

GUIDELINES FOR EEA INDICATOR PROFILE REVIEW AND UPDATE

These guidelines have been compiled primarily to inform the ETC/ICM 2011 review and update process of marine/maritime indicators, i.e. both core set indicators (CSI) and other indicators (existing or new), but since they have been reviewed by OSE3 and SES2 they also apply to any EEA indicator.

Although some guidance documents have been previously published by the EEA and are available in CIRCA (see References and Links section in the end), these were found to be partially out-dated and with some information gaps, namely with respect to the latest version of the Indicator Management System (IMS v.3). Also, the review of the 2010 assessment of marine/maritime CSI revealed that there were several different approaches to the assessments, as well as different understandings of what each section of the indicator profile should contain. These guidelines were therefore built on these previous analyses with the primary objective of assuring more consistency within and between the EEA marine/maritime indicators. However, since they are generic and relate to the IMS, they should also help getting more consistency across EEA indicators.

Indicators are designed for various users, who have a variety of information needs and expertise. These users range from policy-makers and institutions at the EU and national level, to environmental experts and the more general users, including EU citizens. Therefore, the more technical sections of the indicator profile, such as methodology, data sources, references, uncertainties and gaps should be filled and updated with a more expert target group in mind, while the assessment part should be more comprehensive and easily understandable, while conveying a clear and well-founded key message.

The EEA indicator profile therefore consists of two different parts: Part A) a specification of the indicator and Part B) an assessment of the latest trends for the indicator, including supporting graphics and data. The indicator specification (Part A) is considered to hold common and somewhat stable information for all the periodic assessments (Part B), which should in turn be updated more frequently (e.g. every year).

This document provides updated guidelines on the type of information expected for each part (specification and assessment) and respective sections of the indicator profile. Also, it provides a template for the indicator specification and one for the assessment, **which should be used for providing the information requested for each indicator**. The current version of the IMS (v3) now requires for **all** fields in the templates to be filled for the information to be published. This means that even when no information for that field exists, there should still be an indication of that (e.g. no methodology uncertainties to be reported). However, depending on the publication frequency, maturity, data quality and information gaps of the indicator, not all fields may need to be reviewed/updated every year.

The information on these templates can thus be used to upload a 1st commented draft to the IMS, where subsequent commenting should take place. If the indicator does not need major review but mostly an update of the assessment part, the IMS could be used directly for doing so. The exact workflow between EEA and ETC on indicator review and update and the use of the IMS will therefore depend on the work needed and will be defined by the respective parties involved, on a case by case approach.

PART A. INDICATOR SPECIFICATION

Please note some guidelines may cover more than one section, in which case the sections were grouped.

Specification Contents

1. Assessment versions (*automatically filled in*)
2. Justification for indicator selection/scientific references
3. Indicator definition
 - Units
4. Policy context and targets
 - (Policy) context description
 - Targets
 - Related policy documents
5. Key policy question
6. Specific policy question(s) (*if relevant*)
7. Methodology
 - Methodology for indicator calculation
 - Methodology for gap filling
 - Methodology references
8. Data specifications
 - EEA data references
 - External data references
 - Data sources in latest figures (*automatically filled in*)
9. Uncertainties
 - Methodology uncertainty
 - Data sets uncertainty
 - Rationale uncertainty
10. Further work
 - Short-term
 - Long-term
11. General Metadata (*filled in by EEA*)

1. ASSESSMENT VERSIONS

This section contains links to any previous assessments. (*In 'edit'-mode new versions of assessment can be created from here*).

2. JUSTIFICATION FOR INDICATOR SELECTION / SCIENTIFIC REFERENCES (*In 'edit'-mode: RATIONALE – Justification for indicator selection*)

This section corresponds to the **rationale** for selecting the indicator. Explain why the indicator is selected to answer the respective policy question and, if possible, its context in sustainable development (i.e. relevant linkages with economic and social issues). The **environmental context** of this indicator should therefore be briefly described in this section, together with socio-economic considerations, if relevant. **The policy context should not be described here**, but in the policy context section.

Scientific references should also be given (with links if reference is publically available) to justify the choice of the indicator, together with references to its use in other international organisations and reporting initiatives (i.e. which international organisations, in which countries), if possible.

3. INDICATOR DEFINITION / UNITS

Provide short and clear textual definition of the indicator, so that the user understands what the indicator is showing and not just what it is calculating or measuring.

