

European Topic Centre on Catalogue of Data Sources

Selection Criteria for the Catalogue of Data Sources

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SUMMARY

Metainformation¹ for the EEA metadatabase (hereinafter CDS²), discussed in this report, are descriptions of written reports, magazine articles, CD-ROMs, maps, data files, databases, WEB pages and the EIONET directory. The objective for the CDS is to provide the European environmental community with relevant metainformation at European level. A common understanding that there should be a core set of metainformation available on the CDS may be discerned among the actors on the EIONET³ scene. This report presents criteria on how to select that metainformation.

The methodology used reflects the current use or demand for data as the most important criterion. In addition, different weights are given to sets of data and other items depending of the pressure of demand for them, thus giving a method of selection. Quality aspects are discussed and it is proposed that poor quality data records be improved before they can be accepted for entry in the metadatabase. In the future it should be regarded as normal procedure to deliver metainformation to the CDS with quality information built in into the records delivered.

A simple procedure is proposed, by which it is possible to designate a score for the metainformation candidate record for the CDS. The scoring procedure operates in a way closely resembling a taxonomic system for species. The scores vary in between 0 and 5, where 5 is the highest possible score.

The following are proposed:

To qualify at all for mention as a relevant metainformation it should have some relevance from an international or a European point of view.

It is proposed that the CDS should be kept as a high quality information tool with metainformation of high quality having the highest relevance to the assessment activities within the EIONET.

It is proposed that a scoring system be used to find a way of determining which metainformation should populate the CDS. The proposed scoring system takes into account availability of metainformation, metainformation quality, its sectorial and thematic relevance, the cost of the production of metainformation, geographical coverage, update and maintenance.

It is proposed that metainformation scoring 4 and 5 in the proposed scoring procedure will be entered in the CDS.

It is proposed that metainformation be collected on items from 1994 onwards. However, metainformation on databases covering long time series starting before 1994, and still being updated, should be accepted.

It is proposed that the metainformation collection should start in 1998 by making full use of the proposed selection criteria and that the metadatabase will be in a steady-state operational mode by the end of year 2000.

As a result of the proposals the CDS should consist of metainformation records on the following environmental items:

- Data deliveries to the EU as a result of legislative reporting
- Data requested by the EEA/EIONET on a regular and scheduled basis
- Data requested by several international bodies

¹ Metadata and metainformation are terms used to describe different information resources. Most often they are mixed but the ideal would be to use "metadata" to describe databases and "metainformation" to describe information resources as a whole.

² CDS: Catalogue of Data Sources

³ EIONET: European Environmental Information and Observation Network

- Items produced by the EEA/EIONET
- Environmental databases operated by UN, OECD, EU, FAO and environmental conventions such as HELCOM etc.
- Official National State of the Environment Reports
- Official National Environmental Monitoring Programmes
- National Environmental Resource Libraries
- National metadatabases or reference databases on the environment

For national resource libraries and databases only meta-information on the databases and the libraries themselves (and not on their real data sets) should be kept in the CDS.

As a result, if the proposed selection criteria are used, it is estimated that approximately 300 metadata records per country and year would be produced, at an estimated annual cost of 4500 ECU per country.

1. INTRODUCTION

1.1. ETC/CDS Work

The work plan of the ETC/CDS comprises the development activities for a common multilingual thesaurus GEMET⁴, the development of different software to help to collect and disseminate meta-information and to introduce its tools within the EIONET framework. It is of great importance for the EEA to create a metadatabase that will be recognised as a quality metadatabase meeting high standards of reliability and consistency. The most important dissemination tool would be the WebCDS residing on the Internet and which became operational as long ago as May 1997.

The scope of this report is to focus on the need for meta-information as a means of gaining access to real data sets in the environmental work at European level. Meta-information of interest to users in the environmental community not only concerns environmental conditions but also includes meta-information on a wide range of conditions of society as a whole. One of the reasons for this is the more common use of the DPSIR⁵ methodology in environmental assessment studies.

1.2. Stepwise Approach

This report and its proposals reflect the current varying treatment of meta-information in the different European countries. The very varied situation ranges from no national activity at all to managing a full meta-information database. The proposed methodology allows a stepwise approach to development of a European meta-information CDS tool. In the future, when the level proposed in this report has been attained, it will be possible to make a new decision to lower the threshold, thus making it possible to enter more information into the database.

In the last decade there has been an increasing demand for background materials for better policy and decision making in the environmental field. This has led to an increase in evaluations and integrated environmental assessments. Activities of this kind are also one of the key functions of the EEA itself.

Environmental sciences are multidisciplinary *per se*. To achieve a broader understanding of the environmental problems in an evaluation sense, still more fields will need to be appended to the list of disciplines. Examples of such new fields recently recognised are the different economic sectors of society and basic demographic conditions.

The basis of this report and its methodology reflects the need for data in all these sectors and different areas of interest to meet the demand from evaluators and assessment makers.

1.3. CDS Users

It has been assumed that the following groups are the main users of the CDS:

- EEA and its affiliated bodies such as the ETCs
- National Focal Points
- National Reference Centres
- Main Component Elements
- EU Commission and its DGs including EUROSTAT (with GISCO)

⁴ GEMET, General European Multilingual Environmental Thesaurus

⁵ DPSIR, Driving Forces, Pressure, State, Impact and Response indicator approach

- EU Parliament
- Global Environmental Conventions
- Regional Environmental Conventions
- NGOs , the General Public and organisations

This year the EU Commission is revising basic regulation R1210/90 EEC, governing the EEA and its operations. It has been announced that the EEA "*should develop into a European Reference Centre, a one-stop-shop for environmental information and data with modern Internet-based communications to facilitate access across Europe*". The CDS fits well into such a framework.

1.4. Metainformation

Data and information resources required for environmental assessment and evaluation processes are stored in many hands in many countries. Some data might also be restricted and made available only on the basis of a detailed contract between the user and data provider. It is therefore impossible for any single user or evaluator always to be able to rely upon his or her own databases. Co-operation between many actors is therefore essential in order to make data available.

The use of metainformation is a shortcut to finding the real data sets or other information resources and to gaining access to them. Typically, metainformation consist of formalised descriptions of information resources. These may be of many different kinds, e.g., books, reports, CD-ROMs, magazine articles, databases and digital data files. When compiled in a register the metainformation will provide an excellent catalogue of where to find what data, given a common classification system. The objective for the CDS is to provide the European environmental community with relevant metainformation at European level.

The technical solutions so far available in the ETC/CDS context are the GEMET, the WinCDS and the WebCDS. Ideally, the different national reference databases could use the WinCDS to operate and maintain national CDSs. Extractions from national CDS into the European CDS, for presentation on the Internet by the WebCDS, could be made on schedule. It might be possible, (as has already been done with the WinCDS) to disseminate the WebCDS software for national use as well. This report, however, does not discuss technical solutions for the CDS in any further detail.

1.5. The Selection Criteria Project

Intensive discussions in the ETC/CDS Advisory Committee, among the National Focal Points and within the European Environment Agency itself, have concentrated on the lack of clear aims as to the kind of metainformation that should be stored and updated in the CDS. Fears have been expressed that a mandatory request would have to be made to NFPs⁶ to deliver metainformation on all (or a huge number of) data sets produced in the various countries to the CDS, restricted information included. Some countries have also expressed concern that the CDS might not be of interest to them in a national sense and there would be therefore no incentive to maintain deliveries. Some of the fears and doubts may be due to the present lack or scarcity of national resources in many countries for the production of metainformation, including delivery to a European CDS. In addition, in many of the member states currently have no national metadatabases in operation from which to extract data.

However, it may be possible to find a common understanding in the member states for developing a core set of accessible metainformation on the CDS. As a result of the work in this project (task 6.1 in the ETC/CDS Work programme for 1996/97), criteria have been proposed for selection metainformation for the CDS.

⁶ NFP, National Focal Point (to EEA)

2. LIMITATIONS

This report does not propose general methodologies for indexing or rules for the classification of metainformation and the classification systems. These are of course very important issues which must be dealt with. This could be a task for future joint project with the experts on GEMET and library classification systems.

The question of who delivers metainformation records is not dealt with in this report, although this question has been raised several times during the processing of reviewing the report. It thus seems important to develop delivery plans for future maintenance and updates of the database. This report assumes that the main national deliveries to the CDS will pass through the NFPs (or their nominees) in the various countries.

This report does not discuss technical software or hardware solutions for the CDS.

3. METHODOLOGY

3.1. Metainformation at European Level, the very Basic Selection Criterion

To qualify at all as relevant metainformation for the CDS, metainformation should at least have some relevance from an international or European viewpoint. It could be said that this fact is the very basic or axiomatic selection criterion for an ETC/CDS metainformation record. More specific criteria are discussed in the following sections.

3.2. The Demand and Current Use of Information Resources are the Main Selection Criteria

It seems reasonable that real data or information resources currently in use by international bodies for evaluation and assessment purposes, are those that should also be the most important for the CDS.

A simple procedure is used, whereby a score is given to a metainformation candidate record for the CDS. Scores can vary from 0 to 5, where 5 is the highest possible score.

The current use or demand for data is the most important criterion. Different weight is given to data sets and other issues depending of the pressure of demand, thus providing a method for selection. This is explained in further detail below.

An inventory of data sets and reports currently in use for international reporting has been made and is presented in Annex 1. Most of the information resources listed originate from a national inventory on international reporting carried out at the Swedish Environmental Protection Agency. Data requests as they appeared in the guideline for the Dobris+3 report have been added as well as some (albeit incomplete) information from central and southern Europe. The material is grouped by sector. Some records appear on more than one row. This is due to the multi-sectorial reporting in some inventories, e.g., CORINAIR and the chosen grouping. The inventory in Annex 1 is used to produce the first proposal for an actual selection of metainformation records to be included in the CDS, the Annex 1 column headed "score".

