (or oscillation) is not a directional change of a parameter, and therefore fluctuation is not a trend.

Indicate whether the trend of habitat of the species is (select only one option):

- a) Stable
- b) Increasing
- c) Decreasing
- d) Uncertain
- e) unknown

Short-term trend within the Emerald network should be assessed over the period indicated in field 7.3 ‘Short-term trend period’. See instructions for field 7.4 ‘Short-term trend direction’.

### **12.9 Short-term trend of habitat for the species within the network – Method used**

See instructions for field 7.5. ‘Short-term trend – Method used’.

### **12.10 Additional information (optional)**

Additional information to help understand how Emerald covers the species can be reported here.

## **13 Complementary information**

This section is optional and is a place to include any additional or supplementary information.

### **13.1 Justification of % thresholds for trends (optional)**

The indicative suggested threshold for a large decline given in the evaluation matrix (Part C) is 1 % per year. If another threshold has been used for the assessment, please give details, including an explanation of why.

### **13.2 Transboundary assessment (optional)**

Where a joint conservation status assessment is made between two countries, i.e. where there is a wide-ranging transboundary species population, further detailed information can be given here. The information to provide is:

- Countries involved (use code list on the Reporting Reference Portal) including EU countries;
- parameters assessed in the transboundary area (usually Range and Population);
- the % of the total population in the country concerned;
- list of joint management measures;
- references/links, if available.

Further information will be provided in the updated version of the Guidelines on concepts and definitions.

### **13.3 Other relevant information (optional)**

Include any other information thought relevant to the species report and to assessing conservation status.

## **PART C – EVALUATION MATRIX FOR ASSESSING CONSERVATION STATUS OF A SPECIES**

The matrix is an aid to assessing the conservation status of a species. It shall be used for each biogeographical or marine region in which the species is present. The results of using the matrix have to be provided in Section ‘10 Conclusions’ (in ‘Explanatory Notes for species reports’).

The matrix itself is included in the Resolution No. 8 Reporting Format.

DRAFT

## PART D – REPORTING FORMAT ON HABITATS LISTED IN RESOLUTION No. 4 (1996) WITH A 1 TO 1 RELATIONSHIP WITH HABITAT TYPES OF THE ANNEX I OF THE HABITATS DIRECTIVE

### Habitats to be reported

In general, each country should report all habitats listed in Resolution No. 4 (1996) for every biogeographical or marine region in which they occur (see also next paragraph).

The listed habitats can be both biotopes and biotope complexes, and sometimes a habitat is a component of another habitat. As a result, patches of one or more habitats can occur within another Resolution No. 4 (1996) habitat. More information on how to report for those overlapping habitats will be provided in the updated version of the Guidelines on concepts and definitions.

A report is optional for habitats with a scientific reserve. A checklist of habitats covered by Resolution No. 4 (1996) and their estimated occurrence per biogeographical region and country will be available on the Reporting Reference Portal.

Most habitats are clearly present or absent, but to cover all possibilities the habitats checklist also distinguishes habitats with ‘marginal occurrence’ and habitats with some uncertainty in their status (‘scientific reserve’). An overview of the categories in the habitat checklist, with an indication of whether a report is expected and which parts of the report remain mandatory, is given in Table 7. A detailed definition of habitat categories is included in the updated version of the Guidelines on concepts and definitions. For this reporting period (2019-2024) it has been decided to only report on a selection of habitats: those with a 1 to 1 relation with EU Annex I habitat types. The list of habitats to report will be available in the Reporting Reference Portal.

**Table 7: Categories of habitat occurrence within the biogeographical region of the Country and indication of the expected content of the Resolution No. 8 (2012)**

Habitat category (code)	Report	Mandatory information for report
<b>Present regularly (PRE)</b>	Mandatory	Full report.
<b>Marginal (MAR)</b>	Mandatory partial report	Whenever possible provide information for any of the fields listed below: <ul style="list-style-type: none"> <li>• Distribution map (field 2.2)</li> <li>• Actual range – surface area (field 4.1).</li> <li>• Area covered by habitat - surface area (field 5.2) and date (field 5.1) and method used (field 5.4).</li> </ul>
<b>Scientific reserve (SCR)</b>	Optional	<ul style="list-style-type: none"> <li>• Any other relevant information, e.g. related to the problems of habitat interpretation.</li> </ul>

### Field-by-field guidance for completing ‘Part D’ Habitat reports

NB: To be completed for each selected habitat present in Resolution No. 4 (1996) and included in the Reporting Checklist.

The free text information in the different fields is written in English to facilitate the further use of information in the analysis and to allow a wider readership.

Even though not all data used in the report will be collected during the reporting period, the report should give information of relevance for the period 2019–2024.

## NATIONAL LEVEL

The following information is to be provided at the national level:

### 1 General information

#### 1.1 Country

Select the two-digit code for your Country from ISO 3166 in accordance with the list to be found on the Emerald Network Reference Portal.

#### 1.2 Habitat code

Use the code given in the habitats checklist (see the Reporting Reference Portal; these are the same codes as in the Resolution No. 4 (1996) and also as in the 2019 edition of the Interpretation Manual<sup>12</sup>). Do not use any other coding systems.

Reports are expected for each biogeographical region for which the habitat type is listed in the checklist for reporting (for marginal occurrence see ‘Habitats to be reported’ in the new Guidelines on concepts and definitions).

### 2 Maps

This section contains information on maps to be submitted together with the tabular information as a part of Resolution No. 8 (2012). Apart from the mandatory distribution map, other kinds of maps with information relevant for understanding the assessment of conservation status can also be provided.

#### 2.1 Year or period

Enter the year (e.g. 2021) or period (e.g. 2019–2024) when the distribution was last determined.

Many reports will involve periods, because a mapping of the habitat distribution in most cases involves several years of fieldwork and may extend beyond the limits of the current reporting period (2019–2024). The year or period reported should cover the actual period during which the data were collected.

In some cases, the distribution map will be elaborated based on data from the previous reporting period or using older distribution data that has been updated with the results of regular monitoring or using data from online-systems for collecting data. The year or period reported should be that which the reported distribution relates to.

More detailed information on year or period of data used for the distribution map can be provided in field 4.12 ‘Additional information’.

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<sup>12</sup> Interpretation manual of Resolution No. 4 (1996) habitats: [Annex I \(coe.int\)](https://www.coe.int)

## 2.2 Distribution map

Submit distribution grids, together with the relevant metadata (projection, datum, scale). The standard is:

**10 x 10 km ETRS89 grid, projection ETRS LAEA 5210**

The distribution map should provide information about the actual occurrences of the habitat, which should preferably be based on the results of a comprehensive national mapping or inventory of the habitat wherever possible (see Section Maps on the updated guidelines on concepts and definitions). If field data on actual occurrences of the habitat are not sufficient, modelling and extrapolation should be used whenever feasible<sup>13</sup>. The distribution map will be composed of grids with both the actual (mapped) and presumed habitat occurrences.

The distribution map will consist of 10 x 10 km ETRS89 grid cells in the ETRS LAEA 5210 projection<sup>14</sup>. The gridded dataset will consist only of the 10 km grid cells where the habitat is recorded or estimated as occurring; the use of attribute data to indicate the presence or absence of a habitat in a grid cell is not permitted. (Optional for EIONET countries: the period over which the distribution data were collected should be included in the metadata, following the INSPIRE guidelines<sup>15</sup>) The technical specifications for distribution maps will be given on the Reference Portal.

If more precise maps giving more detailed distribution of habitat are available, these can be submitted as additional maps.

For small countries, a 1 x 1 km grid (or 5 x 5 km) is allowed; these will then be aggregated to 10 x 10 km for visualisation at pan-European level.

The grids for individual countries are available for download from the Reporting Reference Portal.

## 2.3 Method used

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. a dedicated mapping or survey or a robust predictive model with representative sample of occurrence data, calibration and satisfactory evaluation of its predictive performance using good data on environmental conditions across the range of the habitat);
- b) based mainly on extrapolation from a limited amount of data (e.g. other predictive models or extrapolation using less complete sample of occurrence and environmental data);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

If the reported distribution map obtained as a result of comprehensive mapping, modelling or

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<sup>13</sup> If modelling or exceptionally expert opinion are used this should be noted in the field 2.3 Method used.

<sup>14</sup> European Terrestrial Reference System 1989; Lambert Azimuthal Equal Area Latitude of origin 52N, Longitude of origin (central meridian) 10E. <http://www.eionet.europa.eu/gis>

<sup>15</sup> For the period 2019-2024 it is not obligatory or expected to provide the Resolution No. 8 (2012) spatial dataset compliant with INSPIRE requirements.



extrapolation or, exceptionally, expert interpretation covers less than 75 % of the presumed actual habitat distribution (i.e. the resulting map is incomplete in relation to the presumed habitat distribution), the ‘Method used’ should be reported as ‘(d) Insufficient or no data available’.

## 2.4 Additional maps (optional)

Countries may also submit additional maps, for example giving more detailed distribution data (e.g. at higher resolution) or a range map (See Section ‘4 Range’ (in ‘Definitions and methods for habitat reporting’)). Any additional maps must be accompanied by the relevant metadata and details of the projection used. Note that this is an optional field and does not replace the need to provide a map in field 2.2.

Maps at a resolution other than 10 x 10 km or with grids other than the ETRS89 LAEA 5210 grid, or close to 10 x 10 km, may be reported here.

## 2.5 Additional information (optional)

This field is optional and allows countries to report, as free text, any information which is felt relevant, such as more information on the methodologies used for mapping, descriptions of additional maps/information submitted.

