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

POLICY SUMMARY

to

Guidance Document No. 4

Identification and Designation of Heavily Modified and Artificial Water Bodies

Produced by Working Group 2.2 - HMWB

EXPLANATORY NOTE

This policy summary gives an overview of the Heavily Modified Water Body (HMWB) & Artificial Water Body (AWB) guidance document drafted by the Common Implementation Strategy (CIS) HMWB Working Group 2.2. This policy summary consists of four sections which have been derived directly from the text of the HMWB & AWB guidance with very minor rephrasing. More explicitly:

- Section 1 has been derived from chapter 1.4 and part of chapter 1.3.2 of the guidance document.
- Section 2 has been derived from parts of chapter 2.1 of the guidance document.
- Section 3 has been derived from chapter 3 and parts of chapter 7.2 of the guidance document.
- Section 4 has been derived from chapter 7.5 of the guidance document.

In this summary, you will find references to chapters and annexes of the HMWB & AWB guidance document.

TABLE OF CONTENTS

1 INTRODUCTION - A GUIDANCE DOCUMENT: WHAT FOR?

The Heavily Modified Water Body (HMWB) & Artificial Water Body (AWB) guidance document (WFD CIS guidance document No. 4) aims at guiding experts and stakeholders in the implementation of Directive 2000/60/EC "establishing a framework for Community action in the field of water policy (the Water Framework Directive – WFD)". It focuses on the identification and designation of heavily modified and artificial water bodies in the broader context of the development of integrated river basin management plans as required by the WFD.

The purpose of the guidance document is to introduce the requirements of the WFD with respect to HMWB and AWB identification and designation and to serve as a practical implementation guide for those who will be actively involved in the implementation of the WFD. As the WFD does not always define or describe the terms and approaches to be used and because some parts are open to differing interpretation, the guidance document aims to develop a common understanding and interpretation of the WFD for the HMWB and AWB designation process and may, in part, describe pragmatic operational approaches to meeting WFD requirements.

To whom is the Guidance Document addressed?

The guidance document is addressed to:

- Administrative bodies responsible for implementing the WFD;
- Administrative bodies influenced by the implementation of the WFD;
- Planning engineers and other technical experts;
- Interested public; and
- Other stakeholders affected by the implementation of the WFD, especially with regards to the designation of HMWB (NGOs, water supply companies, hydropower, shipping, industry etc).

What can you find in the Guidance Document?

1. An introduction to the role of HMWB and AWB designation in the WFD (Chapter 2).
2. Practical guidance on the stepwise approach of identifying and designating HMWB and AWB and setting reference conditions and environmental quality objectives (Chapter 3).
3. Detailed guidance on how to implement the different steps (Chapters 4 to 6).
4. Cross-cutting issues and outlook (Chapter 7).

The guidance document proposes a step-by-step approach. Because of the diversity of circumstances within the European Union, its application may vary across Europe. The proposed approach may therefore need to be tailored to specific circumstances.

There are important links between the HMWB Working Group and other working groups within the Common Implementation Strategy (CIS). It is therefore important to read the HMWB guidance document in the context of the guidance documents produced by the other CIS working groups.

What you will not find in the guidance document?

The guidance document is concerned with the designation of HMWB and AWB resulting from existing physical modifications. Implications from planned, new modifications [Art. 4(7)] are not considered in the document. The guidance document focuses on the first river basin management planning cycle (2008/9). It does not cover physically modified or artificial bodies of water that Member States do not choose to designate as HMWB or AWB.

The HMWB Working Group

As part of the EU WFD Common Implementation Strategy (CIS), a working group was established to develop guidance on the process of HMWB and AWB designation. The CIS Working Group 2.2 on “Heavily Modified Water Bodies” (HMWB) is jointly managed by the United Kingdom and Germany and involves the participation of 12 Member States (MS),[1] Norway, some Accession Countries[2] as well as a number of Stakeholders.[3] A number of distinct “sub projects” were progressed by the Working Group:

- Production of 12 "guidance papers" by the joint chair of the HMWB Working Group that were discussed at several Working Group meetings;
- Thirty-four case study projects, carried out in the MS and Norway, that tested the "guidance papers";
- A synthesis of the case study reports;
- Production of the HMWB and AWB guidance document;
- Production of this policy summary; and
- Production of a toolbox supporting the guidance document.

