COMMON IMPLEMENTATION STRATEGY FOR THE WATER FRAMEWORK DIRECTIVE (2000/60/EC)

POLICY SUMMARY

to
Guidance Document No 6

Towards a guidance on the establishment of the intercalibration network and the process on the intercalibration exercise

Produced by Working Group 2.5 - Intercalibration

Explanatory Note

This policy summary gives an overview of the Intercalibration guidance document (WFD CIS guidance document No. 6) drafted by the Common Implementation Strategy (CIS) Working Group 2.5. This policy summary consists of four sections which have been derived directly from the text of the Intercalibration guidance document as of 15 November 2002 with very minor rephrasing. More explicitly:

- Chapter 1 has been derived from the Introduction and section 1 of the guidance;
- Chapter 2 has been derived from section 2 and 3 of the guidance;
- Chapter 3 has been derived from section 4 of the guidance;
- Chapter 4 has been derived from section 5 of the guidance.

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1 – Introduction

What can you find in this Guidance Document?

- **Common understanding of Water Framework Directive intercalibration requirements**
  - Extraction and description of the relevant text concerning intercalibration from the Directive, Annex V;
  - Agreement on what this text means in practical terms.
- **Synthesis of the intercalibration process: problems and possible solution**
  - Description of the timetable of the intercalibration process;
  - Description of practical problems in requirements of the Directive in relation to the implementation timetable in Member States;
  - Possible solutions to these problems on short-term and long term basis;
  - Possible implications of limited intercalibration.
- **Description of a practical procedure of the intercalibration process**
- **Practical organization for the selection of intercalibration sites**
  - Roles of Member States and the Commission in the site selection process;
  - Procedure, timetable, and criteria for the selection of water body types for intercalibration;
  - Procedure, timetable and criteria for the selection of intercalibration sites;
  - Deliverables and milestones of the intercalibration process;
  - Artificial and heavily modified water bodies and the intercalibration network;
  - Criteria for the selection of intercalibration sites.
- **Preliminary technical protocol for the intercalibation exercise**
  - Stepwise description of the intercalibration exercise and the tasks of the participants;
  - Guidance on data collection and data exchange;
  - Reporting of the classification results;
  - Expected outcome of the intercalibration exercise.

What can you <u>not</u> find in this Guidance Document?

- Guidance on how to calculate Ecological Quality Ratios for different quality elements is not included, because:
  - This will depend on the assessment method and metrics that each MS chooses for the assessment of their surface water quality (this is addressed in WFD CIS guidance document No. 7 - Monitoring);
  - This will depend on the method that each MS chooses for establishing reference conditions (this is addressed in the WFD CIS guidance document No. 10 - REFCOND and WFD CIS guidance document No. 5 - COAST).

- Guidance on a common understanding and more specific interpretations of the normative definitions of the quality classes given in the WFD is not included, because:
  - The REFCOND and COAST working groups have started to address these issues, and (to a certain extent) will address these in their guidance documents (WFD CIS guidance documents No. 10 and 5 respectively);
  - It is proposed that water category and type specific criteria for the normative definitions of the high-good and good-moderate class boundaries will be developed by expert groups as a part of the continuation of the ECOSTAT cluster (REFCOND, COAST, and Intercalibration WGs), building on the present guidance documents.

2 - Common Understanding and Synthesis of the Intercalibration Process

Requirements of the Water Framework Directive

The Directive requires that the boundaries between the ecological quality classes high - good and good - moderate will be established through an intercalibration exercise (Annex V, 1.4.1, iii). An intercalibration network, consisting of selected sites, will be established representing Member States' interpretations of the normative definitions of surface water status (defined in Annex V, section 1.2) in relation to reference conditions.