# BIOGEOGRAPHICAL LEVEL

## 3 Biogeographical and marine regions

The following section should be completed for each biogeographical or marine region in which the habitat occurs. So, for example, if a habitat occurs in three biogeographical regions within a country, three separate reports are required.

### 3.1 Biogeographical or marine region where the habitat occurs

Biogeographical region or marine region concerned within the Country.

- Use the following names for biogeographical regions:

Alpine	Black Sea	Macaronesian
Anatolian	Boreal	Pannonian
Arctic	Continental	Steppic
Atlantic	Mediterranean	

- Use the following names for marine regions<sup>16</sup>:

<sup>16</sup> For the Reporting period 2019-2024, the habitat selection as available from the reference portal, does not contain marine habitats. This section on marine regions will not have to be used for the first reporting period.

Marine-Arctic	Marine Black Sea	Marine Macaronesian
Marine Atlantic	Marine Baltic Sea	Marine Mediterranean
Marine Caspian		

Maps and boundaries of biogeographical and marine regions can be found on the Reporting Reference Portal.

### **3.2 First time reporting (optional)**

If the habitat is reported in the country for the first time this should be indicated here along with the biogeographical/marine region the habitat is reported in. Some fields in the reporting format may not be applicable for habitats reported for the first time e.g. when indicating the change and reason for change since the last reporting period.

### **3.3 Additional information (optional)**

This field is optional and allows countries to report, as free text, any relevant information, such as the reason a habitat is being reported for this first time. Any other additional information on this field section is optional.

### **3.4 Sources of information**

For information from published sources related to Sections 4 to 6 (including the published sources related to distribution maps, on which the range calculation is based) and Sections 8 to 12, provide bibliographic references or links to an Internet site(s). Use the order: author, year, title of publication, source, volume, number of pages, web address.

All Internet addresses in the reporting fields should be given in full, including the initial 'http://' or 'https://', if applicable.

## **4 Range**

This section provides information on range surface area, range trends and favourable reference range.

Range is defined as 'the outer limits of the overall area in which a habitat or species is found at present' and it can be considered as an envelope within which areas actually occupied occur.

The range should be calculated based on the map of the actual distribution using a standardised algorithm. A standardised process is needed to ensure repeatability of the range calculation in different reporting rounds.

It is not necessary to submit a map of the range but the area of the range and trend in area are required to assess this parameter. However, a map can be submitted in field 2.4 'Additional maps'.

Complementary information and methods for range calculation will be available in the updated version of the Guidelines on concepts and definitions.

### **4.1 Surface area**

This is the total surface area (in km<sup>2</sup>) of the current range (outer limits of the habitat distribution) within the biogeographical or marine region concerned. The range in the biogeographical or marine region concerned is represented by grids (10 x 10 km) which occur entirely or partly within the region (i.e.

grids intersected by the boundaries of the biogeographical or marine regions are counted under both regions). In general, the surface area is provided in 10 x 10 km<sup>2</sup> resolution and the minimum area should be 100 km<sup>2</sup>. For localised habitats with a very small range it is possible to report using finer resolution; for example, for habitats restricted to a single location, range is the area of locality where habitat occurs, which can be several square metres. Decimals are allowed, as the range of some habitats can be very small.

The method for estimating the surface will be described in the updated version of the Guidelines on concepts and definitions.

#### **4.2 Change and reason for change in the surface area of range (optional)**

This field is used to indicate if there is any change since the previous reporting period (2013–2018) in the range surface area reported and, if so, to describe the nature of this change.

First answer the question: ‘Is there a change between reporting periods? (If yes, more than one option b) to f) can be chosen <sup>17</sup>).

- a) no, there is no change
- b) yes, due to genuine change
- c) yes, due to improved knowledge/more accurate data
- d) yes, due to the use of a different method
- e) yes, but there is no information on the nature of change
- f) yes, due to other reasons

Finally, indicate whether any difference is mainly due to (select one option):

- genuine change
- improved knowledge or more accurate data
- the use of a different method
- other reasons

If a country wishes to give further information (e.g. cases where range surface area does not change, but its borders are shifting), this can be done in field 4.12 ‘Additional information’. If the field ‘yes due to other reasons’ is ticked, it must be further specified in ‘Additional information’. This field should be used only in very limited cases.

Since for Resolution No. 8 (2012) reporting the checklist is not stable nor the countries participating in the process, this field is optional and may be filled in only by those countries participating in the previous reporting round.

#### **4.3 Short-term trend- Period**

Give the dates for the beginning and end of the period for which the trend has been reported. The short-term trend should be evaluated over a period of 12 years (two reporting cycles). For the 2019– 2024 reports, this means the period is 2013–2024 or a period as close as possible to this. Thus, some flexibility is permitted, so that while trends would ideally be reported for 2013–2024, data from e.g. 2010–2021 will be accepted if the best available data relate to surveys in those years. Where a habitat is newly observed, ideally the trends would be reported with the start year as the first year after it was first

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<sup>17</sup> In some cases, the actual value reported for range surface area has increased, reflecting both a genuine increase in range (positive range trend) and better knowledge or data. Both options (‘genuine change’ and ‘improved knowledge or more accurate data’) above should be selected. In other situations, the actual value reported for range surface area has increased since the previous period due to better knowledge or data. Nevertheless, it may still be clear that the species range is actually declining, based on analyses of data from sites. The option ‘improved knowledge or more accurate data’ above should be selected. Field 5.12 ‘Additional information’ allows a Party to provide further details on why a range estimate has increased, even though a range decline is reported.

observed e.g. if this was in 2018 then the short-term trend period would be 2019 – 2024.

Further guidance will be given in updated version of the Guidelines on concepts and definitions.

#### **4.4 Short-term trend- Direction**

A trend is a (measure of a) directional change of a parameter over time. The range trend shows changes in the overall extent of distribution of the habitat. Although rare for range, a fluctuation (or oscillation) is not a directional change of a parameter, and therefore fluctuation is not a trend.

Indicate if range trend over the period reported in field 4.3 was (select one option):

- a) Stable
- b) Increasing
- c) Decreasing
- d) Uncertain
- e) Unknown

Report 'uncertain' if some data are available but they are not enough to accurately determine direction. Use 'unknown' where there are no data available.

The short-term trend information is used in the evaluation matrix to undertake the conservation status assessment. Any large-scale deviation from this should be explained in field 4.14 'Additional information'.

If there is an apparent change in direction of the trend resulting from a change in monitoring methodology or improved knowledge about habitat distribution, it should not be considered a genuine change trend. This apparent change should be indicated in field 4.2 'Change and reason for change in surface area of range'.

Further guidance will be given in the updated version of the Guidelines on concepts and definitions (in progress).

#### **4.5 Short-term trend- Magnitude (optional)**

If possible, quantify the percentage change over the period indicated in field 4.3. The range at the beginning of the reporting period is taken as 100 %. Where a pre-defined interval is used, please select among the given intervals 0-12%, 13-25%, 26-50%, 51-100%, >100%).

Choose from the following options:

- a) estimated minimum
- b) estimated maximum
- c) pre-defined range
- d) x = unknown

- Where magnitude is available as a range (e.g. 20–30 %), this should be reported in '(a) Minimum' and '(b) Maximum'.
- Where magnitude is available as a precise value, the same value should be reported in a) estimated minimum and b) estimated maximum.
- Where only a minimum value is known, this should be reported in a) estimated minimum and b)

estimated maximum and indicated as 'minimum' in 4.6 Short-term trend magnitude- type of estimate. Conversely, where only the maximum value is available, this should also be entered into both the a) estimated minimum and b) estimated maximum fields with the 'best estimate' indicated in the field 4.6 Type of estimate and precising that maximum is entered in 4.14 Additional information.

- Where a less accurate range is available, field c) pre-defined range can be used.
- Negative magnitude values should be reported (i.e. include the '-' sign) for all negative trend magnitudes, including cases where the direction is already indicated as 'decreasing'. Nevertheless, to avoid unnecessary data entry, it is not necessary to include the '+' sign for positive trends (i.e. a trend magnitude of '15' will be assumed to represent +15%). In the case of negative trends, note that the 'Minimum' and 'Maximum' fields relate to minimum and maximum values mathematically (not minimum and maximum declines). The pre-defined ranges will be provided with a positive or negative sign.

This field does not need to be completed for 'stable' or 'unknown' trends reported in 4.4. 'Uncertain' trends suggest that some data are available and this should be reported on with the 'type of estimate' field completed accordingly.

#### **4.6 Short-term trend Magnitude – Type of estimate (optional)**

The type of estimate for the reported interval in fields 4.5(a) and (b) or the estimated interval in field 4.5(c) should be outlined here. The options for reporting this are:

- best estimate – the best available single figure (including where only the maximum value of the area covered by habitat is available) or interval, derived from e.g. a survey or a model, a compilation of figures from localities or expert opinion, but for which 95 % confidence limits could not be calculated. Whether a best estimate comes from the monitoring data, modelling or from an expert opinion should be assessed in field 4.7;
- multi-year mean – average value or interval where habitat is monitored several times during the period provided in field 4.3;
- 95 % confidence interval – estimates derived from sample surveys or a model in which 95 % confidence interval could be calculated;
- minimum – where insufficient data exist to provide even a loosely range surface area, but where the range surface area is known to be above certain value, or where the reported interval comes from a sample survey or monitoring project which probably underestimates the real population size;
- pre-defined range – where the exact minimum and maximum values could not be estimated (fields 4.5 (a) and (b)), but where a reliable estimate can be made within the pre-defined range increments provided.