3.3. Additional Criteria

The *sectorial and thematic relevance* of real data sets and other items are discussed. Issues of a great importance for the establishment of environmental action plans should be regarded as important for the CDS. Among all sectors, themes and issues it may particularly be noted that some of those entering the environmental scene in a late phase do not yet have fully developed methodologies for monitoring, analyses and assessment. Metainformation from those sources should therefore be treated with particular care. In the scoring procedure described below, allowances should be made if their metainformation records are not as good as those originating from the more traditional environmental actors. The themes, sectors and issues that should be given relevance in this sense are discussed further below.

Metainformation *quality*, the actual possibility of *obtaining* metainformation, keeping it *updated*, and the *cost* for obtaining it should also be considered selection criteria. These criteria are also discussed below. The quality criteria, dealing with comparability and the common standard for subject indexing, are very important. Another awkward question to be dealt with is the possibility that some of the metainformation records might be restricted in some countries. It may also be possible for metainformation records to be produced and published within the frame of the CDS even though the

real information resource or data set is restricted. One case already familiar to the data processors within the EIONET concerns the production of activity rates to accompany the emission factors within the CORINAIR inventories.

3.4. Scoring Procedure

A simple procedure is used, whereby a score is given to a metainformation candidate record for the CDS. The scoring procedure operates in a way closely resembling a taxonomic determining system for species. The scores vary from 0 to 5, where 5 is the highest possible score.

It is proposed that the scores 4 and 5 will render a metainformation record eligible for inclusion in the CDS. The basis for this proposal is the recognition and reviewing process for this report among peers during its development.

3.5. Different Media used for Real Data

In this report the main prerequisite for developing metainformation criteria does not concern the media on which the real data is originally appears. However, it might be useful to go through those media which may be considered to be carriers of real data sources and from which metainformation can be generated.

3.5.1. *Published Written Material, CD-ROMs and WEB-Pages*

Written material as reports, articles, CD-ROMs etc are taken into consideration. They should be indexed according to the GEMET in order to fit into the ETC/CDS system of harmonised indexed metainformation. A list of possible written material candidates for the CDS can be found in Annex 1, Table 2.

Materials from web sites are considered of interest in the same way as printed material. The rapid turnover of pages on the Internet, however, makes it more difficult to apply the selection criteria for the ETC/CDS database to these resources. Moreover, a web site might consist of one single page or many pages. A metainformation record can be connected to virtually every page, to the web site as such or to suitable grouping of pages.

3.5.2. *Maps*

Maps produced for environmental purposes are of interest. They can be in any format or reside on several media available for use by the environment community.

3.5.3. *Data Files*

Descriptions of data files or other digital information stored in databases are the data most commonly thought to inhabit an environmental metadatabase. This will probably also apply to the CDS.

3.5.4. *EIONET Directory (Address Database)*

The EIONET directory is the address database and thus describes the institutions and persons connected to the EIONET. It has already been decided and agreed among NFPs that the EIONET directory should be included in the ETC/CDS database.

4. PROPOSED SELECTION CRITERIA

4.1. Discussion

4.1.1. Requirements

Since the ETC/CDS database should serve the European environmental community in its efforts to create evaluations and assessments of the environment in Europe, it is an axiomatic prerequisite that data should have at least some relevance from an international or European point of view. This means that information resources merely mirroring national conditions not of international interest does not qualify as a resource identified in the ETC/CDS database.

National reference metadata of interest to the international community and identified during the review process for the report are descriptions of

- Official National State of the Environment Reports
- Official National Environmental Monitoring Programmes
- National Environmental Resource Libraries
- National metadatabases or Reference databases on the Environment

Metainformation on these issues should be included in the CDS.

A large number of data sets and other information resources are already in circulation in the field of international and European environmental reporting. An inventory of this material is presented in Annex 1 with a view to showing what is included as important from a reporting viewpoint. It contains the current requests and the demand for data for use in compiling scheduled environmental evaluations, creating scenarios or reporting to various international fora on the state of environment or pollution rates for compliance reasons. The inventory is more complete for northern Europe than for the south, where some information is clearly lacking. However, this may have little effect on further discussion of the selection criteria. The actual proposed selection will be affected however, since full information on the existing data requirements is not available.

Data sets, apart from those generated for international environmental reporting purposes (and shown in Annex 1), can also be found. They are probably produced ad-hoc within the international community, being generated to carry out different projects or as the results of specific research activities. It is not possible or meaningful to set up an inventory of such data sets. However, from time to time they may be of sufficient importance to meet the criteria and then qualify for inclusion in the CDS.

Records of metainformation for possible entry in the ETC/CDS database might originate from the indexing of articles, books and web pages. The flood of information into the general library classification systems is very large. It is far beyond the scope of the CDS to include general library classification within its walls. The inclusion of links to relevant library services already available on environmental topics should be considered, however. It is therefore proposed that metainformation concerning National Resource Libraries themselves be collected in order to create metainformation records that can be used to link those libraries into the CDS.

4.1.2. Quality Assurance

The role of quality assurance as a selection criteria for metainformation in the CDS should also be discussed. This is dealt with further below.

4.1.3. Scores

Different criteria will affect the investigated metainformation record examined and give each metainformation set a relative score:

- very high 5
- high 4
- medium 3
- low 2
- unusable 1
-

The given score will determine whether the metainformation record qualifies for inclusion in the CDS. The designation procedure and scoring are discussed in the next section and the limit for inclusion of the record in the database is discussed in the recognition section, 5.2.

4.1.4. Formal EC Legislative Demands

Many data sets and reports are delivered to different EU institutions pursuant to EC environmental legislation. Metainformation describing these items would be of interest for the CDS and they should have the highest score if they are produced on a regular basis.

Proposed score: 5

It is worth noting that the formal regulatory demand made of the EEA itself is that the EEA should improve data availability, data harmonisation, comparability and consistency. These matters are more of a general nature and are discussed in the section 4.1.11 on quality.

4.1.5. The Potential Use of Information Resources

4.1.5.1. The Pressure of Demand for Data Periodically Requested or Used

Many data sets and other items produced are presented internationally to many recipients such as global conventions, regional conventions and the EU commission and /or the EEA. In addition neighbouring countries frequently have mutual agreements on information- sharing on issues of common interest.

Data available in different places vary with the relative importance they have been given in the past. One useful approach is to grade importance in relation to the obligations and requests made to governments from various international bodies to deliver real data sets and reports. It is reasonable to assume that if many such bodies require data on a certain issue, that piece of information is likely to be important. Metainformation on such data sets or reports should be given a high score.

Proposed score if the information resource is requested from at least three bodies: 5
Proposed score if the information resource is requested from at least two bodies: 4
Proposed score if the information resource is requested from at least one body: 3

The EEA/EIONET should be regarded as an authoritative international body and should be treated in the same way as the other international bodies discussed in the previous paragraph on "pressure of demand". Metainformation describing information resources requested or used should therefore be given a high score. Since the CDS is the EEA metainformation tool it is fair to score EEA/EIONET data one point higher, however.

A distinction should be drawn between metainformation describing information resources that are requested and used on a regular basis and those used ad hoc or for a single project. The score should be higher for data produced on a regular basis.

Proposed score if the information resource is requested or used regularly by the EEA/EIONET: 5
Proposed score if the information resource is not requested or used on a regularly basis by the EEA/EIONET: 4⁷

In order to maintain high credibility as a quality metadatabase the quality rules, requirements or conditions for metainformation should be the same for the EEA itself as for other metainformation providers. Please refer to the discussion below on metainformation quality, 4.1.11.

4.1.5.2. Different Geographical Aggregation Levels Required for a Specific Determinant

Various international fora frequently request data on the same issue. It is also common that these fora require different levels of geographical aggregation to meet their specific needs. In these cases an attempt should be made to confine the metainformation records at European level in the CDS to data sets representing country levels. But if EC legislation requires more detailed data, the metainformation records in the CDS should meet those requirements.

4.1.6. Sectorial and Thematic Relevance

Metainformation describing information resources from sectors and themes ranked highly because of their great environmental interest should be considered important for the CDS. Some of these sectors and themes are still emerging and knowledge is evolving. It is therefore important to encourage developments in those emerging fields and the EEA should try to place additional emphasis on this metainformation production.

Some real data records from evolving areas may not yet fulfil all quality assurance requirements. In order not to discriminate against metainformation records from emerging sectors with a high environmental interest potential, these metainformation records should be given an extra scoring point.

Sectors and themes to be taken into account should be those raised in the Fifth Action Programme and the Dobris+3 report: Industry, Energy, Transport, Agriculture, Fishery, Tourism, Climate change, Acidification, Chemicals, Radiation, Ozone depletion, Air quality, Water resources, Marine environment, Nature and biodiversity, Natural Resources, Urban environment, Noise, Coastal zones, Soils, Waste management and Land use.

Among all those sectors, themes and issues the following should be given a high priority according to the conclusions and findings of the European Environment Agency Review of the 5th Action Program:

- CO₂ emissions
- Traffic related issues: NO_x emissions and noise
- Water abstraction
- Quality of ground water
- Quality of marine waters
- Chemicals in the environment
- Erosion and desertification

Proposed increase of score for metainformation from the sectors and themes in the list above: 1.

4.1.7. Possibilities of Obtaining Metainformation

Since it is important to present high quality data in the CDS (e.g. consistent data with no geographical gaps), no attempt should be made to collect a certain category or type of metainformation unless it is clear that it is practicable from administrative and networking conditions.

⁷ If there is an additional higher pressure of demand from outside the EEA/EIONET the score is 5.

The reader of this report should also refer to the comments below on metainformation updating requirements, 4.1.13 and the comments in section 4.1.12 on "Geographical coverage".

Obstacles to be taken into account are:

- Lack of specification of the real information resource that is described by the metainformation
- Real data item and its metainformation records are restricted
- Data providers do not have the knowledge and skills to process information/data of a specific kind or on a specific issue
- Geographical coverage is severely affected by delivery problems

If there is great interest in proceeding with development in such areas, the ETC/CDS or the EEA itself should endeavour to start a development project on this specific issue before collecting metainformation records for the CDS.