[1] Austria, Belgium, Denmark, Spain, France, Germany, Greece, Netherlands, Portugal, Sweden, Finland and UK.

[2] Hungary, Poland and Slovenia. The other seven Accession Countries are also members of the group but have so far not attended a working group meeting or the workshop.

[3] EEB, EUREAU, Eurelectric and WWF.

2 HMWB AND AWB IN THE WATER FRAMEWORK DIRECTIVE

For surface waters the overall aim of the WFD is that Member States should achieve "good ecological and chemical status" in all bodies of surface water by 2015. Some water bodies may not achieve this objective. Under certain conditions the WFD permits Member States to identify and designate AWB and HMWB according to Article 4(3). The assignment of less stringent objectives to water bodies and an extension of the timing for achieving the objectives is also possible. These derogations are laid out in Articles 4(4) and 4(5).

HMWB are bodies of water which as a result of physical alterations by human activity are substantially changed in character and cannot, therefore, meet the "good ecological status" (GES). In this context:

- Physical alterations mean changes to the hydromorphological characteristics of a water body, and
- A water body that is substantially changed in character is one that has been subject to major long-term changes in its hydromorphology as a consequence of maintaining the specified uses listed in Article 4(3). In general these hydromorphological changes alter morphological and hydrological characteristics.

AWB are surface water bodies which have been created in a location where no water body existed before and which have not been created by the direct physical alteration, movement or realignment of an existing water body.

Member States may designate surface water bodies as HMWB or AWB where they have been physically altered so that they are “substantially changed in character” or "created by human activity" respectively, and subject to the tests specified in Article 4(3) The first test requires that the specified uses of the water body (i.e. navigation, hydropower, water supply or flood defence) or the “wider environment” would be significantly adversely affected by the restoration measures required to achieve good ecological status[4].. The second test requires that there are no significantly better environmental options for delivering the specified use that are technically feasible and cost effective.

The designation of HMWB and AWB is optional; Member States do not have to designate water bodies as HMWB or AWB.[5]

Instead of "good ecological status", the environmental objective for HMWB and for AWB is good ecological potential (GEP), which has to be achieved by 2015. The designation is not an opportunity to avoid achieving demanding ecological and chemical objectives, since GEP is an ecological objective which may often, in itself, be challenging to achieve.

[4] In the guidance document the first designation test 4(3)a is not considered relevant to AWB designation.

[5] Where modified or artificial waters are not designated the objective will be good ecological status.

The designation may, in some instances, help to protect wider environmental interests, e.g. when the removal of a modification would lead to the destruction of valuable environmental features.[6]

3 A STEPWISE APPROACH FOR THE DESIGNATION OF HMWB AND AWB

A very large number of water bodies will have to be assessed for possible designation as HMWB or AWB between now and 2008/2009 (publication of the first draft/final RBMP). It will be important therefore to ensure that the approaches and methods used for the designation process are practicable and comparable in all Member States. Moreover, it is important to develop appropriate options so that the complexity of the assessment methodology can be made proportionate to the circumstances. In addition, if several adjacent water bodies are subject to the same pressures and impacts, it may be possible to group these water bodies and undertake a single identification and designation process.

In the first planning cycle, there are serious practical difficulties in designating HMWB, in defining MEP and GEP and in performing an assessment of the likelihood of not achieving the relevant environmental quality objectives in 2004 as required by Article 5 (and Annex II). The IMPRESS and HMWB working groups have therefore recommended, that the assessment of the likelihood of failing the environmental objectives for HMWB can be carried out against GES rather than GEP. This helps to overcome the practical difficulties of defining the MEP & GEP for HMWB at this early stage.