Provide a list of all parameters used in the indicator, as well as the respective units, including when the parameter is a derived measure from others on that list.

4. POLICY CONTEXT AND TARGETS

The policy context is the main driving force for presenting the indicator and its assessments. This section therefore needs to be up to date. This section **does not set the environmental context**, which should be presented in the rationale section.

4.1 POLICY CONTEXT DESCRIPTION

The context sets the policy stage for the indicator and its message. It should therefore be described from the more overarching and generic related policies to the more specific ones, clearly showing the overall framework from where the policy question arises. EEA indicators focus on EU policy, but international and regional relevant policies should also be referred.

4.2 TARGETS

Identify relevant targets for the indicator from policy documents (e.g. EU legislation, international and/or regional conventions) or/and environmental thresholds, when existing or known. Targets help to evaluate performance. Thresholds, although difficult to define in many cases, are of increasing relevance for policy makers, since these represent the points beyond which ecological discontinuities with socially, economically and environmentally unacceptable, and possibly irreversible,

consequences are likely to occur¹. To avoid such consequences, it is important to identify where such thresholds might exist and assess how close we are of reaching them.

4.3 RELATED POLICY DOCUMENTS

Provide list of names and web links of policy documents (EU or other e.g. international, regional) referred to in the policy context description. Consult the existing EEA policy catalogue www.eea.europa.eu/policy-documents. If the reference is not present, then name of policy document and valid link should be provided. For EU legislation, consult EUR-lex for links at <http://eur-lex.europa.eu/en/index.htm>.

5. KEY POLICY QUESTION and 6. SPECIFIC POLICY QUESTION(S)

The key policy question derives from EU policies and is associated to the rationale of the indicator. **There is only one key policy question**, which might be supported by other specific policy questions, if relevant in the EU policy context.

7. METHODOLOGY

7.1 METHODOLOGY FOR INDICATOR CALCULATION

The user has to be able to reproduce any calculation that has been performed under the indicator, using the underpinning datasets. Therefore indicate which **data sets** are being used and provide the methodology used to construct the indicator, describing the **analytical framework and guidelines with exact formulas for calculating its parameters** (including derived measures).

Also, provide technical definition of used terms, when necessary. Although this section is technical, it should be written as clear and objective as possible, meaning more in-depth descriptions of methodology should be provided by linking appropriate references in the methodology references section (below). If the methodology is too complex to be summarised in such a way (namely steps to get from the raw data to the actual data used for map and graph production), a pdf file with the full description of all steps (incl. tables and figures if needed) should be provided. This document will then be anchored to the methodology field in the IMS.

7.2 METHODOLOGY FOR GAP FILLING

State where **geographical or temporal data gaps exist (if any) and provide the methodology used to fill those data gaps**, if applicable, which includes stating when a decision was made to only use a particular period from a data set, and the reason for this (e.g. to allow comparisons between countries, changes in data collection methodologies). If an international (or regional) guideline is used, state to what extent the guideline is being followed or modified, if deviations are substantial. Include, as appropriate, a description of procedures for estimating missing values, consolidating data and cross-checking data sources. **Data uncertainties (namely on the quality, or comparability of data) do not come here, but under the data uncertainties section (below)**. They can, however, be mentioned here, if needed to understand the rationale behind the methodology for gap filling.

¹ Ecologic Institute and SERI (2010) *Establishing Environmental Sustainability Thresholds and Indicators*. Final report to the European Commission's DG Environment, November 2010.

7.3 METHODOLOGY REFERENCES

Provide specific scientific references for the methodology used in indicator calculation. If the methodology is publically available in detail in some other sources, provide the link to the source.

8. DATA SPECIFICATIONS

EEA DATA REFERENCES

EXTERNAL DATA REFERENCES

This section lists all the general data sets used in the indicator construction, linking them to EEA's data catalogues. It only lists the data sets and sources, therefore specific information on data should come together with the methodology section and with the metadata checklists provided with the graphs and maps (see Assessment Part further below). **EEA data catalogues** (for EEA and external data sets – see reference below and at the end) **should be used to check if the data sets are already listed there**, in which case the link provided in the catalogue should be used. **If not, please provide the following general information on the dataset: name, provider/owner, URL, path.** The path is a textual description of how to get to the dataset from the data source landing page. This information is crucial to allow its insertion in the catalogue.