It might be the case, however, that metainformation can nonetheless be delivered from a vast majority of countries on a certain issue. Although the consistency between countries will suffer, it may still be useful to include important metainformation in the CDS.

Proposed reduction of score for metainformation which is difficult to produce: 1.

4.1.8. Guideline on the Classification of Depth and Level of Metainformation Record Aggregation

Although this report does not deal with classification methodologies, it is important to discuss the degree of detail with which a real data set or report should be described so as to avoid overflow or counterproductiveness in the system. The following guidelines of the depth of the classification should therefore be followed. Please refer also to the comments under section 4.1.10 below on the costs of producing metainformation.

- Written material and the like: classification at a level sufficing to describe the report on an upper thesaurus (GEMET) level, preferably level 2.
- Data series such as those listed in Annex I: Classification at country level even if the actual data series contains broader and more detailed material. The information should relate to main areas of a river basin, lake, coastal area etc.
- The determinants of (e.g., total phosphorus, total Hg etc.) should be given at an aggregate level.
- Times resolution should be confined to a yearly basis (if appropriate)

With regard to the current status of GEMET (version 1.0), it must be stated here that additional items or lists will have to be introduced to develop a high consistency metadatabase for the CDS; geographical information such as countries, cities, municipalities, rivers, lakes, drainage areas, coastal areas etc. There is also a pressing need for the main determinants related to international reporting on pollution, such as total phosphorus, CO₂, etc.

It is also of importance to create a forum for people involved in the indexing process, in order to facilitate the transparency and comparability of the material being indexed. It is proposed that this index forum meet once a year within the framework of the ETC/CDS. The forum might also propose to develop a guideline for indexing if needed.

4.1.9. Proposed Limit for Retrospectiveness

In order to avoid overloading the information supply channels available, a strict approach to retrospectiveness is recommended. It is proposed that, as the general rule, metainformation should not be gathered on written material available prior to 1994. This is the same year as the EEA started its operations in Copenhagen. This rule should apply particularly to written items such as reports and magazine articles etc. Databases covering long time series, starting before 1994, and still being updated, should be accepted.

4.1.10. Cost of Producing Metainformation

There is a cost involved in producing metainformation. Whenever a decision is made to start indexing a certain type of material this must be considered a long-term cost. Given good computer software with a well-integrated thesaurus, indexers themselves argue, the level of indexing is not the main factor for determining the cost. Instead it is of greater importance to decide the very type of material to be indexed.

It has been estimated that the initial creation of a metainformation record will take 30 min (15 ECU) per item as an average, including proper indexing and registration in a database. The same effort, however, is involved in creating the (same) national metainformation record, which already occurs in several member states. Hence, it is not self-evident, that the need for metainformation at the ETC/CDS will always increase costs. Nevertheless, the cost will be evident to countries not currently operating metatdata or reference databases of their own. On the other hand, countries already operating a national metainformation system might meet the cost of selecting records to submit to the CDS. Additional costs incurred by countries will then be unevenly distributed among the EEA member states.

Different information resource material generates different costs because their abundance varies. Magazine articles and web pages currently dominate the information flow. It is therefore necessary to have a conservative view on how much material of this kind should be indexed for the cause of ETC/CDS. Please refer also to the comments above under section 4.1.8, "Aggregation of metainformation".

If the proposals in this report are put into practice, some 300 metainformation records per year and country will be created, at a cost of approximately 4500 ECU.

In certain cases the creation of metainformation records may be difficult to index or create due to a lack of classification systems in a specific area etc. Costs could then rise dramatically. In such cases the score should be reduced by one point.

Proposed decrease of score for metainformation involving high production costs⁸ : 1.

4.1.11. Metainformation Quality

4.1.11.1. Metainformation Standards

The CDS is designed to follow the GEMET (thesaurus) standards for metainformation so as to improve accessibility, comparability and consistency between countries and within issues, themes and sectors. Indexing of metainformation in the ETC/CDS metatdatabase should therefore follow GEMET set of index terms. The better the compliance to GEMET the more useful the database record will be. Metainformation records not indexed or not transferable into indices according to GEMET should be given a relatively low score: 3. The efforts already made in 1997 to collect metainformation have not fully taken this requirement into consideration. This gap should be recognised and filled in conjunction with subsequent updates. Please refer also the proposals in section 8 on the implementation of the criteria.

Proposed highest score for metainformation not using GEMET indexing terms: 3

4.1.11.2. Real Data Quality Reflected by the Metainformation Record

One of the overall objectives of the EEA work is to improve consistency and comparability of environmental data. Quality controlled data sets and the identification of quality control procedures will gradually develop over time. At present, however, there are no general quality guidelines for European environmental data. This means that this report only discusses these matters on a very basic level.

⁸ The cost of creating a normal metainformation record is estimated to be 15 ECU

Many of the real data sets produced on schedule throughout Europe are the result of environmental monitoring activities or emission/discharge monitoring. In most cases they are probably sampled, analysed and presented by using national or international standard methods described in guidelines for monitoring and analyses in their respective areas. *It should be regarded as normal procedure to deliver metainformation to the CDS accompanied by such quality information.* To make basic quality information on data of this kind available is a matter of good housekeeping rather than lack of information or knowledge.

There is a need to harmonise the description of standardised metainformation records so as to bring quality control procedures into play. Deliveries including quality descriptions should be encouraged. The EEA should try to initiate a general project on harmonisation of quality control procedures for metainformation records.

Proposed change of score gained in the earlier procedure for metainformation on sets of data produced according to authoritative guidelines: 0.

Other real sets of data produced ad hoc may or may not follow common guidelines or standard procedures in sampling and analysing. It is therefore suggested that descriptions of such data not being produced according to common guidelines should be considered somewhat less reliable; the score should be lowered by 1 point.

Proposed reduction of score for metainformation on sets of data produced ad hoc data not in accordance with authoritative guidelines: 1.

4.1.12. Geographical Coverage

Metainformation covering the whole of Europe is much more valuable than metainformation displaying gaps in geographical coverage. A reduction of the score is proposed where it is evident that data will not be obtained from a certain area which would be useful and relevant in terms of coverage. Please refer to the comments in section 4.1.7 "Possibilities of obtaining metainformation".

4.1.13. Update and Maintenance

Real data sets and reports produced on a regular basis and reported internationally may be said to be ideal items when updating metainformation records. In most other cases it is less clear when and from whom an update will eventually arrive.

The credibility of the CDS is dependent on updates and proper maintenance, otherwise it will soon have earned a poor reputation and will not be used by people searching for quality information. Before giving a certain set of metainformation the go-ahead for inclusion in the CDS, it should also be considered how and when and who is going to update these specific metainformation records.

A distinction must be drawn between metainformation concerning frequently produced items and items produced in projects or ad hoc. Information resources produced on a scheduled basis should be accompanied by a clear commitment on maintenance and updating procedures, whilst other records might be viewed somewhat less strictly in these respects.

Proposed reduction of score for metainformation to describe data sets or other items produced on a scheduled basis and without a maintenance and updating procedure: 2.

Proposed reduction of score for metainformation to describe data sets or other items produced on an ad hoc basis and without a maintenance procedure: 1.

It is also proposed that the CDS should contain an additional data field showing the name of the person responsible for the update so as to ease updating and maintenance procedures. This field should be kept internally in the database and not be accessible to the general public. The content of this proposed field might differ from the fields currently presenting information on the holder of the real information resource.

4.2. Proposed Selection Criteria and Scoring Path

4.2.1. Criteria Proposal

Metainformation to be selected to the CDS should meet the following criteria:

4.2.1.1. Main Criterion

The metainformation should have international or pan-European relevance

4.2.1.2. Other Proposed Criteria

- The metainformation records should describe items that have been delivered on a formal or regulatory basis to the EU/EEA/EIONET
- The metainformation records should describe items that have an intensive current international or pan-European use
- The metainformation records should describe items produced within the EEA/EIONET frame or work plan
- Records should link to the EEA/EIONET directory (address list) when produced within the EEA/EIONET frame
- A metainformation record may describe an official national State of the Environment Report, an official national environmental monitoring programme, a national environmental resource library or an official national metainformation database

4.2.1.3. Conditions that might Affect the Relevance of the Selection Criteria and make them less Valid

- The possibilities of obtaining the metainformation
- Metainformation quality
- The costs of producing the metainformation
- Metainformation update and maintenance procedures

4.2.1.4. Conditions that might Affect the Relevance of the Selection Criteria and make them more Valid

- Metainformation records describing information resources representing sectors and themes with a high thematic and sectorial relevance

4.2.2. The Selection Criteria Path

To enter a certain set of metainformation in the selection process, please follow the path below. Start at part A and end at part C, following the instructions. The score remaining after passage of the selection criteria path is then compared to what has been agreed between data providers and users in section 5.2.

Path, part A

Criteria	score	
Information resource of some international/ European relevance?	No=0, leave	Yes= continue
Information resource produced according to EC regulation?	Yes=5, goto B	No=continue
Information resource requested by EEA/EIONET on a regular basis ?	Yes=5 goto B	No=continue
Information resource requested by EEA/EIONET on a non-regular basis and at least 1 more inter- national body?	Yes=5 goto B	No=continue
Information resource requested only by EEA/EIONET ⁹ not on a regular basis	Yes=4 goto B	No=continue
Information resource requested by 3 or more international bodies other than EEA/EIONET?	Yes=5 goto B	No=continue
Information resource requested by 2 international bodies other than EEA/EIONET?	Yes=4 goto B	No=continue
Information resource requested by 1 international body other than EEA/EIONET?	Yes=3 goto B	No=continue
Information resource is a national environmental resource library, or an official national metainformation database, or an official "National State of the Environment Report" or an official national environmental monitoring programme	Yes= 4 goto B	No= 0, leave

Path, part B

Criteria	scoring	
Problems in obtaining the metainformation ¹⁰	Yes -1, continue	No=continue
High costs of producing metainformation	Yes -1, continue	No=continue
Metainformation not meeting GEMET	Yes score <=3, continue	No=continue
Information resource not produced according to authoritative guidelines	Yes -1	No=continue
Frequently produced metainformation without updating and maintenance procedures	Yes -2	No=continue
Non-frequently produced metainformation without updating and maintenance procedures	Yes -1	No=leave

Path, part C

Criteria	scoring	
Information resource with high thematic and sectorial relevance	Yes +1, ready	No= ready

⁹ NB - If the address of the data producer is missing it should be entered in the CDS as part of the EIONET directory.