The purpose of the intercalibration exercise is to ensure comparable ecological quality assessment systems and harmonised ecological quality criteria for surface waters in the Member States. This ensures a harmonised approach to define one of the main environmental objectives of the WFD, the "good ecological status", by establishing:

- Agreed ecological quality criteria for good quality sites, setting the targets for protection and restoration;
- Agreed numerical Ecological Quality Ratio (EQR) values for two quality class boundaries (high/good and good/moderate).

Intercalibration is carried out by the Member States. The role of the Commission is to facilitate the information exchange between the Member States.

An intercalibration network should be established by the end of 2004 (Fig. 1). The draft register of the intercalibration network, published by the Commission in 2003 may be adapted in accordance with the procedures laid down in Article 21 of the Directive.

The intercalibration network will be established for a limited number of water body types with two or more sites corresponding to both boundaries between quality classes *High-Good* and *Good-Moderate* according to each Member States' classification. The selection of water body types and intercalibration sites needs to be carried out using expert judgement based on joint inspections and all available information.

Artificial or heavily modified water bodies should be considered in the intercalibration, but not as a separate category. Some artificial or heavily modified water bodies could be considered to be included in the intercalibration network, if they fit in one of the natural water body types selected for the intercalibration network. Artificial and heavily modified water bodies that are not comparable with any natural water bodies should only be included in the intercalibration network, if they are dominant within a water category in one or more Member States; in that case they should be treated as one or several separate water body types.

In the intercalibration exercise, Member State's ecological quality assessment systems are then applied to classify these sites in the ecoregions where their classification systems are applicable. The results are used to set the boundary '*Ecological Quality Ratio*' (EQR) values of the classification systems and published by the Commission.

The Directive requires the following timetable for the intercalibration:

- Establishment of draft register of the intercalibration network – December 2003;

- Establishment of final register of intercalibration network – December 2004;
- Intercalibration exercise completed – June 2006;
- Results of intercalibration exercise published by Commission – December 2006.

Obstacles in the timetable of the intercalibration process

In the fulfillment of the formal requirements of the intercalibration exercise, as described in Annex V of the Directive, certain difficulties are foreseen. The main reason is that the intercalibration timetable does not completely match with the implementation timetable in the Member States. As a consequence, crucial information for the intercalibration will only be available during the progress in implementation (Table 1).

Table 1. Comparison of the Member States' implementation timetable and the intercalibration timetable, as required by Annex V of the Directive

Year	MS implementation timetable	Intercalibration timetable
2003		Draft register of the Intercalibration network
2004	Analysis of characteristics (typology and reference conditions) and pressures & impacts	Final register of the Intercalibration network
2005		Intercalibration exercise
2006	Monitoring programs operational	Intercalibration exercise completed: harmonized class boundaries

The major obstacles for the intercalibration process due to the differences in timetables are related to typology incompatibility between Member States and a limited availability of data. The WFD foresees a single intercalibration exercise in 2005 and 2006. It is inevitable that this exercise will be based on results from monitoring systems that are still under development, with limited data available and practically no possibility to collect additional data. The objectives of the intercalibration exercise – agreement on class boundaries and harmonised classification systems – can be only partially met in the single intercalibration exercise that is required by the WFD.

As a consequence, the site selection in 2003 and 2004 should be targeted for water body types where most data is available, recognising that the intercalibration network established will not reflect the impacts of all pressures, and all biological quality elements.

It is proposed to limit the intercalibration network to sites impacted by the most widespread pressures. This implies that:

- Only those parts of the classification systems targeted to detect impacts of such pressures on the selected quality elements would be intercalibrated;
- Agreed ecological quality criteria for good quality sites, setting the targets for protection and restoration of water bodies would be set only for most widespread pressures, while impacts of other pressures would not be considered;
- In 2006, there will be no verified and comparable targets for 'good ecological status' as a whole.