The method used field encompasses the total assessment i.e. both field 4.4 short-term trend direction and field 4.5 short-term trend magnitude. No type of estimate is required if both trend and magnitude are 'unknown'.

#### **4.7 Short-term trend – Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. comparing two range maps based on accurate distribution data, or a dedicated monitoring of a habitat's distribution with good statistical power);
- b) based mainly on extrapolation from a limited amount of data (e.g. trends derived from occurrence data collected for other purposes, or from data collected from only a part of the geographical

range of a habitat, or trends based on measuring some other predictors of habitat distribution, such as land-cover changes);

- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

The method used field encompasses the total assessment i.e. both field 4.4 short-term trend direction and field 4.5 short-term trend magnitude.

#### **4.8 Long-term trend- Period (optional)**

The long-term trend should be evaluated over a period of 24 years (four reporting cycles). For the 2019–2024 reports this period is 2000–2024 or a period as close as possible to this. Indicate the period in this field. For the 2019–2024 reports this information and the associated fields 4.8 and 4.10 are optional. For newly reported habitats, the start date for the long-term trend would fall within the last two reporting periods (i.e. 2013 to 2024).

Further guidance is given in ‘Definitions and methods for habitat reporting’.

#### **4.9 Long-term trend- Direction (optional)**

Please see the guidance for fields 4.4 (Short-term trend - Direction).

#### **4.10 Long-term trend- Magnitude (optional)**

If possible, quantify the percentage change (with range at the beginning of the reporting period as 100 %) over the period reported in field 4.8. It can be given as estimated minimum and maximum value in fields 4.10 (a) and (b) (e.g. 27% and 55%), or where a precise value is known, enter the same value in the minimum and maximum field (e.g. 27%).

For additional guidance see field 4.5 Short-term trend – magnitude.

#### **4.11 Long-term trend – Method used (optional)**

For guidance in filling field 4.11 ‘Long-term trend – Method used’, please see the guidance for field 4.7 (short-term trend – Method used).

#### **4.12 Favourable reference range**

Favourable reference range (FRR) is the range within which all significant ecological variations of the habitat are included for a given biogeographical region and which is sufficiently large to allow the long-term viability of the habitat. This information is needed to undertake the evaluation of conservation status according to Part E. Where the exact range area is reported decimals are allowed, as the range of some habitats can be very small. In many cases, it is not possible to estimate a value for favourable reference range (option (a)) but it is clear that the favourable reference range is greater (or much greater) than the present-day value. Using the pre-defined range increments (option b) the range ‘approximately equal to the favourable reference range (less than 2% smaller)’, ‘between 2% and 10% smaller than the FRR’, ‘between 11% and 50% smaller than the FRR’, ‘between 51% and 100% smaller than the FRR’, allows flexibility in reporting where the exact values is known. It is also preferable to report a parameter

as 'unknown' (option c). For example, if the actual range is 150 km<sup>2</sup> and the value is estimated to be 'between 11% and 50% smaller than the FRR', then the FRR would be between 169 and 300 km<sup>2</sup>. If the favourable reference range is smaller than the actual range, the favourable reference range is expected to be provided in a precise number and an explanation needs to be given in the field 4.14 'Additional information' on how this is in line with the principles of setting FRVs as described in the Guidelines.

The following information is requested:

- a) area in km<sup>2</sup>; or
- b) if a precise favourable reference range is unknown Indicate if the range is:
  - approximately equal to the favourable reference range (less than 2% smaller)
  - between 2 and 10% smaller than the FRR
  - between 11 and 50% smaller than the FRR
  - between 51 and 100% smaller than the FRR
- c) if the favourable reference range is unknown, use 'x' for the reference range; and
- d) indicate the method used to set the reference value

The methods used can be:

- Model-based approach
- Reference-based approach
- Expert opinion
- Other

More than one method can be selected. If the 'Model-based approach' or the 'Reference-based approach' are selected then the quality of the available information should be indicated as high, moderate or low. If 'other' method is selected, elaborate on this method in field 4.14 'Additional Information'.

The field 'indicate method used' (d) is mandatory if (a) area is provided, but Parties are encouraged to describe the method used also when (b) range increments are used.

The use of (b) range increments should help to reduce the use of 'unknown' to a minimum:

- if a range increments (b) is used, then there is no need to insert a value in relation to the current value provided in field 4.1 'Surface area (of range)';
- if the value is provided for area in km<sup>2</sup> (a), the range increments should not be used.

Where the reference value has changed in comparison to the previous reporting period, this should be explained in field 4.14 'Additional Information'. Favourable reference values and use of range increments will be discussed in more detail in the updated version of the Guidelines on concepts and definitions (in progress).

#### **4.13 Range when the Resolution No. 8 (2012) came into force (optional)**

The surface area of range in 2012, the Resolution 8 came into force can be provided in this field, which is an optional and free text field to see progress with regard to the current range reported.

#### **4.14 Additional information (optional)**

Additional information to help understand the information given on range can be reported here (for example, details on the use of old distribution data, use of data from the previous reporting period, use of different gap distance or range calculation method than that recommended).

## 5 Area covered by habitat

This section reports on the area covered by the habitat type within the range in the biogeographical or marine region concerned.

### 5.1 Year or period

Enter the year (e.g. 2021) or period (e.g. 2019–2024) when the surface area of the habitat was determined.

Many reports will involve more than one reporting periods, because habitat mapping usually involves several years of fieldwork and may extend beyond the limits of the current reporting period (2013–2018). The year or period reported should cover the actual period during which the data were collected.

In some cases, the area covered by habitat will be estimated based on a comprehensive habitat mapping which took place during the previous reporting period or even before and that has been updated with the results of regular monitoring. The year or period reported should be that which the reported estimate of the area covered by habitat relates to.

More detailed information on year or period of data used for the area covered by habitat can be provided in field 5.17 ‘Additional information’.

### 5.2 Surface area

This refers to the total area (in km<sup>2</sup>) currently occupied by the habitat within the biogeographical or marine region of the country concerned. For overlapping habitats see the updated version of the Guidelines.

The surface area of habitat can be reported as an interval (for example minimum and maximum value or 95 % confidence interval from a model) and/or as a best available single value. The interval surface area estimate (fields 5.2(a) and (b)) should be given as minimum and maximum numbers. Minimum and maximum should always be entered together, i.e. not as only the minimum /only the maximum.

There is also a ‘best single value’ field (5.2 (c)) where a single value (a precise value or an estimate) can be entered. When only a minimum (or maximum) value of the surface area of the habitat is known (e.g. through expert opinion) this should be entered in the ‘Best single value’ field and NOT the ‘(a) Minimum’ or ‘(b) Maximum’ fields. The source of this estimate can then be clarified in field 5.3 (see below). The numbers reported should not be rounded. Decimals are allowed when reporting the area covered by the habitat, as the surface area of some habitats can be very small.

Both intervals and a best single value can be provided together, for example where the interval coming from modelling is quite large (e.g. minimum and maximum values) and an expert evaluation of the actual surface area of habitat is also available. The expert evaluation of modelling results can result in a more accurate single value to be used in the pan-European assessments. In other situations, the point estimate (best single value) is available and the country wishes to provide the confidence limits. The confidence interval can be entered in the minimum and maximum fields. If both, interval and best single values are provided this should be explained in field 5.17 ‘Additional information’.

### 5.3 Type of estimate

The type of estimate for the reported interval in fields 5.2(a) and (b) or the best single value in field 5.2(c) should be outlined here. The options for reporting this are:



- best estimate – the best available single figure (including where only the maximum value of the area covered by habitat is available) or interval, derived from e.g. a survey or a model, a compilation of figures from localities or expert opinion, but for which 95 % confidence limits could not be calculated. Whether a best estimate comes from the monitoring data, modelling or from an expert opinion should be assessed in field 5.4;
- 95 % confidence interval – estimates derived from sample surveys or a model in which 95 % confidence interval could be calculated;
- minimum – where insufficient data exist to provide even an estimate of the area covered, but where the area covered is known to be above certain value, or where the reported interval comes from a sample survey or monitoring project which probably underestimates the real habitat areas.

If both interval (field 5.2(a) ‘Minimum’ and field 5.2(b) ‘Maximum’) and a single value (field 5.2(c) ‘Best single value’) are provided, field 5.3 ‘Type of estimate’ should correspond to the more accurate estimate. This should be noted in field 5.16 ‘Additional information’.

#### **5.4 Surface area – Method used**

This field is used to detail the methodology used for calculating habitat area in field 5.2. Choose one of the following categories:

- complete survey or a statistically robust estimate (e.g. complete habitat mapping or data from previous habitat mapping updated with robust monitoring data on trends);
- based mainly on extrapolation from a limited amount of data (e.g. using modelling or extrapolation from surveys of parts of the habitat distribution; using data from previous complete habitat mapping updated with good trend data);
- based mainly on expert opinion with very limited data;
- insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

If both interval (field 5.2(a) ‘Minimum’ and field 5.2(b) ‘Maximum’) and a single value (field 5.2(c) ‘Best single value’) are provided, field 5.4 ‘Method used’ should correspond to the more accurate estimate. This should be noted in field 5.17 ‘Additional information’.

#### **5.5 Change and reason for change in surface area (optional)**

This field is used to indicate if there is any change since the previous reporting period (2013–2018) in the surface area reported and, if so, to describe the nature of this change.