¹⁰ Including access restrictions

5. CONSENSUS AND LEVEL OF RECOGNITION

5.1. Recognition Procedure

The recognition procedure when developing the selection criteria is considered to be very important if the EEA, data providers and the users of the CDS are to be able to find a common platform.

Since it has been important to involve all the main ETC/CDS users and data providers in the selection criteria project, a special reference group has been set up. Before the project started the project plan was discussed within the EEA, the ETC/CDS consortium and the reference group.

The project work has been as open as time limits have permitted. During the first phase of the work the unfinished first draft report was reviewed as "pre draft" by peers, the ETC/CDS itself and by EEA staff. Valuable comments and suggestions were collected and taken into account.

The first draft was distributed for review to NFPs, EEA staff, ETC/CDS consortium, ETC/CDS Advisory Committee, ETC leaders and other peers in mid-July 1997.

In September the first draft report was presented and discussed in Hannover at the ETC/CDS consortium meeting, at the ETC/CDS workshop and at the ETC/CDS Advisory Committee meeting.

In October 1997 the first draft report was presented and discussed at the NFP/EIONET meeting at the EEA in Copenhagen. The report was discussed in great detail at the second meeting of the Reference group in October 1997.

During the recognition procedure it was found that data achieving a "Point 4 and 5 score level" should be included in the database. "Point 3 score level" might be considered for inclusion in the CDS at a later stage. Data from this category should be developed in respects that are currently weak and eventually be brought up to a higher level. This is preferable to merely lowering the threshold value.

The Hannover and Copenhagen meetings resulted in e-mail correspondence and telephone discussions. At the meetings a common understanding was expressed on the main results and the methodology used. Official national reference databases and official national environmental monitoring programmes were proposed for inclusion in the selection system since they are of interest to most users. The stepwise approach suggested in the methodology should also be more clearly described in the final report.

5.2. Results of the Recognition Procedure

A very high degree of common understanding between the different players was found. It also seems that a consensus regarding national deliveries and dissemination of meta-information to populate the CDS has been reached as follows.

Score 5: Meta-information should be included in the CDS

Score 4: Meta-information should be included in the CDS

Score 3: Meta-information should be further developed and might be included at a later stage

Score 2: Meta-information should *not* be included in the CDS

Score 1: Meta-information should *not* be included in the CDS

Score 0: Meta-information is useless for the CDS

6. PROPOSAL FOR THE FIRST SELECTION

Annex 2 contains illustrative examples of how to use the selection criteria path.

The data resources described and listed in Annex 1 have been processed through the selection criteria path proposed in this report. The scores achieved after passage of the selection criteria path are given in the column headed "score". About 200 items will gain a score ≥ 4 and their metadata will be allowed to inhabit the metadatabase.

6.1. Number of Metainformation Records per Year and Annual Cost per Country

Approximately 200 real information items from the international reporting scene may be expected to qualify per year per country for the CDS. In addition about 100 reports, web pages, maps and magazine articles may be expected to qualify per year and country. This will entail a cost of about 4500 ECU per country and year.

6.2. Additional Metainformation Records of Special Interest

It has been mentioned earlier that a few types of metainformation are of particular interest for the CDS even if they do not obviously achieve a high score during the scoring procedure. These types of metainformation records are descriptions of:

- National environmental resource libraries
- National environmental reference or metadatabases
- Environmental metadatabases and databases operated by UN, OECD, EU, HELCOM and similar bodies
- Official national monitoring programmes
- Official national "State of Environmental Reports"

It is proposed that metainformation records describing those resources should be established and maintained jointly by the ETC/CDS and the respective institution.

7. DELIVERY OF META INFORMATION

It is outside the scope of this report to propose how meta information for the CDS should be delivered and from whom. Nevertheless, this question affects some of the criteria previously discussed: the quality assurance and the possibilities of obtaining meta information.

7.1. National Submissions

It has been assumed above that the main national deliveries to the CDS will occur via the National Focal Points.

It is clear that the original data producer has the very best knowledge of the real data and is therefore also the one best equipped to provide a set of meta information. Meta information produced in different countries from original data producers could be transferred to the CDS through the NFP or the transfer, at least, could be supervised or coordinated by the NFP so as to ensure that meta information deliveries comply to the requested format and really do meet the selection criteria. Once the telematic EIONET has become operational the data transfer to the ETC/CDS could use EIONET as the transfer medium.

7.2. EEA and ETC Submissions

Meta information created from material produced by the EEA itself could be transferred to the ETC/CDS directly over the telematic EIONET.

A special group of data processing institutions are the ETCs. They collect copies of data from the original data providers in different countries or institutions and store these real data in databases of their own. Most often they also create new aggregated and condensed data sets from collected data. It is then possible, and desirable, for the ETCs to generate meta information descriptions of their databases and deliver them to the CDS. It is important, however, to avoid duplication of meta information records referring to the same data resource. It would be advantageous, if a standard id-description for meta information sets could be developed in the near future. It is proposed that this could be achieved in international co-operation between the EEA and other international bodies managing information storage and retrieval.

Another solution would be to find other meta information providers of the real data and information resources but NFPs and ETCs. This might ease the burden on the NFPs and ETCs since they then not would be responsible for meta information deliveries. However, this method of metadata generation may adversely affect the quality of the meta information with a factor that is hard to predict. Moreover there is no such general meta information provider available at present, although it should be possible to develop a certain meta information generating unit connected directly to the ETC/CDS .

7.3. Quality Checking

The ETC/CDS is responsible for the operation and maintenance of the metadatabase. Checking deliveries before updating the database with new or corrected records should be the responsibility of the topic centre. This task could be very time-consuming. In addition, ensuring that all scheduled deliveries are made promptly to the ETC/CDS from various parties might involve a constant huge demand for resources the topic centre. Deciding who will be responsible for correct indexing and classification of records collected and submitted to the CDS is very much a question of management within the EEA itself and between EEA and its member states. This report cannot propose how this should be dealt with, merely identify this area as deserving attention in the future.

8. TIME FRAME FOR CRITERIA IMPLEMENTATION

It is proposed that, following possible adoption of the selection criteria, the member states to the EEA and the ETCs start to deliver metainformation to the CDS. In practice this could start in 1998. However, it is not realistic to expect full participation of the countries until 1999. It should be possible to have full proposed retrospectiveness (metainformation from 1994 and onwards) for all countries by the end of year 2000. A delay of approximately half a year before a metainformation record appears in the metadatabase after the creation of the original information resource, must be expected.

This timetable is proposed for the collection of MI (metainformation):

1997	Start of MI collection	ETCs
1998	Quality control of collected MI material to comply to GEMET etc	ETCs
1998	Start of MI collection for 1997 items	NFPs
1998	Start of MI collection on international DBs	ETC/CDS
1998	Start of MI collection on older items	NFPs
1999	Full work	ETCs and NFPs
2000	Full work	ETCs and NFPs
late 2000	The metadatabase in steady-state operation	

9. PROPOSED FURTHER DEVELOPMENTS

Various needs and proposals for future work mentioned in the report are listed below, in no particular order.

- There is a need to develop a delivery plan for metainformation to the CDS.
- There is a need to harmonise metainformation records so that quality control and quality control procedures are also brought into play
- There is a need for metainformation to be given a unique identification tag to avoid duplication of records and to knit metainformation as closely as possible to the creator/author of the real data
- There is a need for the EEA and the ETC/CDS to determine who is to deliver metainformation describing real data sets stored in databases and web pages. Attention should be paid to delivery procedures
- It should be investigated whether it is possible to disseminate the WebCDS software to interested countries for possible use at national level
- The question of responsibility for indexing and classification of the records collected for the CDS should be addressed by the EEA and between EEA and its member states
- Additional items must be introduced into GEMET (or connected to GEMET as accessory lists) such as geographical information (countries, cities, municipalities, rivers, lakes, drainage areas, coastal areas etc). There is also a pressing need for lists of the main determinands related to international reporting on pollution
- A forum should be created so that people involved in the indexing work could meet and exchange views, in order to facilitate transparency and comparability. It is proposed that this index forum meet once a year within the framework of the ETC. The forum should, if necessary, initiate the development of indexing guidelines.
- A specific field should be created in the metadatabase for maintenance purposes. It should contain the name of the person working on update and maintenance of the record.