Long-term strategy to overcome the problems of intercalibration

It is anticipated that a voluntary commitment of the Member States could improve the outcome of the intercalibration exercise in 2003-2006. However, due to practical problems in establishing WFD compatible monitoring systems in time it is anticipated that the objectives of the intercalibration exercise – agreement on class boundaries and harmonised classification systems – can be only partially met in the single intercalibration exercise that is required by the WFD. In order to establish reliable and comparable ecological quality class boundaries, a review mechanism for the intercalibration network at a time when more data with better quality and compatible with WFD requirements will be available (i.e. after 2006) is strongly recommended. The practical implications[1] and the legal possibilities[2] for such revisions should be clarified as soon as possible in the continuation of the Common Implementation Strategy.

3 –Guidance for the Establishment of the Intercalibration Network

Procedure for the establishment of the intercalibration network

The selection of intercalibration sites for the intercalibration network needs to be carried out in two steps.

1. First, selection of the surface water body types for each of the surface water categories (rivers, lakes, transitional and coastal waters), and possibly the artificial and heavily modified waters in each ecoregion, which will be included in the intercalibration network;
2. Secondly, within these types a minimum number of intercalibration sites have to be selected by the Member States following the requirements described in the Annex V of the WFD (Fig. 1). The intercalibration network must consist of sites selected from a range of surface water body types present within each ecoregion (WFD Annex V).

[1] *Taking into account the consequences for preparing programmes of measures, river basin management plans and establishing classification systems*
[2] *Taking into account the possibilities given in WFD Art. 19, 20 and 21*

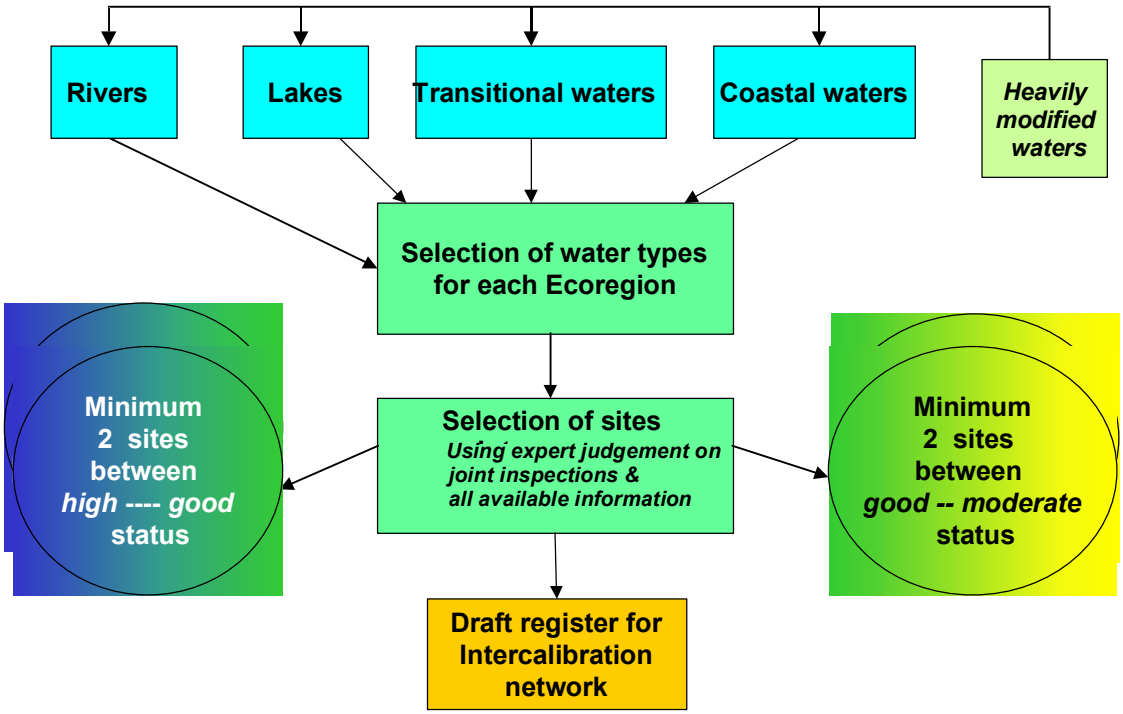

Figure 1. Selection of intercalibration sites for the intercalibration network.