Figure 1 illustrates the overall stepwise approach to the identification and designation of HMWB and AWB. In chapter 3 of the guidance document, the steps are summarised (steps 1 – 11), whilst chapters 4-6 describe the steps in more detail, including some proposed methods and explanations. It should be noted that step 1 and steps 3-5 are broader than the HMWB and AWB process. Step 1 is applicable to all water bodies and involves the application of the EC horizontal guidance on water body identification.[7] Steps 3-5 are part of the broader Annex II (1.4 & 1.5) assessment of pressures and impacts which is described in the WFD CIS guidance document No 3 - IMPRESS. **No additional work beyond that required under IMPRESS is required as part of these steps.**

[6] The removal of a weir or dam may, for example, impact significant ecological (e.g. biodiversity) or historical (old mill) features. By designating the water body as heavily modified, the weir or dam probably will not have to be removed.

[7] WFD CIS Guidance Document No. 2 Identification of Waterbodies.

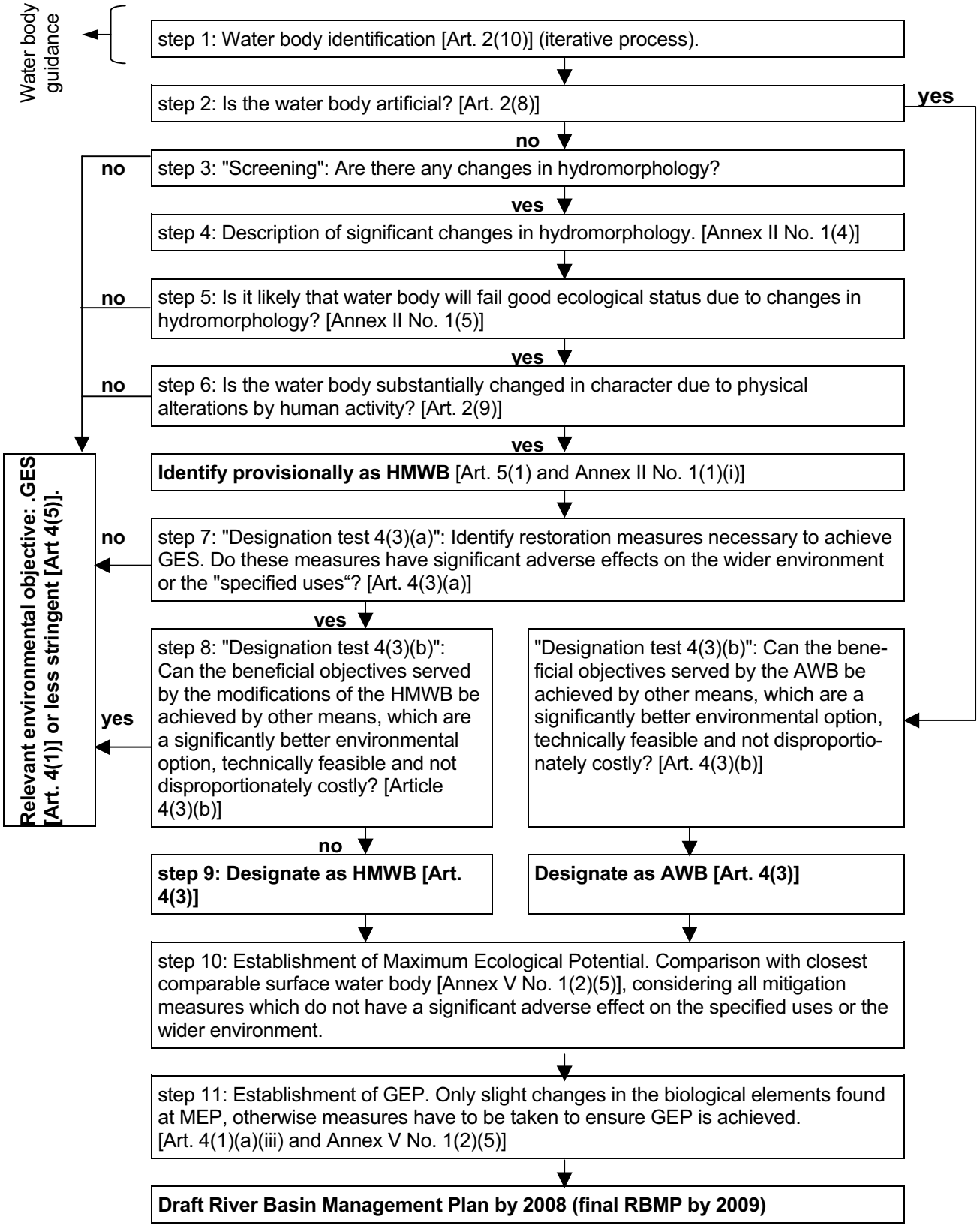

Figure 1: Steps of the HMWB & AWB identification and designation process

- **step 1:** Distinct water bodies are to be identified and described according to WFD CIS guidance document No. 2 - water body identification. Water body identification is an iterative procedure with possible adaptations in later stages of the designation process (mainly after step 6, the provisional identification of HMWB). The water body identification has to be done for all surface waters (natural, heavily modified and artificial waters), and is significant, because water bodies are the units for which status is being assessed, objectives established and achievement of objectives of the WFD checked.

- **step 2:** The WFD gives distinct definitions for AWB and HMWB [Art. 2(8) and Art. 2(9) respectively]. In this second step it should be identified whether the water body concerned has been "created by human activity". If this is the case, Member States will have the option to identify it as AWB and consider it for designation or, in some circumstances, identify it as a natural water body. Where the intention is to designate as AWB, the first designation test (step 7) is not relevant and AWB should continue directly with the second designation test (step 8).

- **step 3:** A screening process is proposed to reduce effort and time in identifying water bodies which should not be considered for the HMWB designation tests. This will include those water bodies that are likely to fail to achieve GES but which show no hydromorphological changes. This step is part of the Annex II (1.4) assessment of pressures.