ANNEX 1 POSSIBLE META-INFORMATION SETS AND PROPOSED SCORING

Table 1: KNOWN REPORTING ACTIVITIES

Classification	Series of data	Aggregation	Reference	Notes	Freq.	5AP	Dob +3	Score
Sectors and themes								
Industry								
	CO ₂ , CO, NH ₃ , NMVOC, SO ₂ , NO _x , N ₂ O, CH ₄ , Me, POP	LPS, NUTS3	ETC/AEM	CORINAIR	1:1 years	y		5
	Emiss inventory, SO _x , NO _x , NMVOC, CH ₄ , CO, CO ₂ , NH ₃ , heavy Me, POP	LPS, Country/ 50*50 km squares	UN/ECE/ LRTAP/EMEP		1:1 years ?	y		4
	PM, abatement	Baltic catchm	HELCOM			y		3
	Cd, Hg, dioxines, chlorinated substances, (emis. of) abatement	Baltic catchm	HELCOM	Iron & steel ind.	1:3 years	y		4
	pesticides (production, blending, emission of)	Baltic catchm	HELCOM		1:3 years	y		4
	PM, NO _x , Pb, As, Sb, F (emis. of) abatement	Baltic catchm	HELCOM	glass ind	1:3 years	y		4
	NO _x , S, abatment (emis. of)	Baltic catchm	HELCOM	pulp & paper ind.	1:3 years	y		3
	VOC (emis.of)	Baltic catchm	HELCOM	plating ind	1:3 years	y		4
	Cl, VOC (emis. of) abatement	Baltic catchm	HELCOM	textile ind.	1:3 years	y		4
	PM, F, NO _x , Cl-compounds (emis. of) abatement	Baltic catchm	HELCOM	Fertilizer ind.	1:3 years from 2003 onwards	y		4
Energy								
	CO ₂ , CO, NH ₃ , NMVOC, SO ₂ , NO _x , N ₂ O, CH ₄ , Me, POP	LPS, NUTS3	ETC/AEM	CORINAIR	1:1 years	y		5
	Emissions	Country	88/609/EEG			y		5
	SOE Indicator data energy consumption	Country	OECD		1:2 yeras	y		3
	Emiss inventory, SO _x , NO _x , NMVOC, CH ₄ , CO, CO ₂ , NH ₃ , heavy Me, POP	LPS, Country/ 50*50 km squares	UN/ECE/ LRTAP/EMEP		1:1 years ?	y		4
	HCl, Hg, dioxines, CO, Me (emiss of)	Baltic catchm	HELCOM	Waste burning	1:3 years	y		4
	Energy consumption, trends and by sectors in Mtoe	Country	EUROSTAT/OECD(I EA)	Indicator 2.10, 2.11 Dob3	1:1 years	y	y	4
	Primary total energy supply, trends and by sources in Mtoe	Country	EUROSTAT/OECD(I EA)	Indicator 2.12, 2.13 Dob3	1:1 years	y	y	4
	Energy prices	Global	OECD(IEA)	Indicator 2.14 Dob3	1:1 years	y	y	4
	Energy intensety, energy per unit of GDP	Country	OECD(IEA)/ Eurostat/World Bank	Indicator 2.15 Dob3	1:1 years	y	y	4
Transport								
	CO ₂ , CO, NH ₃ , NMVOC, SO ₂ , NO _x , N ₂ O, CH ₄ , Me, POP	LPS, NUTS3	ETC/AEM	CORINAIR	1:1 years	y		5
	SOE Indicator data, transports	Country	OECD		1:2 yeras	y		3
	Emiss inventory, SO _x , NO _x , NMVOC, CH ₄ , CO, CO ₂ , NH ₃ , heavy Me, POP	LPS, Country/ 50*50 km squares	UN/ECE/ LRTAP/EMEP		1:1 years ?	y		4
	Passenger Road transport	Country	EUROSTAT	Indicator 4.14 Dob3	1:1 years	y	y	4
	Passenger transport by means	Country	EUROSTAT	Indicator 4.14 Dob3	1:1 years	y	y	4
	Freight Road transport	Country	EUROSTAT	Indicator 4.14 Dob3	1:1 years	y	y	4

	Freight transport by means	Country	EUROSTAT	Indicator 4.14 Dob3	1:1 years	y	y	4
	Passenger cars	Country	EUROSTAT	Indicator 4.15 Dob3	1:1 years	y	y	4
	Road density, km/km ²	Country	EUROSTAT	Indicator 4.16, 8.14 Dob3	1:1 years	y	y	4
	Fuel prices for road transport vehicles	Country	EUROSTAT	Indicator 4.17 Dob3	1:1 years	y	y	4
	Fuel consumption for road transport vehicles	Country	EUROSTAT	Indicator 4.18 Dob3	1:1 years	y	y	4
	Number of cars equipped with catalytic converters	Country	EEA	Indicator 5.08 Dob3	1:1 years	y	y	4
Agriculture								
	CO ₂ , CO, NH ₃ , NMVOC, SO ₂ , NO _x , N ₂ O, CH ₄ , Me, POP	LPS, NUTS3	ETC/AEM	CORINAIR	1:1 years	y		5
	SOE Indicator data, crops	Country	OECD		1:2 years	y		3
	Use of fertilisers	Country	EUROSTAT	Indicator 8.12 Dob3	1:1 years	y	y	4
	Use of pesticides	Country	EUROSTAT	Indicator 8.13, 9.13 Dob3	1:1 years	y	y	4
	Sales and apparent consumption of pesticides, tonnes	Country	FAO ECPA	Indicator 9.13 Dob3	1:1 years	y	y	4
	Water abstraction	Country	ETC/IW EUROSTAT	Indicator 8.13, 9.01 Dob3	1:1 years	y	y	5
	Irrigated land % of total areas	Country	ETC/IW	Indicator 9.02 Dob3	1:1 years	y	y	5
	Damage of O ₃ on crops	spec prgm	UN/ECE/LRTAP-ICP crops		1:1 years	y		3
	Emiss inventory, SO _x , NO _x , NMVOC, CH ₄ , CO, CO ₂ , NH ₃ , heavy Me, POP	LPS, Country/ 50*50 km squares	UN/ECE/LRTAP/EMEP		1:1 years ?	y		4
Fishery								
	Aquaculture production in tonnes and nbr of farms	Closed European Seas	ETC/MC, FAO, ICES	Indicator 10.05 Dob3	1:5 years		y	5
	Fish catch by species and area	Country and marine areas	ETC/MC, FAO, ICES	Indicator 10.06 Dob3	1:1 years		y	5
	Fishing techniques, nbr of vessels	Country	ETC/MC, FAO, ICES	Indicator 10.07 Dob3	1:1 years		y	5
Tourism								
Climate Change								
	CO ₂ Emissions and sinks	Country	92/72/EEG		1:1 years	y		5
	SOE Indicator data, GHG	Country	OECD		1:2 years	y		3
	Carbon storage, CO ₂ , CO, CH ₄ , NMVOC, N ₂ O, NO _x , HFC, FC, SF ₆	sectors according to IPCC	FCCC/IPCC		1:1 years	y		4
	CO ₂ conc and PM in Svalbard in air and precipitation		WMO			y		3
	Trend in European/global mean temperature	Europe	WMO	Indicator 2.01 Dob3	1:1 years	y	y	4
	Extent of sea ice	Europe	Norwegian Polar Inst	Indicator 2.03 Dob3	1:1 years	y	y	4
	CO ₂ , CH ₄ , N ₂ O conc in atmosphere	Global	CDIAC, NOAA/CDML	Indicator 2.04 Dob3	1:1 years	y	y	4
	CO ₂ (emiss of)	Country	ETC/AEM	Indicator 2.05 Dob3	1:1 years	y	y	5
	CO ₂ , CH ₄ , N ₂ O, GWP (emiss of) by sector	Country	ETC/AEM	Indicator 2.06, 2.07, 2.08, 2.09 Dob3	1:1 years	y	y	5
Acidification								
	deposition SO ₂ , NO ₂ , NH ₃ , Cl, Ca, Mg, K, conduct., pH, SO ₂ , NO ₂ , soot, O ₃ , NO ₃ -tot, NH ₄ -tot, NO _x , VOC	a nbr of stations and precipitation	UN7ECE/LRTAP/EMEP			y		4

	SO ₂ (emiss of)	Country	ETC/AEM	Indicator 4.01 Dob3	1:1 years	y	y	5
	SO ₂ (emiss of) by sectors	Country	ETC/AEM	Indicator 4.02 Dob3	1:1 years	y	y	5
	NOx (emiss of)	Country	ETC/AEM	Indicator 4.03 Dob3	1:1 years	y	y	5
	NOx (emiss of) by sectors	Country	ETC/AEM	Indicator 4.04 Dob3	1:1 years	y	y	5
	NH ₃ (emiss of)	Country	ETC/AEM	Indicator 4.05 Dob3	1:1 years	y	y	5
	NH ₃ (emiss of) by sectors	Country	ETC/AEM	Indicator 4.06 Dob3	1:1 years	y	y	5
	Impacts on materials	Selected sites	ETC/AQ	Indicator 4.08 Dob3	1:1 years	y	y	5
	Forest damage % trees (four species) that are damaged	Country	EEA	Indicator 4.09 Dob3	1:1 years	y	y	5
	Lake acidification	Areas in Europe	ETC/IW - NIVA	Indicator 4.10 Dob3	1:1 years	y	y	5
	Critical Load exceedence	Areas in Europe	ETC/AQ UNECE/CCE	Indicator 4.11 Dob3	1995	y	y	5
	ox S, ox N and red N (Deposition. of)	Areas in Europe	ETC/AQ EMEP/MSC West	Indicator 4.12 Dob3	1:1 years	y	y	5
	pH, SO ₄ , NO ₃ (conc in precipitation)	?	ETC/AQ NILU	Indicator 4.13 Dob3	1:1 years	y	y	5
Chemicals								
	Heavy Me and POP and toxoc chem in reindeer	selected stations	AMAP					4
	Hevy Me and POP and toxoc chem in fish	selected stations	AMAP					4
	Heavy Me (emis of)	Europe	UNECE HELCOM OSPARCOM	Indicator 6.02 Dob3	1:4 years		y	5
	PCB's (emis of)	Europe	ETC/AEM EMEP/CCC	Indicator 6.03 Dob3			y	4
Radiation								
	Radon concentrations in homes	Country	EEA	Indicator 6.07 Dob3			y	4
Stratospheric Ozone Depletion								
	monitoring of strat. O ₃	selection of stations	WODC		contin			3
	Stratosph O ₃ levels	Global/selection of stations	ETC/AQ	Indicator 3.01 Dob3	1:1 years		y	5
	Atmospheric conc of CFC's	Global	ETC/AQ NOAA	Indicator 3.02 Dob3	1:1 years		y	5
	UV-radiation	Europe	ETC/AQ	Indicator 3.03 Dob3	1:1 years		y	5
	Production of CFC's	Europe	ETC/AEM	Indicator 3.04 Dob3	1:1 years		y	5
	Sales of CFC's	Europe	ETC/AEM	Indicator 3.04 Dob3	1:1 years		y	5
	Production of HCFC's	Europe	ETC/AEM	Indicator 3.05 Dob3	1:1 years		y	5
	Sales of HCFC's	Europe	ETC/AEM	Indicator 3.05 Dob3	1:1 years		y	5
	Production of halons	Europe	ETC/AEM	Indicator 3.06 Dob3	1:1 years		y	5
	Sales of halons	Europe	ETC/AEM	Indicator 3.06 Dob3	1:1 years		y	5
	Production of methyl chloroform	Europe	ETC/AEM	Indicator 3.07 Dob3	1:1 years		y	5
	Sales of methyl chloroform	Europe	ETC/AEM	Indicator 3.07 Dob3	1:1 years		y	5
	Production of CCl ₄	Europe	ETC/AEM	Indicator 3.08 Dob3	1:1 years		y	5
	Sales of CCl ₄	Europe	ETC/AEM	Indicator 3.08 Dob3	1:1 years		y	5