The following is a stepwise description of the proposed procedure for the site selection for the intercalibration network. Flowcharts of the process are presented in Figure 2 and 3.

Step 1 Establishment of the Expert groups

- Expert groups will be established for all main water body categories (rivers, lakes, and transitional and coastal waters);
- The experts are proposed and selected by the Member States. Their work will be coordinated through the Ecological Status Cluster;
- Each Member State should be represented in the expert groups relevant for their surface waters;
- Expert groups can be subdivided into (eco)regional groups, or further into geographical intercalibration groups when necessary;
- A platform for the communication within/between the expert groups (information exchange, meetings, www-page, etc.) will be organised by the Commission.

Step 2 Proposal of water body types

- The expert groups will propose the water body types for each surface water category and (eco)region included in the intercalibration network, taking into account the output of working groups REFCOND and COAST. Preliminary proposals of common

intercalibration types for each surface water category have been prepared by the expert drafting groups[3].

Step 3 Proposal of pressures and biological quality elements

- For each selected intercalibration type, the expert groups need to agree on the pressures and the biological quality elements, where the intercalibration exercise should focus on, taking into account guidance from the Impress (2.1.) and monitoring (2.7.) working groups. Preliminary proposals for the focus and information requirements for the site selection have been prepared by the expert drafting groups[3].

Step 4 Selection of types, pressures, and quality elements for the intercalibration network

- The proposals of the expert groups will be discussed and finalised by the Intercalibration working group.

Step 5 Selection of sites for the draft intercalibration register

- Each Member State will select sites for the draft intercalibration register;
- The sites selected should represent high-good and good-moderate class boundaries according to each Member State's interpretation of the normative definitions, taking into account the WFD CIS guidance documents No. 10 - REFCOND and No. 5 - COAST.

  The selection process should follow these steps:

  i. Member States identify which types in the Member State's typology system correspond to the intercalibration types relevant for the Member State, and identify the reference conditions for those types.

  ii. Bring together all available information necessary for the site selection (pressures, impacts, biological data for the sites that will be considered for the sites selection - ranging from high to moderate status).

  iii. If there is not sufficient biological data, site selection should be partially based on pressure criteria, and the Member State should plan to acquire biological data to be available for the intercalibration exercise in 2005-6.

  iv. Based on the available information, Member States select sites representing the high-good and good-moderate boundary, according to their interpretation of the normative definitions specified in Annex V (1.2.) of the WFD, motivating their choice.

Step 6 Metadata analysis

- The Commission will set up a database holding metadata (information about the availability of data) for all intercalibration sites as selected by the Member States;
- Member States will provide metadata on typology, reference conditions and biological and physico-chemical monitoring results (step 5.1-5.3 above). If essential information is lacking at the time of the site selection, they should indicate if, when and in what form the data will become available;

[3]*drafting expert group reports are available on CIRCA: http://forum.europa.eu.int/Members/irc/env/wfd/library?l=/working_groups/intercalibration/drafts/expert_drafting&vm=detailed&sb=Title*

- Additionally, information should be provided on the criteria for classification of the sites (step 5.4 above). This information is necessary for the evaluation of the choices of the Member States by the expert groups in the next step;
- The metadata analysis will be the basis for the compilation of the draft register for the intercalibration network providing an overview of the information available for each intercalibration site;
- The metadata analysis will be the basis for a realistic planning for the intercalibration exercise and for the preparation of the database for this purpose.

Step 7 Evaluation of the proposed intercalibration sites by expert groups

- The Commission will compile the results of the metadata analysis and make them available to the expert groups;
- The expert groups evaluate the selection by the Member States and point out possible inconsistencies (including differences in Member State's interpretations of the normative definitions);
- The expert groups review the metadata and propose what data should be collected / made available for the intercalibration exercise – allowing Member States to start collecting data which is still not available.