- **step 4:** For those water bodies which have not been "screened out" in step 3, significant changes in hydromorphology and resulting impacts should be further investigated and described. This includes the description of hydromorphological changes and the assessment of resulting impacts. This step is part of the Annex II (1.4 & 1.5) assessment of pressures and impacts.

- **step 5:** Based on the information gathered in step 4 and an assessment of the ecological status of the water body, the likelihood of failing to achieve good ecological status (or an estimate of what GES may be, based on current knowledge) should be determined. Within this step it has to be assessed whether the reasons for failing the GES are hydromorphological changes and not other pressures such as toxic substances or other quality problems. This step is part of the Annex II (1.5) assessment of impacts process to be completed by 22 December 2004.

The WFD CIS guidance document No.3 – IMPRESS will give more explicit guidance for steps 3-5; in particular, guidance on the "risk assessment". The Monitoring Working Group will deal with the monitoring requirements for water bodies "at risk" as well as for all other water bodies.

- **step 6:** The purpose of this step is to select those water bodies where the changes in hydromorphology result in the water body being substantially changed in character. Such water bodies can be provisionally identified as HMWB. The remaining water bodies likely to fail GES, which are not substantially changed in character, will be identified as natural water bodies. Environmental objectives for such water bodies will be GES or other less stringent environmental objectives.

It is only necessary to collect sufficient information during steps 1, 3, 4 & 5 to demonstrate that pressures and impacts result in a failure to achieve good status (as described by the

IMPRESS guidance document) and in step 6 (first step of the HMWB process) that the water body is substantially changed in character. These requirements can be satisfied in a simple descriptive manner in clear-cut cases. For example, if a water body has irreversibly and definitely changed category, then it is easy to demonstrate that pressures and impacts prevent the achievement of GES (of the original water body category) and that it is substantially changed in character.

- **steps 7-8-9:** Where Member States wish to designate a water body as heavily modified they must then consider them for the designation tests specified under Article 4(3)(a) & Article 4(3)(b). Artificial water bodies are only considered for the test under Article 4(3)(b). In the first "designation test" (**step 7**) necessary hydromorphological changes ("restoration measures") to achieve "good ecological status" should be identified. In the first test it has to be assessed whether these "measures" have significant adverse effects on either the "specified uses" or the "wider environment". If they do, then the second designation test (**step 8**) is to be carried out.