EEA data sets catalogue available at www.eea.europa.eu/data-and-maps/data

External data sets catalogue available at www.eea.europa.eu/data-and-maps/data/external

9. UNCERTAINTIES

Summarize uncertainties related to methodology, data sets and indicator rationale. **All these aspects are essential to understand the robustness of the assessments and key messages made.** It also provides information regarding current shortcomings that need further work, although further work should only be detailed in the further work section (below). References can also be provided, although there is no specific field for them so they should be inserted at the end of the text in each field.

9.1 METHODOLOGY UNCERTAINTY

9.2 DATA SETS UNCERTAINTY

Provide any uncertainties and/or disparities regarding the used datasets (e.g. representativeness of data on national level, quality and comparability issues). **Geographical and time coverage information/gaps on EU or/and regional level can be highlighted here, if relevant, however these should be specified under the methodology for gap filling section, where it is explained how to address these gaps.**

9.3 RATIONALE UNCERTAINTY

This field is particularly relevant when proxies are being used to assess a policy question, rather than actual indicators.

10. FURTHER WORK

SHORT-TERM WORK

LONG-TERM WORK

Describe short-term (in the coming year) and medium-term (in the frame of EEA multi-annual strategy) plans for making improvements to the indicator and note any

improvements that were implemented in the past year. Technical or other (e.g. financial, institutional) constraints that may exist for implementing these plans should also be noted, if applicable. This information is mainly for EEA use and may not be published in the IMS.

PART B. INDICATOR ASSESSMENT

Only general considerations are given for this part, and not necessarily for each section.

Assessment Contents

- 1) Key policy question
 - a) Key Message
 - b) Key Figures
 - c) Key assessment text
- 2) Specific policy questions (when applicable)
 - a) Specific figures (if necessary)
 - b) Specific assessment text

KEY MESSAGE (BOX)

Key message must clearly answer the key policy question, summing up the most important trends and conclusions for the parameters used in the assessment. If applicable, countries or regional benchmarking should also appear.

Key messages contain factual statements and are usually 2-3 bullet points (or short paragraphs). Each point should be 1-2 sentences and not a long text, nor a plain copy of the assessment text. The message text should be simple, with key numbers only, if necessary.

FIGURES (MAPS AND GRAPHS) AND ASSOCIATED DATA

Detailed guidelines for authors providing and delivering maps and graphs are available from EEA's wiki-pages (see below and references at the end). The following are a summary of the most important aspects to be considered when delivering figures and associated data with the assessments. However, whether maps or graphs should be used as a basis for indicators or in EEA reports, a kick-off meeting should be arranged with SES2 at an early stage, so that appropriate planning for publication is possible.

Each map and graph must be accompanied by its respective **data package**, i.e.

- 1) A figure, in form of a map or a graph;
- 2) The underpinning data behind a map or a graph;
- 3) In case of graphs, the “drill-down” (disaggregated) data and;
- 4) The metadata behind a map or a graph.

Graphs

In the case of graphs, the data package must be provided in a XLS-file, **using the EEA specific template for graphs**, downloadable at:

<https://svn.eionet.europa.eu/projects/Zope/wiki/DataServiceMetadataInstructions/DM-DIpackageGraphs>.

The graph excel template is organized as follows:

- Each graph should have the following tabs (work sheets) filled relating to the drill-down data(drill-down data tab(s) and data info tab), the underpinning data used for production of the graph (Data for graph tab), the graph itself (Graph tab), and the metadata for the graph (Metadata tab). If a graph is based on several ‘drill-down’ datasets, each dataset requires separate tabs in the excel-file and each dataset should be described in the ‘data info’ tab.
- Normally, none of these tabs should be edited or changed by EEA staff, meaning valid links between the graph and the underpinning data should be secured. Data that links to other (external) files or datasets should be broken.
- If an indicator has several graphs, **one XLS-file per graph should be used, with the 5 tabs filled for each graph.**

For more information on Data package requirements for graphs, see

<https://svn.eionet.europa.eu/projects/Zope/wiki/DataServiceMetadataInstructions/DM-DIpackageGraphs>

Maps

All maps delivered to EEA also have a **data package**, which consists of:

- A draft map
- Delivery of underpinning data behind the map (tabular data, grid-files, shp-files, geodatabases)
- Mandatory metadata (using the map metadata checklist downloadable at <https://svn.eionet.europa.eu/projects/Zope/wiki/DataServiceMetadataInstructions/DMDIpackageMaps>).