Step 8 Finalisation of the draft register

- The evaluation of the different expert groups of the proposed selections of the Member States will be presented, discussed and approved by the Intercalibration working group;
- The draft register of the intercalibration network will be discussed in a joint workshop of Member State representatives (Intercalibration WG) and the Commission, to evaluate consistency with the normative definitions of the class boundaries and comparability between Member States[4]. Where possible, proposals are made how inconsistencies should be resolved;
- The draft register will be the list of sites selected by the Member States, together with the approved summary of the metadata analysis including information of the criteria for the quality classification of those sites.

Step 9 Presentation of the draft register to the Article 21 Committee

- The Commission will finalise the draft register of the Intercalibration network, and submit it to the Article 21 Committee before 22nd December, 2003;
- Together with the draft register, the Commission will submit the results of the evaluation made in step 8;
- The procedure for revising the draft intercalibration register will depend on the decisions of the Article 21 Committee;

Step 10 Revision of the draft intercalibration register

- If a revision of the draft intercalibration is decided, Member States should reconsider and possibly expand their selection (based on the decisions of the Article 21 Committee);

[4] *WFD Annex V, 1.4.1 (iv)*

- If new sites are selected by the Member States they should be included in the metadata analysis;
- For the final register, it is recommended that the same procedure should be followed as for the draft intercalibration register (see steps 7-9 above):
  - Evaluation of the proposed intercalibration sites by expert groups;
  - Finalisation of the (proposed) register;
  - Presentation of the (proposed) register to the Article 21 Committee;
  - Approval of the final intercalibration register by the Article 21 Committee.

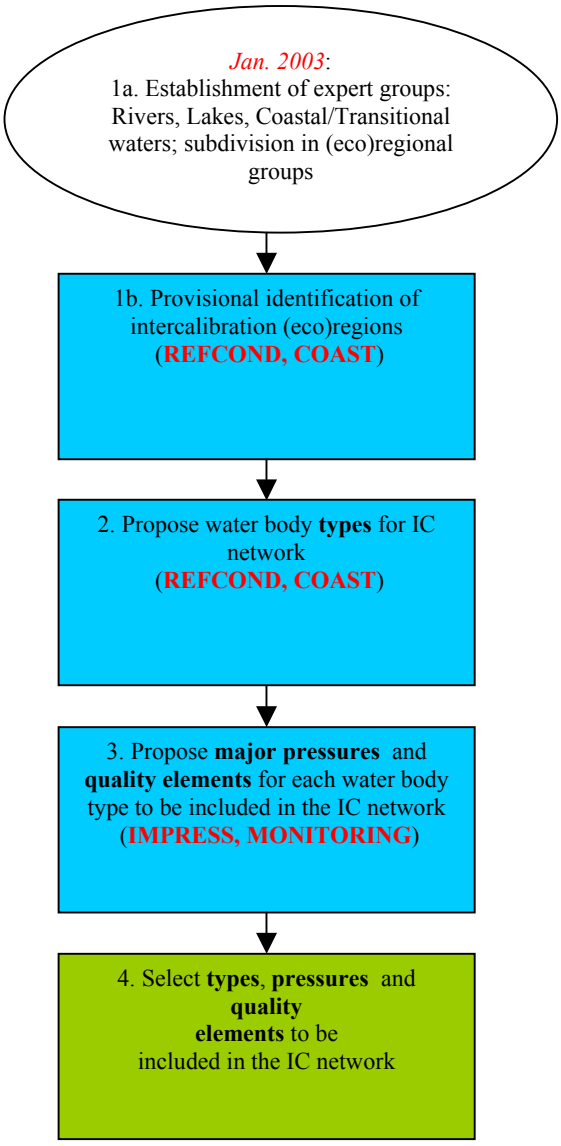

Figure 2. Flow chart of the proposed process for the selection of types, pressures, and quality elements for the intercalibration network in 2003. Steps where guidance is required from other WFD CIS working groups are indicated. The colours of the boxes indicate the actors that have to carry out the steps: White – Ecological Status Cluster, Blue – expert groups, green – Intercalibration working group.