If there is a change, indicate which of the following option b) to f) apply (it is possible to select more than one of the options b-f)<sup>18</sup>

- no, there is no change
- yes, due to genuine change

<sup>18</sup> In some cases, the actual value reported for area covered by habitat has increased, reflecting both a genuine increase in area (positive trend) and better knowledge or data. Both options (‘genuine change’ and ‘improved knowledge or more accurate data’) above should be selected. In other situations, the actual value reported for area covered by habitat has increased since the previous period due to better knowledge or data. Nevertheless, it may still be clear that the habitat area is actually declining, based on analyses of data from sites. The option ‘improved knowledge or more accurate data’ above should be selected. Field 5.17 ‘Additional information’ allows a Party to provide further details on why an area estimate has increased, even though an area decline is reported.

- c) yes, due to improved knowledge/more accurate data
- d) yes, due to the use of a different method
- e) yes, but nature of change is unknown
- f) yes, due to other reasons

Finally, indicate whether any difference is mainly due to (select one option):

- a) genuine change
- b) improved knowledge or more accurate data
- c) the use of a different method
- d) unknown
- e) Other reasons

If a country wishes to give further information (e.g. cases where range surface area does not change, but its borders are shifting), this can be inserted into field 5.17 'Additional information'. If the field 'yes due to other reasons' is ticked, it must be further specified in 'Additional information'. This field should be used only in very limited cases. Since for Resolution No. 8 (2012) reporting the checklist is not stable nor the countries participating in the process, this field is optional and may be filled in only by those countries participating in the previous reporting round.

## **5.6 Short-term trend- Period**

Give the dates of the beginning and end of the period for which the trend has been reported. The short-term trend should be evaluated over a period of 12 years (two reporting cycles). For the 2019– 2024 reports, this means the period is 2013–2024 or a period as close as possible to this. Thus, some flexibility is permitted, so that while trends would ideally be reported for 2013–2024, data from e.g. 2010–2021 will be accepted if the best available data relate to surveys in those years.

Where a habitat is newly observed, ideally the trends would be reported with the start year as the first year after it was first observed e.g. if this was in 2018 then the short-term trend period would be 2019 – 2024.

Further guidance will be given in the updated version of the Guidelines on concepts and definitions.

## **5.7 Short-term trend- Direction**

A trend is a (measure of a) directional change of a parameter over time. The trend in area covered by habitat shows changes in the overall area covered by the habitat. Although rare for habitat area, the fluctuation (or oscillation) is not a directional change of a parameter, and therefore fluctuation is not a trend.

Indicate if the habitat trend over the reported period in field 5.6 was:

- a) Stable
- b) increasing
- c) decreasing
- d) uncertain
- e) unknown

Report 'uncertain' if some data are available but they are not enough to accurately determine direction. Use 'unknown' where there are no data available.

The short-term trend information is used in the evaluation matrix to assess the conservation status. Any large-scale deviation from this should be explained in field 5.17 'Additional information'.

If there is an apparent change in direction of the trend resulting from a change in monitoring methodology or improved knowledge about the habitat distribution, it should not be considered a trend. This apparent change should be indicated in field 5.5 'Change and reason for change in surface area'.

Further guidance will be given in the updated version of the Guidelines on concepts and definitions.

## 5.8 Short-term trend- Magnitude

If possible, quantify the percentage change (with range at the beginning of the reporting period as 100 %) over the period reported in field 5.6. It can be given as a precise figure (e.g. 27 %) or a pre-defined range (e.g. 26–5 %). If a precise figure is available give the same value under 'minimum' and 'maximum' (fields 5.8(a) and (b)). Where a less accurate range is available, please, select a pre-defined banded interval in field 5.8 c). The pre-defined intervals are 0-12%, 13-25%, 26-50%, 51-100%, >100%. If the trend magnitude is unknown, indicate in the field (d).

Choose from the following options:

- a) estimated minimum
- b) estimated maximum
- c) pre-defined range
- d) unknown

- Where a magnitude is available as a range (e.g. 20–30 %), this should be reported in '(a) estimated minimum' and '(b) estimated maximum'.
- Where magnitude is available as a precise value, the same value should be reported in '(a) estimated minimum' and '(b) estimated maximum'.
- Where only a minimum value is known, this should be reported in '(a) estimated minimum' and '(b) estimated maximum' and indicated as 'minimum' in 5.9 Short-term trend magnitude – type of estimate. Conversely, where only the maximum value is available, this should also be entered into both the (a) 'estimated minimum' and (b) 'estimated maximum' fields with 'best estimate' indicated in the 5.9 'Type of estimate' field and precisising that maximum is entered in 5.16 'Additional information'.
- Where a less accurate range is available, field c) pre-defined range can be used.
- Negative magnitude values should be reported (i.e. include the '-' sign) for all negative trend magnitudes, including cases where the direction is already indicated as 'decreasing'. Nevertheless, to avoid unnecessary data entry, it is not necessary to include the '+' sign for positive trends (i.e. a trend magnitude of '15' will be assumed to represent +15%). In the case of negative trends, note that the 'Minimum' and 'Maximum' fields relate to minimum and maximum values mathematically (not minimum and maximum declines). The pre-defined ranges will be provided with a positive or negative sign.

This field does not need to be completed for 'stable' or 'unknown' trends reported in 5.7. 'Uncertain' trends suggest that some data are available and this should be reported on with the 'type of estimate' field completed accordingly.

## 5.9 Short-term trend Magnitude – Type of estimate

The type of estimate for the reported minimum and maximum in fields 5.8(a) and (b), or the pre-defined range (c) should be outlined here. The options for reporting this are: best estimate, multi-year mean, 95 % confidence interval, minimum or pre-defined range:

- best estimate – the best available single figure (including where only the maximum value of the area covered by habitat is available) or interval, derived from e.g. a survey or a model, a compilation of figures

from localities or expert opinion, but for which 95 % confidence limits could not be calculated. Whether a best estimate comes from the monitoring data, modelling or from an expert opinion should be assessed in field 5.10;

- multi-year mean – average value or interval where habitat is monitored several times during the period provided in field 5.6;
- 95 % confidence interval – estimates derived from sample surveys or a model in which 95 % confidence interval could be calculated;
- minimum – where insufficient data exist to provide even an approximative area covered estimate, but where the area covered is known to be above certain value, or where the reported interval comes from a sample survey or monitoring project which probably underestimates the real area covered;
- pre-defined range – where the exact minimum and maximum values could not be estimated (fields 5.8 (a) and (b)), but where a reliable estimate can be made within the pre-defined range increments provided.

The type of estimate field encompasses the total assessment i.e. both field 5.7 short-term trend direction and field 5.8 short-term trend magnitude. No type of estimate is required if both trend and magnitude are ‘unknown’.

### **5.10 Short-term trend – Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. a dedicated monitoring of a habitat area with good statistical power);
- b) based mainly on extrapolation from a limited amount of data (e.g. trends derived from data collected from a limited number of sample sites; trends extrapolated from data collected for other purposes; trends extrapolated from some other indirect measurements, such as land- cover changes);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

The method used field encompasses the total assessment i.e. both field 5.7 short-term trend direction and field 5.8 short-term trend magnitude.

### **5.11 Long-term trend- Period (optional)**

The long-term trend should be evaluated over a period of 24 years (four reporting cycles). For the 2019–2024 reports, this means the period is 2000–2024 or a period as close as possible to this. Indicate the period in this field. For the 2019–2024 reports, this information, together with fields 5.11 to 5.14, are optional. For newly reported habitats, the start date for the long-term trend would fall within the last two reporting periods (i.e. 2013 to 2024).

Further guidance will be provided in the updated version of the Guidelines on concepts and definitions.

### **5.12 Long-term trend- Direction (optional)**

For guidance in filling this field, see field 5.7. (short-term trend - Direction).

### **5.13 Long-term trend- Magnitude (optional)**

If possible, quantify the percentage change (with range at the beginning of the reporting period as 100 %)

over the period reported in field 5.11. It can be given as estimated minimum and maximum value in fields 5.13 (a) and (b) (e.g. 27% and 55%), or where a precise value is known, enter the same value in the minimum and maximum field (e.g. 27%). If neither a minimum, maximum nor a precise value can be provided, 5.13 (c) Confidence interval can be used (if a statistically reliable method was used).

For additional guidance see field 5.8 Short-term trend – Magnitude.

#### **5.14 Long-term trend – Method used (optional)**

For guidance in filling in field 5.14 ‘Long-term trend – Method used’, see field 5.10 (short-term trends – method used).

#### **5.15 Favourable reference area**

Favourable reference area (FRA) is the surface area in a given biogeographical region considered the minimum necessary to ensure the long-term viability of the habitat type; this should include necessary areas for restoration or development for those habitat types for which the present coverage is not sufficient to ensure long-term viability. This information is needed to undertake the evaluation of conservation status using the evaluation matrix (Part E).

Where an exact area is reported, decimals can be used as the area of some habitat can be quite small. In many cases it is not possible to estimate a value for favourable reference population (option a) but it is clear that the favourable reference area is greater (or much greater or, in exceptional situations, lower) than the present-day value. If the favourable reference area is smaller than the actual area the favourable reference area is expected to be provided in a precise number. Using the pre-defined range increments ‘approximately equal to the favourable reference area (less than 2% smaller)’, ‘between 2 and 10% smaller’, ‘between 11 and 25% smaller’, ‘between 26 and 50% smaller’, ‘between 51 and 100% smaller’ allows flexibility in reporting where the exact value is not known. It is also preferable to reporting a parameter as ‘unknown’ (option c). For example, if the actual area is 150 km<sup>2</sup> and the value is estimated to be ‘between 11% and 25% smaller than the FRA’, then the FRA would be between 169 and 200 km<sup>2</sup>. If a pre-defined range increment is used to estimate a favourable reference area, it should be used with the minimum area estimate. If the favourable reference area is smaller than the actual area, the favourable reference area is expected to be provided in a precise number and an explanation needs to be given in the field 5.17 ‘Additional information’ on how this is in line with the principles of setting FRVs as described in the Guidelines.