	Production of Methyl Bromide	Europe	ETC/AEM	Indicator 3.09 Dob3	1:1 years		y		5
	Sales of Methyl Bromide	Europe	ETC/AEM	Indicator 3.09 Dob3	1:1 years		y		5
Air Quality									
	Air Q Data	Country?	82/459/EEG	New Dir 97			y		5
	Pb	big cities	82/884/EEG				y		5
	SO ₂	big cities	80/779/EEG // 89/427/EEG				y		5
	NO ₂	big cities	85/203/EEG				y		5
	O ₃ , NOx nbr of exceedence episodes	Country	92/72/EEG				y		5
	Air Q data C ₆ H ₆ , CO, Cd, As, Ni, Hg, PAH	cities>250000	96/82/EEG				y		5
	SO ₂ , NO ₂ , PM, O ₃ , C ₆ H ₆ , CO, Cd, As, Ni, Hg, PAH	cities>250000	96/62/EEG				y		5
	Hg (emis. of)	Baltic catchm	HELCOM	chloro alkali ind	1:3 years		y		4
	Hg (emis. of)	Katteg/Skager catchm	OSPAR	chloro alkali ind	1:1 years		y		4
	Pb (emis. of)	Country	ETC/AEM	Indicator 12.17 Dob3	1:1 years		y	y	4
	deposition Heavy Me	not yet known	UN/ECE/LRTAP/E MEP	HM protocoll			y		4
	deposition POP	not yet known	UN/ECE/LRTAP/E MEP	POP protocoll			y		3
	wet deposition: NO _y , NH ₃ , SO ₂ , Cl, Na, K, Ca, Mg, Cd, Cu, Pb, Zn, Cr, Ni, As, POP; conc: NO ₂ , NH ₃ +NH ₄ , HNO ₃ +NO ₂	selected stations	HELCOM		1:1 years		y		3
	NO _y , NH ₃ , Cd, Hg, As, Cr, Cu, Ni, Pb, Zn, a-HCH, g-HCH, HCB, DDE, TDE, DDT, aldrine, dieldrine, endrine, PAH, PCBs, heptachlor (wet depos. of)	selected stations	OSPAR		1:1 years		y		3
	Hg-tot, Cd, a-HCH, g-HCH, HNO ₃ -N, NO ₃ -N, NO-N, NH ₃ -N, NH ₄ -N, NO ₂	Kattegat & Skagerack	OSPAR		1:1 years		y		4
	Summer smog episodes, population exposure	Country	ETC/AQ	Indicator 5.01 Dob3	1:1 years		y	y	5
	Exceedence of O ₃ treshhold at ground level, maps	Europe	ETC/AQ EMEP	Indicator 5.02 Dob3	1:1 years		y	y	5
	VOC (emiss of)	Country	ETC/AEM	Indicator 5.04 Dob3	1:1 years		y	y	5
	VOC (emiss of) by sector	Country	ETC/AEM	Indicator 5.05 Dob3	1:1 years		y	y	5
	CO (emiss of)	Country	ETC/AEM	Indicator 5.06 Dob3	1:1 years		y	y	5
	CO (emiss of) by sector	Country	ETC/AEM	Indicator 5.07 Dob3	1:1 years		y	y	5
	Particulates (emiss of)	Country	ETC/AQ	Indicator 12.15 Dob3	1:1 years		y	y	5
	CO (emiss of), by sector	Country	ETC/AEM	Indicator 12.16 Dob3	1:1 years		y	y	5
Water Resources									
	SOE Indicator data, waters	selected rivers and lakes	OECD		1:2 years		y		3
	River quality, BOD, COD, P, NO _y , etc	Large River Catchments	ETC/IW	Indicator 9.04, 9.05, 9.06 Dob3	intermittent		y	y	4
	Water abstraction m ³	Country	Eurostat ETC/IW	Indicator 9.01 Dob3	1:5 years		y	y	5
	COD, BOD, N-tot, oil, sulphide, phenols, Ar (discharge of)	Baltic catchm	HELCOM	refineries	1:2 years		y		4
	COD, BOD, N-tot, oil, sulphide, phenols, (discharge of)	Katteg/Skager catchm	OSPAR	refineries	1:3 years		y		4
	Ground Water Supervision	Country	80/68/EEG				y		5

	Hg (discharge of)	Country	82/176/EEG	Chloro Alkali Ind.		y			5
	Hg (discharge of)	Baltic catchm	HELCOM	chloro alkali ind	1:3 years	y			4
	Hg (discharge of), production and waste	Katteg/Skager catchm	OSPAR	chloro alkali ind	1:1 years	y			4
	Bacteria, Algae, Colour, Oil, Detergents, Phenol, Visibility	Municipality	76/160/EEG	Bathing Water Dir.		y			5
	Cd (discharge of)	Country	83/513/EEG			y			5
	Cd (production, discharge, usage of)	Baltic catchm	HELCOM	point sources	1:3 years	y			4
	Hg (discharge of)	Country	84/156/EEG	Non Chloro Alkali		y			5
	pesticides (production, blending, discharge of)	Baltic catchm	HELCOM		1:3 years	y			4
	Pb, As, Sb, F (discharge of) abatement	Baltic catchm	HELCOM	glass ind	1:3 years	y			4
	C ₆ H ₆ , Cl ₂ (discharge of)	Country	84/491/EEG			y			5
	Concentrations Haz Substances (discharge of)	Country	86/464/EEG			y			5
	Sewage Effluents	Country	91/271/EEG		1:2 years	y			5
	Sewage Effluents' determinands	Baltic catchm	HELCOM		1:5 years	y			3
	Radionuclides from nuclear power plants	Baltic	HELCOM		1:1 years	y			3
	Riverine load of chemicals into seas	Seas	ETC/IWETC/MC HELCOM OSPARCOM North Sea Task Force Medpol MAP	Indicator 9.08 Dob3	1:5 years	y	y		5
	NO _x Surface & Ground Waters	Country	91/676/EEG		1:1 years	y			5
	Water Q 18 determinands		77/795/EEG			y			5
	Org+Me+Nutrients (discharge of)	Catchm Areas	"IPPC"	new 1997		y			5
	a nbr of determinands	selection lakes and rivers	UN/ECE/LRTAP/ICP waters		1:1 years	y			4
	Integrated Monitoring mosses, lichens, water chem	selection unaffected catchm areas	UN/ECE/LRTAP/ICP-EDC			y			4
	new wetland areas, legislation (change of)	Country	RAMSAR convention		1:3 years	y			3
	water chem determinands	selection rivers and lakes	UNEP/GEMS		1:1 years	y			3
	Hg, Cd, Cu, Zn, nutrients, organics	river mouths	HELCOM		1:3 years	y			4
	Hg, Cd, Cu, Zn, nutrients, organics, AOX, Ni, Cr, TOC	point sources	HELCOM		1:3 years	y			4
	BOD, COD, Hg, Cd, Cu, Ni, Pb, Cr ⁶⁺ , Zn, tox	Baltic catchm	HELCOM	chem ind.	1:3 years	y			4
	Zn, Cr, Cd, Cu, Ni (discharge of)	Baltic catchm	HELCOM	plating ind	1:3 years	y			4
	Cr, COD, N-tot (discharge of)	Baltic catchm	HELCOM	leather ind	1:3 years	y			4
	Me (discharge of)	Baltic catchm	HELCOM	Waste burning	1:3 years	y			4
	Sewage treatment plants nbr with N-purification	Baltic catchm	HELCOM	Sewage treatm	1:3 years	y			3
	% of population connected to different types of waste water treatment plants	Country	ETC/IW EUROSTAT	Indicator 9.14 Dob3	1:5 years	y	y		5
	COD, AOX, P-tot, tox.tests (discharge. of) treatment	Baltic catchm	HELCOM	textile ind.	1:3 years	y			4
	susp sol, oil, Pb, Zn (discharge of) treatment	Baltic catchm	HELCOM	Iron & Steel ind	1:3 years from 2000 onwards	y			4
	NH ₃ -N, N-tot, COD, phenol, CN, PAH	Baltic catchm	HELCOM	Iron & Steel ind	1:3 years from 2003 onwards	y			4
	Cd, Hg, Zn, P-tot, PO ₄ -P, F (discharge of) abatement	Baltic catchm	HELCOM	Fertilizer ind.	1:3 years from 2003 onwards	y			4