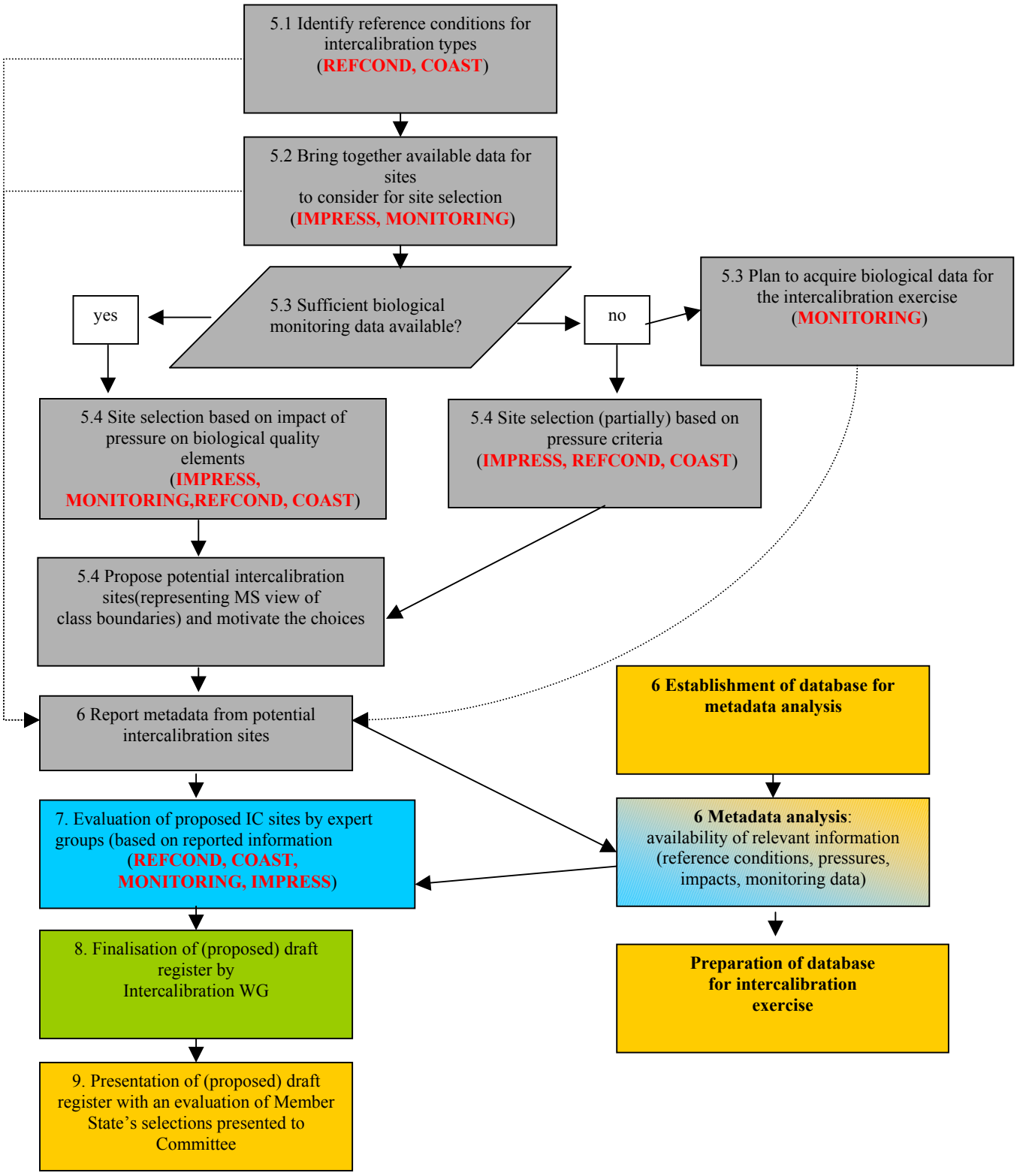

Figure 3. Flow chart of the proposed process for the selection of sites for the draft intercalibration register. Steps where guidance compiled by other WFD CIS working groups is needed are indicated. The colours of the boxes indicate the actors that have to carry out the steps: Grey - Member States, blue – expert groups, green – Intercalibration working group, yellow – Commission

Table 2. Summary and proposed timetable of the site selection for the intercalibration network in 2003 and 2004.

Month	Actions		Actors
Jan-03	Establishment of expert groups (for rivers, lakes, transitional and coastal waters); subdivision in (eco)regional groups		Member States, Commission
Feb-Mar-03	Selection of surface water body types. Selection of pressures and biological quality elements.		Expert groups, Intercalibration working group.
Apr-Jun-03	Selection of sites for the draft intercalibration register. Delivery of metadata to the Commission.		Member States
Apr-Oct-03	Metadata evaluation, possible checking of sites, preliminary draft register.		Expert groups and Commission .
Oct-03	**Workshop**	Approval of draft register	Intercalibration working group, Expert groups, Commission
Nov-03	Compilation of the draft register		Commission
Dec-03	Draft register submitted to the Art. 21 Committee		Commission
Jan-Jun-04	Submission of new information, if possible & available		Member States
Jan-Sep-04	Revision of the draft register, if possible		Expert groups
Sep-Nov-04	Compilation of the final register		Commission
Nov-Dec-04	Adaptation and publication of the final register		Committee

4 - Preliminary Technical Protocol for the Intercalibration Exercise

In this section the preliminary description of the process during the intercalibration exercise in 2005 and 2006 is presented. This section is not complete and further development will be required in 2003. At present it is not possible to provide more detailed guidance, since there is not a clear overview what kind of data can be expected from the provisional intercalibration sites.

Such information will be obtained in the metadata analysis carried out during site selection process in 2003.

Stepwise description of the intercalibration exercise and the tasks of the participants