The following information is requested:

- a) area in km<sup>2</sup>;
- b) if a precise favourable reference area is unknown indicate if the habitat area is:
  - approximately equal to the favourable reference area (less than 2% smaller)
  - between 2 and 10% smaller than the FRA
  - between 11 and 25% smaller than the FRA
  - between 26 and 50% smaller than the FRA
  - between 51 and 100% smaller than the FRA
- c) if the favourable reference area is unknown, indicate in the field
- d) indicate the method used' to set the reference value

This method can be:

- Model-based approach
- Reference-based approach
- Expert opinion
- Other

More than one method can be selected. If the ‘Model-based approach’ or the ‘Reference-based approach’ are selected then the quality of the available information should be indicated as high, moderate or low. If ‘other’ method is selected, elaborate on this method in field 5.16 ‘Additional Information’.

The field ‘indicate method used’ (d) is mandatory if (a) area is provided but Countries are encouraged to describe the method used also when (b) range increments are used.

The use of (b) range increments should help to reduce the use of ‘unknown’ to a minimum:

- if a range increment (b) is used, then there is no need to insert a value in relation to the current value provided in field 5.15 a) ‘area in km<sup>2</sup>’;
- if the value is provided for area (a) the range increments should not be used.

Where the reference value has changed in comparison to the previous reporting period, this should be explained in field 5.17 ‘Additional information’.

### **5.16 Surface area when the Resolution No.8 (2012) came into force (optional)**

The surface area in 2012, when the Resolution No.8 was adopted can be provided in this field, which is an optional and free text field to see progress with regard to the current area reported.

### **5.17 Additional information (optional)**

Additional information to help understand the information given on habitat area can be reported here as free text (for example, information on the need to reflect fragmentation in setting favourable reference area, large-scale deviations in trend direction or magnitude).

## **6 Structure and functions**

This section provides information on the proportion of the habitat area in ‘good’ and ‘not-good’ condition, its trends, and typical species. Habitat structure is considered to be the physical components of a habitat which will more than likely be formed by species both living and dead but can also include abiotic features.

Complementary information on structure and functions of habitat can be found in the updated version of the Guidelines on concepts and definitions.

### **6.1 Condition of habitat**

Provide the area (km<sup>2</sup>) of habitat with ‘good’, ‘not-good’ and ‘unknown’ condition. The condition of the habitat at the biogeographical level is reported as:

- a) area in good condition;
- b) area in not-good condition;
- c) area where condition is not known.

The area is reported in km<sup>2</sup> and can be reported as a range (minimum and maximum); if a precise value is known this value should be reported for both the ‘minimum’ and ‘maximum’ fields.

Further information on estimating habitat area in ‘good’/‘not good’ condition can be found in Section ‘Condition of habitat type’ in the updated version of the Guidelines on concepts and definitions (in progress).

## 6.2 Condition of habitat – Method used

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. complete habitat mapping including information on habitat conditions, or complete habitat mapping combined with robust extrapolation of habitat conditions or previous complete inventory updated with information from robust monitoring);
- b) based mainly on extrapolation from a limited amount of data (e.g. using modelling or extrapolation from detailed surveys of parts of the habitat distribution);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

## 6.3 Short-term trend of habitat area in good condition – Period

Give the dates of the beginning and end of the period for which the trend has been reported. The short-term trend should be evaluated over a period of 12 years (two reporting cycles). For the 2019– 2024 reports, this means the period is 2013–2024 or a period as close as possible to this. Thus, some flexibility is permitted, so that while trends would ideally be reported for 2013–2024, data from e.g. 2010–2021 will be accepted if the best available data relate to surveys in those years. Where a habitat is reported for the first time, the start year is the year the habitat was first observed e.g. if this was in 2018 then the short-term trend period would be 2019 – 2024.

Further guidance will be given in the updated version of the Guidelines on concepts and definitions.

## 6.4 Short-term trend of habitat area in good condition – Direction

A trend is a (measure of a) directional change of a parameter over time. The trend of habitat area in good condition should inform on changes in proportions between the habitat areas in good and not-good condition. Although rare in the case of range of habitat area, fluctuation (or oscillation) is not a directional change of a parameter, and therefore fluctuation is not a trend.

Indicate if the habitat trend over the reported period in field 6.3 was (select one option):

- a) stable
- b) increasing
- c) decreasing
- d) uncertain
- e) unknown

Report ‘uncertain’ if some data were available but they were not enough to accurately determine direction. Use ‘unknown’ where there are no data available.

The short-term trend information is used in the evaluation matrix to assess the conservation status. Any large-scale deviation from this should be explained in field 6.8 ‘Additional information’.

If there is an apparent change in direction of the trend resulting from a change in monitoring methodology or improved knowledge about the habitat condition, it should **not** be considered as a trend. An apparent change should be indicated in field 6.8 ‘Additional information’, and the trend should be

reported as ‘unknown’, unless other information also clearly shows a trend.

## **6.5 Short-term trend of habitat area in good condition – Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. dedicated monitoring of a habitat’s condition with good statistical power);
- b) based mainly on extrapolation from a limited amount of data (e.g. trends derived from data collected from a limited number of sample sites; trends extrapolated from data collected for other purposes; trends extrapolated from some other indirect measurements, such as shrub coverage);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

## **6.6 Typical species**

The typical species of the habitat are reported as they are used to assess whether a habitat is at favourable conservation status. These are species which occur regularly in the habitat type (as opposed to occasionally occurring species) and are species which are good indicators of favourable habitat quality. The list of ‘typical species’ chosen for the purpose of assessing conservation status should ideally remain stable over the medium to long term, i.e. across reporting periods. Typical species may be drawn from any species group. The choice of species should not be restricted to the species listed in Resolution No. 6 (1998).

Indicate if the list of typical species has changed since the previous reporting period (Yes or No).

If the list of ‘typical species’ has changed, then an additional spreadsheet with an updated list is requested. Only scientific names should be used. It is recommended to use names from the Pan-European Species directories Infrastructure (PESI<sup>19</sup>) Catalogue of Life (CoL<sup>20</sup>), Eur+Med PlantBase<sup>21</sup>, or another international or regional taxonomical reference.

An extensive definition of typical species (and structure and functions) can be found in Section ‘Typical species’ in the updated version of the Guideline on concepts and definitions.

## **6.7 Typical species – Method used (optional)**

This field allows for changes in the methodology for recording typical species to be noted. If ‘No’ was chosen in field 6.6, there is no requirement to complete field 6.7.

## **6.8 Additional information (optional)**

Additional information can be provided as free text to help understand the information given on the condition of the habitat or typical species.

# **7 Main pressures and threats**

This section provides information on main pressures and threats. A list of 20 pressures should be provided and for each pressure a ranking of its impact on the conservation status of habitat is also

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<sup>19</sup> <http://www.eu-nomen.eu/>

<sup>20</sup> <http://www.catalogueoflife.org/>

<sup>21</sup> <http://www.emplantbase.org/home.html>



required in the form of the timing of the pressure, scope and influence.

Pressures have acted within the current reporting period and they have an impact on the long-term viability of the habitat and its typical species; threats are future/foreseeable impacts (within the next two reporting periods) that are likely to affect the long-term viability of the habitat.

Threats are not reported separately, it is understood that a pressure designated as having an impact ongoing and in the future ('timing') is both a pressure and a threat and when having an impact only in the future is only a threat. The threats should rather represent those issues judged to be reasonably likely (e.g. based on current pressures being reported or on foreseeable development projects). The definition of pressures and threats is given in table 8 below.

**Table 8: Definition of pressure and threat (in the context of reporting under Resolution No. 8 (2012))**

	<b>Period of action/definition</b>	<b>Time-frame</b>
Pressure	Acting now and/or during (any part of or all of) the current reporting period.	Current six-year reporting period.
Threat	Factors expected to act in the future after the current reporting period.	Future two reporting periods, i.e. within 12 years following the end of the current reporting period.

### 7.1 Characterisation of pressures

Provide the list of pressures: list a maximum of 20 pressures.

- For each habitat: select from the list of pressures a maximum of 20 entries using the code at the second level of the hierarchical list. The list of pressures will be available on the Reference Portal on Reporting.
- For each pressure, indicate the timing which is the time frame it is acting in.

<b>Timing</b>	
<b>in the past but now suspended due to measures</b>	For reporting pressures Where selected, there is no need to complete the fields on scope and influence.
<b>ongoing</b>	For reporting pressures
<b>ongoing and likely to be in the future</b>	For reporting pressures and threats Where selected, there is no need to complete the fields on scope and influence for the part of the entry concerning the threat but only for the part that concerns the pressure.
<b>only in future</b>	For reporting threats Where selected, there is no need to complete the fields on scope and influence.

- indicate the **scope** of the area affected for each pressure that is 'ongoing' or 'ongoing and likely to be in the future'.