	COD, AOX, P-tot, N-tot (discharge of abatement)	Baltic catchm	HELCOM	Pulp ind.	1:3 years from 2003 onwards	y			3
	COD, BOD, NH ₄ -N, P-tot (discharge of abatement)	Baltic catchm	HELCOM	Food ind.	1:3 years from 2000 onwards	y			3
	P-tot, N-tot (discharge of)	Katteg/Skager catchm	OSPAR	Pressure from sectors		y			3
	N and P source apportionment for discharge	Large river catchm areas	ETC/IW	Indicator 9.07 Dob3	Intermittent	y	y		4
	Eutrophication of lakes, P-tot, Chl A, Transparency, maps	Selected lakes	ETC/IW	Indicator 9.09 Dob3	1:5 years	y	y		5
	Groundwater NO ₃ , pesticides	Country	ETC/IW	Indicator 9.10, 9.11 Dob3	1:1 years	y	y		5
Marine Environment									
	temp, salin, pH, alkal, O ₂ , H ₂ S, PO ₄ , P-tot, NH ₄ , NO ₂ , NO ₃ , SiO ₂ , N-tot	Baltic	HELCOM						3
	Hg, Pb, Cd, in herring, cod etc.	Baltic	HELCOM		1:1 years				4
	hydrography, phyto & zoo plankton, bentofauna	Baltic	HELCOM		1:1 years				3
	dredging and dumping, heavy Me	Baltic	HELCOM		1:1 years				4
	aqua culture, fish breeding, nutrients	Baltic	HELCOM		1:3 years				3
	Hg, Cd, Pb, Cu, Zn, susp sol., HCH, PCBs, HCs organohalog	Katteg & Skag	OSPAR	pressures from point sources and rivers	1:1 years				4
	Hg, Cd, Cu, Zn, HCH, HCB, PAH, dieldrine, Cr, As, Ni, chlordan, TBT, organo-Hg	Katteg & Skag	OSPAR		1:1 years				4
	Hg, Pb, Cu, Zn, Cd, PCB (contents in fish and crustacea)	Katteg & Skag	OSPAR		1:1 years				4
	Hg, Pb, Cu, Zn, Cd, PCB, g-HCH (contents in sediments)	Katteg & Skag	OSPAR		1:1 years				4
	DDE, DDD, DDT, PCB, HCH, HC in biota in some chlordan, dieldrine	Baltic	HELCOM		1:1 years				4
	Radionucleids (discharge of)	Katteg/Skager	OSPAR		1:4 years				3
	nonylphenoethoxylates	Katteg/Skager	OSPAR	pressure from sectors	1:3 years				4
	P-tot, N-tot, AOX, chlor subst (discharge of) abatement	Katteg/Skager	OSPAR	pulp ind	1:3 years				4
Forests									
	State of forests	Net / Country	R 3528/86		Contin.				5
	SOE Indicator data on forests	Country	OECD		1:2 years				3
	inventories needle losses	spec prgm	UN/ECE/LRTAP/ICP forest						3
	forest ecosystems	Country	WCMC						3
Nature and Biodiversity									
	Birds populations	Country	79/409/EEG			y			5
	Habitats exclusions	Country	92/43/EEG		1:2 years	y			5
	Threatened species, protected areas	Country	ETC/NC	CORINE BIOTOPES	(1:5 years)	y			4
	SOE Indicator data, flora & fauna	Country	OECD		1:2 years	y			3
	threatened species, flora & fauna & hunting	Country	UN/ECE		intermittent	y			3
	exception from the convention	country	BERN convention		1:2 years	y			3
	protection of migratory species	country	BONN convention		irregular	y			3
	Effectiveness of conservation activities	Country	UNEP/CDB convention			y			3
	Habitat Types, map	Country	ETC/LC	CORINE BIOTOPES, CORINE Landcover, Indicator 8.02 Dob3	?	y	y		4

	Ecological regions, map	Country	ETC/NC	CORINE BIOTOPES, CORINE Landcover, Indicator 8.01 Dob3	?	y	y	4
	Threatened or endangered species, % and numbers	Country	ETC/NC, WCMC, IUCN	Indicator 8.03 Dob3	?	y	y	5
	State and trends of selected species	Country	ETC/NC, WCMC, IUCN	Indicator 8.04, 8.05, 8.06 Dob3	?	y	y	5
	Status of protected areas and habitats per type	Europe	ETC/NC, WCMC	Indicator 8.07 Dob3	?	y	y	5
	Map of naturalness	Europe	ETC/LC, CORINE Land Cover	Indicator 8.16 Dob3	?	y	y	4
	Forest Fires, number and area and map	Country	FAO/UNECE, EFI	Indicator 8:17 Dob3	1:1 years	y	y	4
	International trade in endangered species,	Europe	ETC/NC, CITES	Indicator 8:18 Dob3	?	y	y	4
	Major protected areas, number and km ²	Country	ETC/NC, WCMC	Indicator 8.19 Dob3	1:13 years	y	y	4
	Internationally protected species in Europe, % of group	Europe	ETC/NC, CEC, WCMC	Indicator 8.20 Dob3	intermittent	y	y	5
	International conventions, ratifications	Europe	ETC/NC, UNECE	Indicator 8.21 Dob3	intermittent	y		4
Urban Environment								
	Area with built-up land	Country	EUROSTAT	Indicator 8:15 Dob3	1:1 years	y	y	4
	Annual average concentration of NO ₂ exceedence of AQGs	Large Cities	ETC/AQ	Indicator 12.10 Dob3	1:1 years	y	y	4
	Annual average concentration of SO ₂ exceedence of AQGs	Large Cities	ETC/AQ	Indicator 12.09 Dob3	1:1 years	y	y	4
	Annual average concentration of Pb	Large Cities	ETC/AQ	Indicator 12.11 Dob3	1:1 years	y	y	5
	Annual average concentration of C ₆ H ₆	Large Cities	ETC/AQ	Indicator 12.12 Dob3	1:1 years	y	y	5
	Winter smog episodes, number of and potential of, map	Large Cities	ETC/AQ	Indicator 12.13, 12.14 Dob3	Intermittent	y	y	4
	Particulate matter, ambient air Qual.	Large Cities	ETC/AQ	Indicator 12.18 Dob3	1:1 years	y	y	4
	Number of people affected by health effects from exceedances, map	Large Cities	ETC/AQ, WHO	Indicator 12.19 Dob3	1:1 years	y	y	4
Coastal Zones								
	Coastal waters P and N concentrations	Seas	ETC/MC, HELCOM, OSPARCOM, MED-POL/MAP, ICES	Indicator 10.02 Dob3	1:5 years	y	y	5
	Coastal waters heavy Me and micropollutants which ?	Seas	ETC/MC, HELCOM, OSPARCOM, MED-POL/MAP, ICES	Indicator 10.03 Dob3	1:5 years	y	y	5
	Load from coastal areas of selected chemicals	Seas	ETC/MC, HELCOM, OSPARCOM, MED-POL/MAP, ICES	Indicator 10.04 Dob3	1:5 years	y	y	5
Soils								
	Heavy Metals in sewage sludge	Country	86/278/EEG		1:4 years			5
	SOE Indicator data	Country	OECD		1:2 years			3
	Change in farming structure and practices	Country	FAO, ENOF	Indicator 8.10 Dob3	1:1 years		y	4

	Water erosion, map	Regions	ETC/Soil, ISRIC	Indicator 11.01 Dob3	intermittent		y		4
	Wind erosion, map	Regions	ETC/Soil, ISRIC	Indicator 11.02 Dob3	intermittent		y		4
	Desertification	Regions	ETC/Soil, ISRIC	Indicator 11.03 Dob3	intermittent		y		5
Socio-economics									
	Rural Development: population	Country	FAO	Indicator 8.08 Dob3	1:1 years		y		4
	Biotechnology, usage of	Country	90/219/EEG						5
	Release of GMO's	Country	EU commission	Indicator 13.04 Dob3	1:1 years		y		4
	Oil Depots	Country	96/63/EEG // 91/692/EEG						5
	GDP trends index based	Country	EUROSTAT/OECD	Indicator 1.02 Dob3	1:1 years		y		4
	GDP trends value added per sector % of GDP	Country	EUROSTAT/OECD	Indicator 1.03 Dob3	1:1 years		y		4
	Trends in manuf. industrial production index based	Country	EUROSTAT/OECD	Indicator 1.04 Dob3	1:1 years		y		4
	Trends in manuf. industrial production per industry branch	Country	EUROSTAT/OECD food, textile, wood, paper, chem, non-metal, basic metal, machinery ind.	Indicator 1.05 Dob3	1:1 years		y		4
	Trends in households final expenditures, index based	Country	EUROSTAT/OECD	Indicator 1.09 Dob3	1:1 years		y		4
	Trends in households waste production, kg per capita	Country	EUROSTAT	Indicator 1.10 Dob3	1:1 years		y		4
	Trends in households water consumption, l per capita	Country	MECR, VROM	Indicator 1.10 Dob3	1:1 years		y		4
	Chemical Industry, economic growth	Country	CEFIC	Indicator 6.08 Dob3	1:1 years		y		4
	Chemical Industry, volume growth	Country	EUROSTAT / CEFIC	Indicator 6.09 Dob3	1:1 years		y		4
	Chemical Industry, market for end-users	Country	EUROSTAT / CEFIC	Indicator 6.10 Dob3	1:1 years		y		4
	Population inhab.	Country	UN	Indicator 1.13 Dob3	1:1 years		y		4
	Urban population, inhab.	Country	UN	Indicator 12.01 Dob3	1:1 years		y		4
	Population in cities, density inhab per km ²	Large Cities	UN, unclear	Indicator 12.02 Dob3	intermittent		y		4
	Population density inhab per km ²	Country	UN	Indicator 1.15 Dob3	1:1 years		y		4
	Land use	Country	FAO databases	Indicator 1.16 Dob3	1:1 years		y		4
	Waste generation by sector in tonnes *1000	Country	OECD	Indicator 7.01 Dob3	1:5 years		y		4
	Municipal Waste generation per capita in tonnes	Country	OECD	Indicator 7.02 Dob3	1:5 years		y		4
Waste Management									
	Packages	Country	94/62/EEG				y		5
	CO ₂ , CO, NH ₃ , NMVOC, SO ₂ , NO _x , N ₂ O, CH ₄ , Me, POP	LPS, NUTS3	ETC/AEM	CORINAIR	1:1 years		y		5
	SOE Indicator data, waste handling	Country	OECD		1:2 years		y		3
	Disposal of Municipal Waste per treatment	Country	OECD	Indicator 7.03 Dob3	1:5 years		y	y	4
	Generation of hazardous waste (unknown unit)	Country	OECD	Indicator 7.05 Dob3	1:5 years		y	y	3
	Disposal of hazardous waste (unknown unit)	Country	OECD	Indicator 7.06 Dob3	1:5 years		y	y	3
	Recycling in % (unknown of what)	Country	OECD	Indicator 7.04 Dob3	1:1 years		y	y	3