The ESRI environment is the preferred environment for producing maps, but not mandatory (e.g. GRID or raster data are also accepted). If using ESRI, data should be delivered in shape-file format or geodatabases, using the templates provided at <https://svn.eionet.europa.eu/projects/Zope/wiki/DataServiceMetadataInstructions/DM-DIpackageMaps>. The drafts maps and the underpinning data are very important and they should be provided in such a way that the map can be easily reproduced at the EEA, so coordinates and parameters shown in the map or any other relevant information should be clear when delivering the data.

Maps therefore do not have a single template for delivery, as graphs do. However, there is a map metadata checklist which is common and this should be used when delivering maps (see link above or at the end). **The description of the methodology to produce the map from the data should be described in this metadata checklist.** Further information about GIS-formats is available at <http://www.eionet.europa.eu/gis/>.

Metadata

Metadata for graphs and maps must be provided by filling in the appropriate metadata checklists. The name, provider/owner, URL and path of the datasets used in each figure should be the same as in the data specification section in the Specification part. These checklists will then also provide additional information necessary to understand the graphs and maps, as well as their construction (see information fields below).

As described above, the metadata checklist is part of the graph excel template, while for maps there is an individual metadata checklist that should accompany the delivery of the map and its underpinning data. **These checklists will hold the information needed when uploading graphs and maps to the IMS, so it is very important that these be correctly filled.**

Therefore, each map and/or graph must have an individual metadata checklist associated to it. However, if a figure uses several data sets, they should be named and described one after each other **in the same** checklist. Red marked (*) metadata elements in the checklists are mandatory elements. Without this information maps and graphs cannot be uploaded and published via the IMS service.

When filling the metadata checklist, special consideration should be taken in the following fields:

- Figure title – it should be short and objective;
- Temporal and geographical coverage – geographical acronyms or country/regional groupings should be harmonized across EEA indicators as much as possible. This should be checked with EEA (SES2), in case of doubt.
- Figure description – a single statement saying what the graph or map is actually showing (and not just measuring), plus any additional information **necessary to understand the figure** (e.g. geographical and temporal coverage of the data sets or countries grouping). **Significant limitations to data sets coverage** in relation to the specification should also be mentioned here. Other specific data issues or methodological considerations (e.g. confidence intervals) should not appear here, but under additional information.
- Methodology – describe any additional methodology for construction of the graphs or maps, including actual data manipulation, if different from the one in the specification. This field is particularly important for map production.
- Additional information – Provide information **relevant to understanding the figure but not critical**, which isn't described in the indicator specification or which is important to highlight from there.
- Copyrights – provide information on copyright permissions for information used in EEA productions, especially when it is not public.
- Data sets – Provide data sets names as given by the source, as well as **valid links (URL) to all the used data sets** (not just to the source's webpage) and a path which describe the generic position of the data. EEA data catalogue (for EEA and external data sets – see reference at the end) should be used to check if the data sets are already listed there, in which case the link provided in the catalogue should be used.

- Data set usage - Data sets should also be tagged as “indicator data set”, if the dataset was built from other sets for the indicator only or as “main data set”, if the data retrieved directly from some source, with no manipulation.
- EPSG code (for maps only): This is a reference to the projection in which the map data has been defined. Instead of describing the projection EEA uses the EPSG code, which is a unique key that points at the right Geodetic Parameters of the projection. The EPSG codes are defined here: <http://www.epsg-registry.org/>

ASSESSMENT TEXT

The assessment text supports the policy questions at an EU level, but also on relevant international or regional aspects, as identified in the policy context section in the specifications part. An assessment should be an evaluation of recent trends, taking into account the policy context and targets. A long historical perspective is important to show an overall trend, but it might be important to focus on a determined period because of the implementation of a new policy or policy measure, for example.

The text must be **objective, impartial and it must only contain factual statements**. This means qualitative analyses should be restrained to a minimum. Figures (maps and graphs) should be directly linked to the assessment, meaning they should be **specifically referenced in the text**. The assessment **should not be long** and it should be structured around the parameters used for the indicator calculation or around a countries/regional perspective, whichever is more relevant under the policy context. If relevant, **provide references** used or cited that are not in the specification part as text as well at the end of the assessment text, since not specific field exists for assessment references.