<b>*Scope (proportion of area affected)</b>	
[*to be completed for 'ongoing' and 'ongoing and likely to be in the future' timings only. Although the latter also includes threats, the 'scope' and 'influence' will only address pressures]	
<b>whole (&gt;90%)</b>	more than 90% of the area reported in the Country's biogeographical regions is affected by the pressure
<b>majority 50 – 90%</b>	between 50 – 90% of the area reported in the Country's

	biogeographical region is affected by the pressure
<b>minority &lt;50%</b>	less than 50% of the area reported in the Country's biogeographical region is affected by the pressure

d) indicate for each pressure that is 'ongoing' or 'ongoing and likely to be in the future' the **influence** on the area or habitat condition.

The overall impact of the pressure as addressed in the fields timing, scope and influence, should reflect the influence of a pressure on the conservation status of the habitat.

Habitats can be affected by pressures and threats originating from outside the Contracting Party (e.g. pollution or nitrogen deposition). The list also includes pressures to address the transboundary effect of pressures and threats i.e. 'threats from outside the Contracting Party' and 'threats from outside the Party's territory'.

e) Where Invasive Alien Species (IAS) is selected among pressures, it is obligatory to provide the names of these species. A drop-down list with Invasive Alien Species of Bern Convention concern will be available for these species.

f) When a pressure concerns 'Other invasive alien species (other than species of Bern Convention concern considered for the reporting)' the provision of names of these species can be ideally provided (e.g. IAS included in national lists), because this field is optional. More than one species can be selected for both cases.

As there is no characterisation of threats required in the reporting format but is used for the assessment of the parameter future prospects, an expert-based characterisation of threats can be made by countries, however this is not required to be reported.

## 7.2 Methods used (optional)

The optional methods used field is to provide general information for the pressures reporting and is not required for specific pressures. Where a specific methodology is used for a specific pressure, this information can be provided in field 8.4 Additional information.

Choose one of the following categories:

- a) complete survey or a statistically robust estimate
- b) based mainly on extrapolation from a limited amount of data
- c) based mainly on expert opinion with very limited data
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

## 7.3 Sources of information (optional)

Provide source of information relevant to Section 7 (optional) with URL, metadata, or supporting evidence.

## 7.4 Additional information (optional)

If a Country wishes to give additional information on the nature of a certain pressure or methodology this can be provided in the field.

# 8 Conservation measures

This section concerns information on conservation measures, including management plans, taken to

maintain or to restore the habitats at Favourable conservation status.

The evaluation undertaken in fields 8.1 to 8.5 is an overall assessment, not a measure-by-measure evaluation.

### **8.1 Status of measures**

Select whether measures are needed or not. If the answer is 'Yes, measures are needed', then proceed to select from the following options (select only one option):

- a) measures identified but none yet taken
- b) measures needed but cannot be identified
- c) part of measures identified have been taken
- d) most/all of measures identified have been taken

Measures may be implemented at different points in time.

If the answer to the question if measures are needed is no', an explanation of the situation must be inserted in the free text field 8.7. 'No measures needed' does not include legal/administrative measures and should always be justified.

### **8.2 Scope of measures taken (optional)**

Where part of the measures identified have been taken (8.1 c) or most/all of the measures identified have been taken (8.1 d), indicate the scope of these measures i.e. the proportion of the habitat area they impact.

- a) <50%
- b) 50 – 90%
- c) >90%

### **8.3 Main purpose of the measures taken**

A. Indicate the main purpose of the measures taken. This part should only be filled in if the conservation measures have been taken (field 8.1(c) 'Part of measures identified and taken' or 8.1(d) Most/all of measures identified and taken are marked 'Yes'). Several purposes can be identified:

- a) Maintain the current range, surface area or structure and functions of the habitat type or
- b) Expand the current range of the habitat type (related to 'Range') or
- c) Increase the surface area of the habitat type (related to 'Area covered by the habitat')
- d) Restore the structure and functions, including the status of typical species (related to 'specific structure and functions')

B. To identify the main objective of the measures taken, please indicate if this is to (only one option can be selected):

- maintain the current range
- expand the range
- increase habitat area
- improve habitat condition

The aim of this field is not to describe the effect of the measures, but rather describe the intended

objective of the measures implemented. The response is further elaborated on in field 8.5 below.

#### **8.4 Location of the measures taken**

Indicate where the measures are mostly being implemented. This part should only be filled in if the conservation measures have been taken (field 8.1(c) 'Part of measures identified have been taken' and 8.1(d) Most/all of measures identified have been taken is marked 'YES'), only one option can be selected:

- a) only inside the Emerald Network;
- b) both inside and outside Emerald Network;
- c) only outside Emerald Network.

This field tries to capture where the main focus of the conservation action is taking place. Therefore, choose option (a) if all, or the vast majority, of the conservation measures are restricted to Emerald Network, option (b) if there is a proportional investment in the implementation of measures inside and outside Emerald Network, and option (c) if all, or the vast majority, of the measures are taken outside the Emerald Network.

#### **8.5 Response to the measures**

Provide an estimate of when the measures taken will start, or are expected to start, to neutralise the pressure and to produce positive effects (regarding the main purpose of the measures indicated in field 8.2). Choose one option from:

- a) short-term results (within the current reporting period, 2019–2024);
- b) medium-term results (within the next two reporting periods, 2025–2036);
- c) long-term results (after 2036).

#### **8.6 List of main conservation measures**

List a maximum of 20 conservation measures using the code that is provided on the Reporting Reference Portal.

More detailed guidance on the use of conservation will be provided in the updated version of the Guidelines on concepts and definitions.

#### **8.7 Additional information (optional)**

Additional information to help understand the information given on conservation measures can be reported here.

## **9 Future Prospects**

This section provides information on the future prospects of three parameters (Range, Area, and Structure and functions). Future prospects indicate the direction of expected change in conservation status in the near future based on a consideration of the current status, reported pressures and threats, and measures being taken for each of the other three parameters (Range, Area, and Structure and functions).

### **9.1 Future prospects of parameters**

For each parameter (Range, Area, and Structure and functions), indicate if the prospects are ‘good’, ‘poor’, ‘bad’ or ‘unknown’. Future prospects of each of the three parameters should principally reflect the future trends which are the result of the balance between threats and conservation measures. The future prospects should be assessed in relation to the current conservation status. For example, the impact of future improvement on the assessment of future prospects of a parameter will be different if the current status is ‘favourable’ or ‘unfavourable-bad’.

An evaluation method will be provided in the updated version of the Guidelines on concepts and definitions.

## 9.2 Additional information (optional)

Additional information to help understand how future prospects were assessed can be reported here.

## 10 Conclusions

This section includes the assessment of conservation status at the end of the reporting period in the concerned biogeographical region or marine region. It is derived from the matrix in Part E.

Give the result of the assessment for each parameter of conservation status using the four categories available: ‘favourable’ (FV), ‘unfavourable-inadequate’ (U1), ‘unfavourable-bad’ (U2) and ‘unknown’ (XX).

The conservation status of parameters is assessed using the criteria in the evaluation matrix (Part E of the Report format). Sections 10.1 to 10.5 provide an overview of the assessment criteria for each of the parameters. In addition, several complementary assumptions and criteria are outlined in these guidelines, which aim at harmonising and facilitating the assessment of conservation status. For each parameter these complementary assumptions and criteria are summarised under the heading ‘Complementary remarks’.

### 10.1 Range

Give the result of the assessment of the status for Range using the four categories available: ‘favourable’ (FV), ‘unfavourable-inadequate’ (U1), ‘unfavourable-bad’ (U2) and ‘unknown’ (XX).

Conservation status	Assessment criteria
Favourable (FV)	<p>According to the evaluation matrix (Part E) the status of Range is ‘favourable’ if:</p> <ul style="list-style-type: none"> <li>the trend is stable (loss and expansion in balance) or increasing; and</li> <li>range surface area (field 4.1) is not smaller than the favourable reference range (field 4.12).</li> </ul> <p>Complementary remarks:</p> <p>The trend over the short-term trend period (field 4.3) should be used for the status assessment.</p> <p>The status of Range should not be favourable if any large-scale changes resulting from human pressures but not impacting the range surface area (e.g. shifts or range boundaries) were recorded.</p>
Unfavourable-inadequate (U1)	<p>According to the evaluation matrix (Part E) the status of Range is ‘unfavourable-inadequate’ if:</p> <ul style="list-style-type: none"> <li>any other combination (other combination of criteria than for ‘favourable’ or</li> </ul>

	<p>‘unfavourable-bad’).</p> <p>Complementary remarks:</p> <p>1. The evaluation matrix does not include explicit criteria for ‘unfavourable-inadequate’ status of Range. However, taking into account the criteria for ‘favourable’ and ‘unfavourable-bad’, the status of Range should be considered as ‘unfavourable-inadequate’ if:</p> <ul style="list-style-type: none"> <li>• a decline equivalent to a loss of less than 1 % per year; or</li> <li>• range surface area (field 4.1) is less than 10 % below favourable reference range (field 4.12).</li> </ul> <p>2. The trend over the short-term trend period (field 4.3) should be used for the status assessment.</p>
<p>Unfavourable-bad (U2)</p>	<p>According to the evaluation matrix (Part E) the status of Range is ‘unfavourable-bad’ if:</p> <ul style="list-style-type: none"> <li>• a large decline equivalent to a loss of more than 1 % per year within the period specified by the Country; or</li> <li>• range surface area (field 4.1) is more than 10 % below favourable reference range (field 4.12).</li> </ul> <p>Complementary remarks:</p> <p>The trend over the short-term trend period (field 4.3) should be used for the status assessment.</p>
<p>Unknown (XX)</p>	<p>According to the evaluation matrix (Part E) the status of Range is ‘unknown’ if: there is no or insufficient reliable information available.</p>

## 10.2 Area

Give the result of the assessment of the status for Area covered by the habitat using the four categories available: ‘favourable’ (FV), ‘unfavourable-inadequate’ (U1), ‘unfavourable-bad’ (U2) and ‘unknown’ (XX).