Intercalibration is carried out by the Member States. Cooperation between Member States belonging to the same geographical intercalibration group is needed. The role of the Commission is to facilitate the information exchange between the Member States:

1. After adaptation and publication of the register for the intercalibration sites in December 2004, the intercalibration exercise will be initiated. All data from the selected

intercalibration sites will be made available for Member States through an Intercalibration database[5] hosted by the Commission (EEWAI);

2. Member States will use data from the sites, which are within the ecoregion/geographical area, where their national assessment systems are applicable. Practically Member States belonging to the same geographical intercalibration group will share data from the common intercalibration sites;
3. Using this data and possibly carrying out voluntary additional sampling[6], the Member States will assess the Ecological Quality Ratio (EQR) values of the intercalibration sites representing the relationship of observed values with the type-specific reference conditions;
4. If additional sampling is carried out, Member States will use this data for intercalibration and report this data to the Intercalibration database;
5. Member States will report the results of the intercalibration exercise to the Commission;
6. The Commission will be assisted by expert groups in the analysis and evaluation of the results;
7. The Commission will publish the results of the intercalibration exercise within six months after the completion of the intercalibration exercise. The report should at least include:
   - ✓ An evaluation of the factors affecting comparability of the EQR values established by the Member States' monitoring and classification systems;
   - ✓ Proposals for the numerical values to set harmonized EQR–scales for the same water body types.

[5] The intercalibration database can either hold all necessary data, or provide links to databases at the Member States where actual data would be available in structured form to be downloaded for the use of other Member States in the same intercalibration group.
[6] The Member States that need more data for assessment than available in the database for the particular site, may carry out additional sampling. This may not be needed if the available monitoring data would be compatible with WFD.