	Import and export of hazardous waste (unknown unit)	Country	OECD	Indicator 7.07 Dob3	1:1 years	y	y	3
	Hg (to wastes)	Baltic catchm	HELCOM	chloro alkali ind	1:3 years	y		4
Major accidents								
	Number of major accidents in industry	Country	Major accidents Hazards Bureau/JRC-ISEI	Indicator 13.01 Dob3	1:1 years		y	4
	Number of nuclear accidents	Country	IAEA	Indicator 13.02 Dob3	1:1 years		y	4
	Number of accidents at sea	The seas	ITOPF	Indicator 13.03 Dob3	1:1 years		y	4
Land Use								
	Contaminated sites, (number of)	Country	ETC/S	Indicator 6.01 Dob3			y	4
	CO ₂ , CO, NH ₃ , NMVOC, SO ₂ , NO _x , N ₂ O, CH ₄ , Me, POP (emis of)	LPS, NUTS3	ETC/AEM	CORINAIR	1:1 years			4
	Land Cover data, CORINE programme	squares, 5 ha	ETC/LC	CORINE LC	1:5 years			4
	Land Use	Country	UN/ECE	statistics	inter-mittent			3
	Land use in agriculture, km ² and % per type	Country	FAO	Indicator 8.09 Dob3	1:1 years		y	4
	Livestock in agriculture, animal per group	Country	FAO	Indicator 8.11 Dob3	1:1 years		y	4

Table 2: OTHER RESOURCES

Type of activity	From	Target groups	Remarks
International Publications			
	EEA, EUROSTAT, Other EU bodies	International public	Dataserries presented in publications which are collected and assessed exclusively should be indexed separately if they are available for external use outside EEA
	UN organisations	International public	dataserries of importance for the evaluation and assessment work on a European level should be indexed separately if they are available for external use
	Other Internat. Bodies, regional conventions	International public	dataserries of importance for the evaluation and assessment work on a European level should be indexed separately if they are available for external use
	NGO:s	General Public	
	National agencies	International public	
	National ministries	International public	
Research Reports			
	Research Institutes	International public	dataserries of importance for the evaluation and assessment work on a European level should be indexed separately if they are available for external use
National Publications			
	Official sources	National public	State of the Environment reports
Maps			
	EEA, EEA bodies	Evaluators etc	State of the Environment reports/indicators
	Official sources	Evaluators etc	State of the Environment reports/indicators
WWW-pages			
	EEA	The Interested General Public	
	National Agencies, Ministries	The Interested General Public	
	UN bodies, conventions	The Interested General Public	
	NGO's	The Interested General Public	

Abbreviations used in Annex 1

AMAP	Arctic Monitoring Programme for Air Pollution
BERN	Bern Convention, Convention on the Conservation of European Wildlife and Natural Habitats
BONN	Bonn convention, Convention on the Conservation of Migratory Species of Wild Animals
CBD	Convention on Biological Diversity
CCC	Chemical Co-ordinating Centre, EMEP
CCE	Scientific and technological co-operation with the countries of Central Europe
CDIAC	Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, Tennessee.
CEC	Commission of the European Communities
CEFIC	Conseil européen des fédérations de l'industrie chimique
CITES	Convention for International Trade in Endangered Species of Wild Fauna and Flora
ECPA	European Crop Protection Association
EEA	European Environment Agency
EFI	European Forest Institute
EMEP	European Monitoring and Evaluation Programme
ENOF	The European Network for Scientific research co-ordination in Organic Farming
ETC/AEM	European Topic Centre For Air Emission
ETC/AQ	European Topic Centre For Air Quality
ETC/IW	European Topic Centre for Inland Waters
ETC/LC	European Topic Centre for Land Cover
ETC/MC	European Topic Centre For Marine and Coastal Areas
ETC/NC	European Topic Centre for Nature Conservation
ETC/S	European Topic Centre For Soils
FAO	United Nations' Food and Agriculture Organisation
FCCC	Framework Convention on Climate Change under United Nations
GEMS	Global Environment Monitoring System (UNEP)
HELCOM	Helsinki Commission (under the Helsinki Convention)
ICES	International Council for the Exploration of the Sea
ICP	International Cooperative Programme under LRTAP
ICP/Forest	International Cooperative Programme under LRTAP, Forests
ICP/Waters	International Cooperative Programme under LRTAP, Waters
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change, set-up by UNEP and WMO
IPPC	Integrated Pollution and Prevention and Control, EU legislative approach and Directive
ISRIC	International Soil Reference and Information Centre
ITOPF	International Tanker Owners Pollution Federation Ltd. UK
IUCN	International Union for the Conservation of Nature and Natural Resources or World Conservation Union
LRTAP	Long Range Transboundary Air Pollution Convention
MAP	Middle Atmosphere Programme
MEDPOL	Barcelona Convention, control of pollution in the Mediterranean region
MSC	Meteorological Synthesizing Centre, under EMEP
NILU	Norwegian Institute for Air Research
NIVA	Norwegian Institute for Water Research
NOAA	National Oceanic and Atmospheric Administration (US)
OECD	Organisation for Economic Cooperation and Development
OSPARCOM	Ospar Convention For The Protection Of The Marine Environment Of The North-East Atlantic
RAMSAR	Convention on Wetlands
UN	United Nations
UN/ECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
WCMC	World Conservation Monitoring Centre
WHO	United Nations' World Health Organisation

WMO
WODC
VROM

United Nations' World Meteorological Organisation
World Ocean Data Centre
Ministerie van Volkshuisvesting, Ruimtelijke Ordening en Milieubeheer, NL

ANNEX 2 EXAMPLES OF THE USE OF THE SELECTION CRITERIA PATH

Examples, environmental reports:

State of the Environment in Ireland, Irish Environmental Protection Agency, Feb 1996, ISBN No. 1-899965-25-4.

Following the selection criteria path:

It has international/European relevance.

It is not produced according to an EC regulation.

It is not requested by EEA/EIONET on any basis.

No other international body requests it.

It is an official national SoER

Score is 4.

It must be considered evident that GEMET indexing will occur.

It contains information also on resources with a high thematic and sectorial relevance.

Score is 4+1=5.

International Water Databases, Topic Report 16, 1966, ETC Inland Waters, ISBN 92-9167-051-0.

Following the selection criteria path:

It has international/European relevance.

It is not produced according to an EC regulation.

It is not requested by EEA/EIONET on a regular basis.

It is requested by EEA/EIONET* on a project basis.

Score is 4.

No other international body requests it.

It must be considered evident that the EEA itself will produce and maintain the metadata on the report as well as letting the metadata be in accordance with GEMET.

It contains information on ground waters and marine waters (high sectorial relevance)

Score 4+1 = 5.

Example, web-pages:

<http://www.eea.dk/frdb.htm>, Air Emissions NMVOC, CH4, CO, CO2; Summaries

Following the selection criteria path:

It has international/European relevance.

It is produced according to an EC regulation.

Score is 5.

It is requested by EEA/EIONET* on a regular basis.

Score is already 5.

It is not requested by EEA/EIONET on a project basis.

Data requested by more than 3 other international bodies.

Score is already 5.

It is not yet fully clear who will maintain the metadata (EEA or ETC/AEM).

Score 5-2=3.

* Check to ensure that the EIONET directory information for the data producer is recorded in the ETC/CDS metadata database.

* Check to ensure that the EIONET directory information for the data producer is recorded in the ETC/CDS metadata database.

<http://www.environ.se/sweionet/threats/3acid/h3p3.htm> - Deposition of Nitrogen and Sulphur on Sweden from selected countries 1995

Following the selection criteria path:
It has international/European relevance.
It is not produced according to an EC regulation.
It is not requested by EEA/EIONET on any basis.
There is no other international request.
Score is 0.

Examples, environmental data sets:

Data on discharge of Cadmium.

Following the selection criteria path:
It has international/European relevance.
It is produced according to an EC regulation, (83/513/EEG).
Score = 5.

It is not requested by EEA/EIONET on a regular basis.
It is not requested by EEA/EIONET on a project basis.
It is requested by HELCOM and OSPARCOM.

Score is already 5.

It is possible to obtain metadata, obtain quality information and to have metadata maintained and updated.
Metadata originates from issues with high thematic importance
Score is already 5.

Data on emissions of POP's (persistent organic pollutants)

Following the selection criteria path:
It has international/European relevance.
It is not produced according to an EC regulation.
It is requested by EEA/EIONET* (CORINAIR) on a regular basis.
Score is 5.

Data is required by CORINAIR, LRTAP, AMAP.

Score is already 5.

We will meet problems to obtain the metadata because of lack of specification of real data.

Score is 5-1=4.

Metadata production will not meet to high costs for their production.

Metadata will meet GEMET terms.

Metadata might not in all cases be referenced to authoritative guidelines.

Score is 4-1=3.

Metadata will be maintained and updated.

It contains information on chemicals in the environment (high thematic and sectorial relevance)

Score is 3+1=4.