Conservation status	Assessment criteria
Favourable (FV)	<p>According to the evaluation matrix (Part E) the status of Area covered by habitat is ‘favourable’ if:</p> <ul style="list-style-type: none"> <li>• the trend is stable (loss and expansion in balance) or increasing; and</li> <li>• area covered by habitat (field 5.2) is not smaller than the favourable reference area (field 5.15); and</li> <li>• there are no significant changes in distribution pattern within the range.</li> </ul> <p>Complementary remarks:</p> <ol style="list-style-type: none"> <li>1. The trend over the short-term trend period (field 5.6) should be used for the status assessment.</li> <li>2. There may be situations where the habitat area has decreased during the short-term trend period (field 5.6) as a result of management measures (e.g. to restore another Resolution No. 4 (1996) on habitats or the habitat of a species listed in Resolution No. 6 (1998)). The habitat area could still be considered at favourable conservation status, but in such cases give details in field 10.8 ‘Additional information’.</li> <li>3. For dynamic habitats such as shifting coastal dunes (B1.3) the habitat area may have decreased during the short-term trend period (field 5.6), but due to the dynamic nature of the habitat this does not represent a permanent loss of the habitat area. In this situation the habitat area could still be assessed as ‘favourable’ but details should be given in field 10.8.</li> </ol>
Unfavourable-inadequate (U1)	<p>According to the evaluation matrix (Part E) the status of Area covered by habitat is ‘unfavourable-inadequate’ if:</p> <ul style="list-style-type: none"> <li>• any other combination (other combination of criteria than for ‘favourable’ or ‘unfavourable-bad’).</li> </ul> <p>Complementary remarks:</p> <ol style="list-style-type: none"> <li>1. The evaluation matrix does not include explicit criteria for ‘unfavourable-inadequate’ status of area covered by habitat. However, considering the criteria for ‘favourable’ and ‘unfavourable-bad’ the status of area covered by habitat should be considered as ‘unfavourable-inadequate’ if: <ul style="list-style-type: none"> <li>• a decline equivalent to a loss of less than 1 % per year; or</li> <li>• area covered by habitat (field 5.2) is less than 10 % below favourable reference area (field 5.15); or</li> <li>• small losses in distribution pattern within range.</li> </ul> </li> <li>2. The trend over the short-term trend period (field 5.6) should be used for the status assessment.</li> </ol>

<p>Unfavourable-bad (U2)</p>	<p>According to the evaluation matrix (Part E) the status of area covered by habitat is ‘unfavourable-bad’ if:</p> <ul style="list-style-type: none"> <li>• a large decrease equivalent to a loss of more than 1 % per year within the period specified by the Country; or</li> <li>• major losses in distribution pattern within range; or</li> <li>• area covered by habitat (field 5.2) is more than 10 % below favourable reference area (field 5.15)</li> </ul> <p>Complementary remarks:</p> <p>The trend over the short-term trend period (field 5.6) should be used for the status assessment.</p>
<p>Unknown (XX)</p>	<p>According to the evaluation matrix (Part E) the status of Area covered by habitat is ‘unknown’ if:</p> <ul style="list-style-type: none"> <li>• there is no or insufficient reliable information available.</li> </ul>

### 10.3 Specific structure and functions (including typical species)

Give the result of the assessment of the status for Structure and functions using the four categories available: ‘favourable’ (FV), ‘unfavourable-inadequate’ (U1), ‘unfavourable-bad’ (U2) and ‘unknown’ (XX).

<p><b>Conservation status</b></p>	<p><b>Assessment criteria</b></p>
<p>Favourable (FV)</p>	<p>According to the evaluation matrix (Annex E) the status of structure and functions is ‘favourable’ if:</p> <ul style="list-style-type: none"> <li>• structure and functions (including typical species) are in good condition; and</li> <li>• and there are no significant deteriorations/pressures.</li> </ul>



	<p>Complementary remarks:</p> <ol style="list-style-type: none"> <li>1. The evaluation matrix states that if more than 25 % of the habitat type area in the region being assessed is considered ‘unfavourable’ (i.e. not in good condition), then the status of structure and functions is ‘unfavourable-bad’. However, it does not give numerical criteria for ‘favourable’ or ‘unfavourable-inadequate’. Ideally, the entire area of a habitat type should be in good condition for structure and functions to be considered ‘favourable’. However, this is hardly achievable in practice and it could be acceptable to have part of the habitat type in ‘not-good’ condition, but still consider structure and functions to be assessed as ‘favourable’.</li> </ol> <p>It is recommended to use an indicative value of 90 % of the habitat type area (field 6.1) in ‘good’ condition as the threshold to conclude on ‘favourable’ structure and functions. If a country uses a different value, this should be noted and explained in field 10.8 ‘Additional information’. This indicative value could, for example, be adapted according to the rarity/abundance of the habitat type (for more guidance see Section ‘Condition of habitat type’ in the updated Guidelines on concepts and definitions).</p> <ol style="list-style-type: none"> <li>2. Although it is not stated clearly in the evaluation matrix, the trend (trend in area in good condition (field 6.4)) must be stable or increasing for structure and functions to be considered ‘favourable’.</li> <li>3. Although a full assessment of the conservation status of each typical species is not required, the typical species overall should be ‘favourable’ (not threatened), at least in this habitat, as species can be typical of more than one habitat.</li> <li>4. For a habitat to be considered ‘favourable’, fragmentation or other conditions are not impacting significantly on ecological processes.</li> <li>5. It is possible that restoration has increased the area of habitat but has decreased the proportion of habitat in ‘not good’ condition, as the restored area is not yet in ‘good’ condition. In such cases, if the area in ‘good’ condition is less than 90 % of the habitat area, the habitat should not be ‘favourable’ for the parameter structure and functions (see above, point 1). Such cases are most likely to arise where the habitat area is lower than the reference value and the overall conservation status would have been ‘unfavourable’ regardless of structure and functions.</li> </ol>
<p>Unfavourable-inadequate (U1)</p>	<p>According to the evaluation matrix (Part E) the status of structure and functions is ‘unfavourable-inadequate’ if:</p> <ul style="list-style-type: none"> <li>• any other combination (other combination of criteria than for ‘favourable’ or ‘unfavourable-bad’).</li> </ul> <p>Complementary remarks:</p> <ol style="list-style-type: none"> <li>1. The evaluation matrix does not include explicit criteria for ‘unfavourable-inadequate’ status of structure and functions. However, taking into account the criteria for ‘favourable’ and ‘unfavourable-bad’ and complementary criteria for ‘favourable’ status, the status of structure and functions should be considered as ‘unfavourable-inadequate’ if: <ul style="list-style-type: none"> <li>• the area of habitat with ‘unfavourable’ (‘not good’) condition (field 6.1) is less than 25 %; and</li> </ul> </li> </ol>

	<ul style="list-style-type: none"> <li>the area of habitat with ‘good’ condition (field 6.1) is less than 90 %; and</li> <li>the area of habitat with ‘unknown’ condition (field 6.1) is less than 75 %.</li> </ul>
Unfavourable-bad (U2)	<p>According to the evaluation matrix (Part E) the status of structure and functions is ‘unfavourable-bad’ if:</p> <ul style="list-style-type: none"> <li>more than 25 % of the area is unfavourable (‘not good’ in field 6.1) as regards its specific structure and functions (including typical species).</li> </ul>
Unknown (XX)	<p>According to the evaluation matrix (Part E) the status of structure and functions is ‘unknown’ if:</p> <ul style="list-style-type: none"> <li>there is no or insufficient reliable information available.</li> </ul> <p>Complementary remarks: The status of structure and functions should be considered ‘unknown’ if more than 75 % of habitat area has ‘unknown’ condition (field 6.1).</p>

## 10.4 Future prospects

Give the result of the assessment of the status of future prospects using the four categories available: ‘favourable’ (FV), ‘unfavourable-inadequate’ (U1), ‘unfavourable-bad’ (U2) and ‘unknown’ (XX).

Conservation status	Assessment criteria
Favourable (FV)	<p>According to the evaluation matrix (Part E) the status of future prospects is ‘favourable’ if:</p> <ul style="list-style-type: none"> <li>no significant impact from threats to habitat is expected and its long-term viability is assured.</li> </ul> <p>Complementary remarks: The future prospects should be assessed as ‘favourable’ if all parameters have good prospects (field 9.1), or the prospects of one parameter are ‘unknown’ while the other parameters have good prospects. The matrix for combining the prospects of three parameters to give overall status of future prospects is provided in the updated Guidelines on concepts and definitions.</p>
Unfavourable-inadequate (U1)	<p>According to the evaluation matrix (Part E) the status of future prospects is ‘unfavourable-inadequate’ if:</p> <ul style="list-style-type: none"> <li>any other combination (other combination of criteria than for ‘favourable’ or ‘unfavourable-bad’).</li> </ul> <p>Complementary remarks: The evaluation matrix does not include explicit criteria for ‘unfavourable-inadequate’ status of Future prospects. However, taking into account the method for assessing the future prospects proposed in these guidelines, the status should be considered ‘unfavourable-inadequate’ if the prospects of one or more parameters (field 9.1) are ‘poor’, none has ‘bad’ prospects and there is at most one parameter with ‘unknown’ prospects.</p>

Unfavourable-bad (U2)	<p>According to the evaluation matrix (Part E) the status of future prospects is ‘unfavourable-bad’ if:</p> <ul style="list-style-type: none"> <li>severe impacts from pressures and threats to the habitat are expected, prospects for its future are ‘bad’ and long-term viability is not assured.</li> </ul> <p>Complementary remarks:</p> <p>The future prospects should be assessed as ‘unfavourable-bad’ if one or more parameters have ‘bad’ prospects (field 9.1).</p>
Unknown (XX)	<p>According to the evaluation matrix (Part E) the status of future prospects is ‘unknown’ if:</p> <ul style="list-style-type: none"> <li>there is no or insufficient reliable information available.</li> </ul> <p>Complementary remarks:</p> <p>The future prospects should be assessed as ‘unknown’ if two or more parameters have ‘unknown’ prospects and no parameters have ‘bad’ prospects (field 9.1).</p>

### 10.5 Overall assessment of conservation status

Give the result of the overall assessment of conservation status using the four categories available: ‘favourable’, ‘unfavourable-inadequate’, ‘unfavourable-bad’ and ‘unknown’, based on the evaluation matrix for assessing conservation status for a habitat.