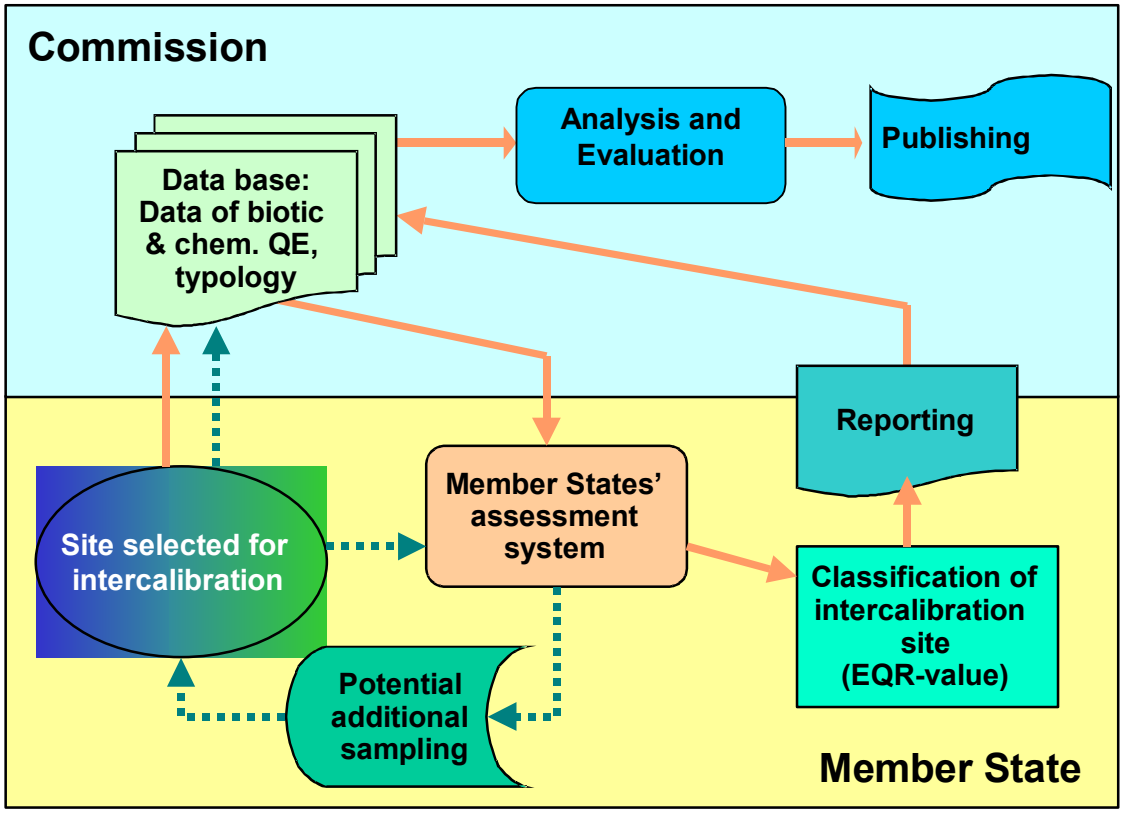

Figure 4. Process of intercalibration showing the tasks of the Member States and the Commission (stippled green arrow: Flow of data in case, if additional sampling is carried out).

Table 3. Summary and [tentative] timetable of the intercalibration exercise in 2005 and 2006.

Month	Actions	Actors
Jan-05	Establish intercalibration database	Commission
Jan-05-Jun-06	Reporting data from intercalibration sites to database; assessing EQR of applicable sites	Member States, assisted by Expert Groups
Jun-06	Reporting the results to Commission	Member States
Jul-Oct-06	Analysis and evaluation of the results	Commission , Expert Groups
Oct-Dec-06	Publication of the results	Commission