  The second designation test consists of several sub-tests. Firstly, "other means" to achieve the beneficial objective (e.g. replacement of surface water for drinking water supply with groundwater) are to be considered. Then, it has to be assessed whether the "other means" are a) technically feasible, b) a better environmental option and c) not disproportionately costly. If any of the sub-tests a), b) or c) are negative, the water bodies may be designated as heavily modified (**step 9**). If either the mitigation measures have no significant adverse effects (see step 7) or if "other means" can be found that fulfil the criteria a), b) or c) (see step 8), the water body must not be designated as heavily modified and the relevant environmental objective would be GES or a less stringent objective.

- **steps 10-11:** These steps are not part of the designation process. However, they are relevant to HMWB and AWB only and are therefore covered in this guidance document. They concern the definition of reference conditions and the setting of the environmental quality objectives for heavily modified and artificial water bodies. In **step 10** the reference condition for HMWB and AWB, the Maximum Ecological Potential (MEP), is defined. Based on the MEP, the environmental quality objective, the Good Ecological Potential (GEP), is defined (**step 11**).

The information gathered in the different steps (1-11) summarised above will contribute to the RBMP. The RBMP will contain programmes of measures [Art. 11] that are required to ensure the achievement of the environmental objectives for natural, heavily modified and artificial water bodies.

TIMING IN THE FIRST RIVER BASIN PLANNING CYCLE

The first draft RBMP should be available for public consultation by December 2008 [Art.14(1)(c)], while the final version is due one year later, in December 2009 [Art.13(6)]. The RBMP shall be reviewed and updated at the latest in December 2015 and every 6 years thereafter [Art.13(7)].

The guidance document provides advice on how the HMWB and AWB identification and designation process should be undertaken during the first RBMP cycle. An overview of the step-wise identification and designation process for the first planning cycle is given in chapter 3 of the guidance document. It will be important that the timing of these activities are considered in the context of other relevant WFD Common Implementation Strategy working group guidance documents.

Table 1 identifies the major WFD deadlines in the timetable of the HMWB and AWB identification and designation process in the first planning cycle.

By when?	**What major task?**	**What needs to be done for HMWB and AWB?**
2004	Characterisation of river basin district [Art. 5]	steps 1-6: Including: identification of water bodies (step 1); identification of AWB (step 2); description of hydromorphological changes (step 3); description of significant changes in hydromorphology (step 4); estimation of GES (non-AWB); likelihood of failing GES objective (Step 5; non-AWB); estimation of GEP (AWB); likelihood of failing GEP (AWB); and provisional HMWB identification (step 6).
2008/9	River basin management plan & public consultation [Art. 13 & 14]	steps 7-11: Including designation tests (steps 7 and 8), designation (step 9), identification of reference conditions (step 10) and environmental quality objective (step 11) for HMWB and AWB.

Table 1: Major WFD deadlines in the timetable for the identification and designation of HMWB and AWB in the first planning cycle

4 CONCLUSIONS AND OUTLOOK

The guidance document provides advice on how the HMWB and AWB identification and designation process should be undertaken during the first RBMP cycle (2008/2009). The designation process in the second and in subsequent RBMP cycles will be different in several aspects. It is important to appreciate that the identification and designation of HMWB and AWB is not a “one off” process and that the WFD provides for the flexibility to modify designations to take account of changes over time in environmental, social and economic circumstances.

The guidance document is based on the experiences of thirty-four case studies. It should, therefore, be applicable to most circumstances. However, further experiences in implementing the provisions relevant to HMWB and AWB in Member States will shed new light on the interpretation of the HMWB and AWB requirements of the Directive and the approach suggested in the guidance document and the accompanying toolbox. In the pilot river basins as well as in other river basins across Europe the guidance document will be applied in the coming months and years. The HMWB and AWB guidance document will require adaptations as a result of these new experiences and, as all other CIS guidance documents, the HMWB and AWB guidance will remain a “living document”.