Clearly **distinguish between assessments based on data and on expert opinion** from other sources (e.g. other international reports, scientific papers). If you do provide expert opinion, direct citations must not be used and all the statements must be referenced in the text, as well as the references provided with the text.

REFERENCES AND LINKS

Guidelines for maps and graphs, including templates and metadata checklists:

Guide for authors providing and delivering maps and graphs, for EEA indicators and reports:

<https://svn.eionet.europa.eu/projects/Zope/wiki/DataServiceMetadataInstructions>

Data package requirements for graphs, including excel template (which already includes the graph metadata checklist):

<https://svn.eionet.europa.eu/projects/Zope/wiki/DataServiceMetadataInstructions/DM-DIpackageGraphs>

Data package requirements for maps, including ESRI templates and the map metadata checklist:

<https://svn.eionet.europa.eu/projects/Zope/wiki/DataServiceMetadataInstructions/DM-DIpackageMaps>

Guidelines, templates and services for use in EEA - Eionet when handling geographic information systems, maps and geographic spatial data:

<http://www.eionet.europa.eu/gis/>.

EPSG codes are defined here: <http://www.epsg-registry.org/>

EEA data and documents catalogues:

EEA catalogue for policy documents available at www.eea.europa.eu/policy-documents

EUR-lex for EU legislation links and description available at <http://eur-lex.europa.eu/en/index.htm>

EEA data sets catalogue available at www.eea.europa.eu/data-and-maps/data

External data sets catalogue available at www.eea.europa.eu/data-and-maps/data/external

Others:

European data centres, overview: <http://www.eea.europa.eu/data-and-maps/european-data-centres/european-data-centres>

Information on the CSI can be found in the 2005 report

http://reports.eea.europa.eu/technical_report_2005_1/en/CSI-tech1_2005_FINAL-web.pdf

Template for Indicator Specification

Indicator Set (if applicable) [Text]	Date [Text] Author (s) [Text]
Indicator Title [Text]	

Rationale
Justification for indicator selection (namely environmental context) [text]
Scientific references (<i>with valid link for publically available ones</i>) [text]

Indicator definition
Indicator definition [text]
Units [text]

Policy context and targets
Policy context description [text]
Targets [text]
Related policy documents – <i>Check EEA policy catalogue for links</i> [text]

Policy Question(s)
Key policy question [text]
Specific policy question (s) (if applicable) [text]

Methodology
Methodology for indicator calculation (including description of data used) [text]
Methodology for gap filling [text]
Methodology references [text]

Data specifications
EEA data references – <i>check EEA data catalogues first before inserting new links. If not listed, please provide dataset name, provider/owner, URL and path.</i> Data set 1 [data source name + data set name + hyperlink to data set from catalogue] Data set 2 [data source name + data set name + hyperlink to data set from catalogue] Etc.
External data references – <i>check EEA data catalogues first before inserting new links. If not listed, please provide dataset name, provider/owner, URL and path.</i> Data set 1 [data source name + data set name + hyperlink to dataset from catalogue] Data set 2 [data source name + data set name + hyperlink to dataset from catalogue] Etc.

Uncertainties
Methodology Uncertainty [text]
Data sets uncertainty [text]
Rationale uncertainty [text]

Further work
Short-term work [text]
Long-term work [text]

Template for Indicator Assessment

Indicator Set (if applicable) [Text]	Date [Text] Author (s) [Text]
Indicator Title [Text]	

Key policy question
Key message [text]

Key figure(s) – <i>A copy of the figures (graphs or maps) should be inserted here, together with the Forum link to the respective data package files containing the drill-down data, underpinning data and metadata checklists (use excel template for graphs).</i>
Figure 1 [title + name and link in Forum of data package file containing map or graph, underpinning data, drill-down data and associated information, and metadata]
Figure 2 [title + name and link in Forum of data package file containing map or graph, underpinning data, drill-down data and associated information, and metadata] Etc.

Key assessment text
Key assessment text [text]
References in key assessment text [text]

Specific policy question(s) (if applicable)
Specific figure(s) - <i>A copy of the figures (graphs or maps) should be inserted here, together with the link Forum to the respective data package files containing the drill-down data, underpinning data and metadata checklists (use excel template for graphs).</i>
Figure 1 [title + name and link in Forum of data package file containing map or graph, underpinning data, drill-down data and associated information, and metadata]

Specific assessment text
Specific assessment text [text]
References in specific assessment text [text]