Status of parameters	All ‘favourable’, or three ‘favourable’ and one ‘unknown’	One or more ‘inadequate’, but no ‘bad’	One or more ‘bad’	Two or more ‘unknown’ combined with ‘favourable’ or all ‘unknown’
Overall assessment of CS	‘favourable’	‘unfavourable-inadequate’	‘unfavourable ‘bad’	‘unknown’

### 10.6 Overall trend in conservation status

If the overall conservation status reported in field 10.5 is ‘favourable’, ‘inadequate’ or ‘bad’, indicate the trend (qualifier) as follows:

- Improving
- Deteriorating
- Stable
- unknown

The qualifier should be based on individual trends (for Range, Area covered by habitat, and Structure and functions) over the reporting period (2019–2024). As the trends over the reporting period are often not available, reported short-term trends can be used to assess the trend in the conservation status, unless there is evidence that the trend during the reporting period is different than a measured short-term trend (e.g. if after past decline of habitat over the reporting period 2013–2018 the trend has stabilised, the qualifier should be assessed as ‘stable’ even though the trend in habitat area is ‘decreasing’; this should be explained in field 10.8 ‘Additional information’). The (short-term) trends should be combined using Table 9 below. For instance, the number 3 in the column increasing means that the three individual short-term trends: range, area of the habitat and structure and functions have increasing short-term trend, while 1 in the column stable means that only one individual short-term trend is stable.

**Table 9: Assessing overall trend in conservation status of a habitat by combining trends for parameters**

Short-term trend of parameters (Range, Area of habitat, Structure and functions)				Overall trend in CS
Number increasing	Number stable	Number decreasing	Number unknown	
3 2 1	0 1 2	0 0 0	0 0 0	<b>Improving</b>  <i>(Only increasing and stable trends)</i>
0 2 2 0 1 1	3 0 0 2 1 1	0 1 0 0 1*	0 0 1 1 0 1	<b>Stable</b>  <i>(Only stable trends or stable and increasing dominates (there is at least one increasing and only one unknown or decreasing))</i>  <i>* Trend magnitude should also be considered. The overall trend in CS is stable only in case of moderate declines (&lt; 1 % per year).</i>
0 1 0 0 0 1 0	0 0 1 0 2 1 1	3 2 2 1 1*	0 0 0 1 0 0 1	<b>Deteriorating</b>  <i>(Decreasing trends dominate)</i>  <i>* Trend magnitude should also be considered. The overall trend in CS is declining only in case of important declines (&gt; 1 % per year).</i>
0 1 0 0 1	0 0 1 0 0	0 0 0 1 1	3 2 2 2 1	<b>Unknown</b>  <i>(Unknown trends dominate)</i>

Note: 'unknown' in the table above includes both 'unknown' and 'uncertain'. The above has been provided as a general guide, some combination of trends for the parameters may not be accounted for.

## 10.7 Change and reasons for change in conservation status and conservation status trend (optional)

This field is used to indicate if there is any change since the previous reporting period (2013–2018) in conservation status and/or in trend in conservation status and, if yes, the reason for this change. Indicate which of the following options apply (separately for the overall assessment of conservation status and overall trend in conservation status). It is possible to reply 'Yes' to more than one of the options b-f, but at least one option 'Yes' must be selected for options b-f if there is a change.

The fields to be completed are:

- No, there is no difference;
- yes, due to genuine change;
- yes, due to improved knowledge/more accurate data;
- yes, due to the use of different method (including taxonomic change or use of different thresholds);
- yes, but nature of change is unknown;

f) yes, due to other reasons

If the field 'yes due to other reasons' is ticked, it must be further specified in field 10.8 'Additional information'. This field should be used only in very limited cases.

Finally, it should be indicated (separately for overall assessment of conservation status and overall trend in conservation status) whether any difference is mainly due to (select only one option):

- genuine change;
- improved knowledge or more accurate data;
- the use of a different method;
- unknown;
- other reasons.

Only one option should be chosen for the main reason for change.

Since for Resolution No. 8 (2012) reporting the checklist is not stable nor the countries participating in the process, this field is optional and may be filled in only by those countries participating in the previous reporting round. If a country wishes to give further information, this can be done in field 10.8 'Additional information'.

### **10.8 Additional information (optional)**

Additional information to help understand the information in fields 10.1 to 10.7.

## **11 Emerald Network (Proposed, Candidate and Adopted sites) coverage for the habitat types listed in Resolution No. 4 (1996)**

This section provides information on surface area of habitat and trend of surface area in good condition within the Emerald Network. The requested information should cover the proposed Emerald sites, the Emerald Candidate and Adopted sites of the Emerald Network within the biogeographical/marine region concerned.

The information relates to all Emerald sites where the habitat is present, not only those sites where the habitat is declared as a target habitat or a conservation objective.

See background information in the updated Guidelines on concepts and definitions.

### **11.1 Surface area of the habitat type inside the ASCIs**

Indicate the surface area of the habitat type within the network in the biogeographical or marine region concerned, including all the sites where the habitat type is present. Follow the same guidance as for the surface area of the habitat in field 5.2.

### **11.2 Type of estimate**

The type of estimate for the reported interval in field 11.1(a) and (b) or the best single value in field 11.1(c) should be outlined here. The options for reporting this are: best estimate, 95 % confidence interval, and minimum.

Follow the same guidance as for the 'Type of estimate' for the surface area covered by the habitat (field 5.3).

### **11.3 Surface area of the habitat type inside the network – Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate (e.g. complete habitat mapping or data from previous habitat mapping updated with robust monitoring data on trends);
- b) based mainly on extrapolation from a limited amount of data (e.g. using modelling or extrapolation from surveys of parts of the habitat distribution; using data from previous complete habitat mapping updated with good trend data; using models);
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

Follow the same guidance as for field 5.4 'Surface area – Method used' for the area covered by the habitat.

#### **11.4 Short-term trend of habitat area within the network – Direction**

Trend is a (measure of a) directional change of a parameter over time. The trend of habitat area in the network should inform on changes in proportions between the habitat areas within the Emerald network. Although rare in the case of range of habitat area, fluctuation (or oscillation) is not a directional change of a parameter, and therefore fluctuation is not a trend.

Indicate whether the trend of habitat area is (select one option):

- a) stable
- b) increasing
- c) decreasing
- d) uncertain
- e) unknown

Short-term trend within the Emerald network should be assessed over the period indicated in field 5.6.

#### **11.5 Short-term trend of habitat area within the network – Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate
- b) based mainly on extrapolation from a limited amount of data
- c) based mainly on expert opinion with very limited data
- d) insufficient or no data available

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

#### **11.6 Short-term trend of habitat area in good condition within the network – Direction**

A trend is a (measure of a) directional change of a parameter over time. The trend of habitat area in good condition should inform on changes in proportions between the habitat areas in good and not-good condition within the Emerald Network. Although rare in the case of range of habitat area, fluctuation (or oscillation) is not a directional change of a parameter, and therefore fluctuation is not a trend.

Indicate whether the trend of habitat area in good condition is (select one option):

- a) stable
- b) increasing
- c) decreasing

- d) uncertain
- e) unknown

Short-term trend within the Emerald Network should be assessed over the period indicated in field 5.6.

### **11.7 Short-term trend of habitat area in good condition within the network–**

#### **Method used**

Choose one of the following categories:

- a) complete survey or a statistically robust estimate;
- b) based mainly on extrapolation from a limited amount of data;
- c) based mainly on expert opinion with very limited data;
- d) insufficient or no data available.

Only one category can be chosen; where data have been compiled from a variety of sources, choose the category for the most important source of data.

### **11.8 Additional information (optional)**

Additional information to help understand Emerald coverage can be reported here.

## **12 Complementary information**

This section is optional and is a place to include any additional information.

### **12.1 Justification of % thresholds for trends (optional)**

The indicative suggested threshold for a large decline given in the evaluation matrix (Part E) is 1 % per year. If another threshold has been used for the assessment please give details, including an explanation of why.

### **12.2 Other relevant information (optional)**

Include any other information thought relevant to the habitat report and to assessing conservation status.

## **PART E –ASSESSING THE CONSERVATION STATUS OF A HABITAT TYPE**

The matrix is an aid to assessing the conservation status of a habitat. It shall be used for each biogeographical or marine region in which the habitat is present. The results of using the matrix are inserted in Section ‘Conclusions’ (in ‘Field-by-field guidance for habitat reports’).