

**Water Framework Directive:
State of implementation in member
states, definition of “heavily modified
water bodies” influenced by SHP,
problems and concerns**

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WFD requirements and deadlines

⇒ 2004 Characterisation of river basin districts

provisional identification of AWB and HMWB

⇒ 2008/9 River basin management plan & public consultation

definition of maximum ecological potential (MEP) and good ecological potential (GEP)

designation of AWB and HMWB



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⇒ own „category“

⇒ less stringent objective than good status

- „reference condition“ : maximum ecological potential (MEP)

- quality objective: good ecological potential (slight deviation from MEP) and good chemical status



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Requirements for designation as HMWB or artificial (Art. 4(3))

The achievement of good ecological status would entail

a) **Significant adverse effects on:**

⇒ The wider environment

⇒ Uses: navigation, power generation, drinking-water supply, irrigation, flood protection, land drainage, recreation, other important sustainable human development activities

b) **Alternatives**, which would be the **better environmental option** cannot be achieved due to

⇒ Technical feasibility

⇒ Disproportionate costs



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CIS-Guidance Heavily modified

- Basis: „case study report“
- Guidance Document
- Toolbox
- Policy Summary



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- Guidance Document
 - Advice for the designation of artificial and HMWB acc. to the WRRL
 - Support for the stepwise designation of HMWB
 - Provision of criteria for the definition of maximum and good ecological potential



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Definition of "Heavily Modified Water Body" WFD Article 2 (9)

"Heavily modified water body" means a body of surface water which as a result of **physical alterations** by human activity is **substantially changed** in character, as designated by the Member State in accordance with the provisions of Annex II.



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„physical alteration“

Any significant alterations that have resulted in **substantial** changes to the **hydromorphology** of a water body.



Physical alterations include:

⇒ Changes in morphology and hydrology

Problem: Changes in hydrology

without changes in morphology?



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Substantial changes in character

- ⇒ „extensive“ and „profound“
- ⇒ permanent, not temporary
- ⇒ changes in hydrology (withdrawal, recharge) without changes in morphology usually do not mean a substantial change!!



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- ⇒ Stepwise approach for designation of HMWB
 - ⇒ Identification as potentially HMWB
„provisional designation 2004!“
 - ⇒ Designation test acc. to Art. 4 (3) a+b
 - ⇒ if steps in test prove „Yes“: designation as HMWB 2009



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Test acc. Art. 4 (3) a

Identify restoration measures to achieve good status,
would they have significant impacts on

⇒ Specified uses (hydropower, flood protection)

⇒ The wider environment
(z.B. Natura 2000, Archaeology)

⇒ Consideration of economic aspects (WATECO)



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Steps leading to the designation as HMWB

- 1) Assessment of **significant** hydromorphological alterations
- 2) **Provisional designation** as HMWB (2004)
- 3) Reassess that **good status** is not achieved (2006/07)
- 4) If **good status cannot be achieved due to physical alterations**, test if Art. 4 (3) requirements are fulfilled
- 5) If yes: designation as HMWB in the **RBMP** (2009)

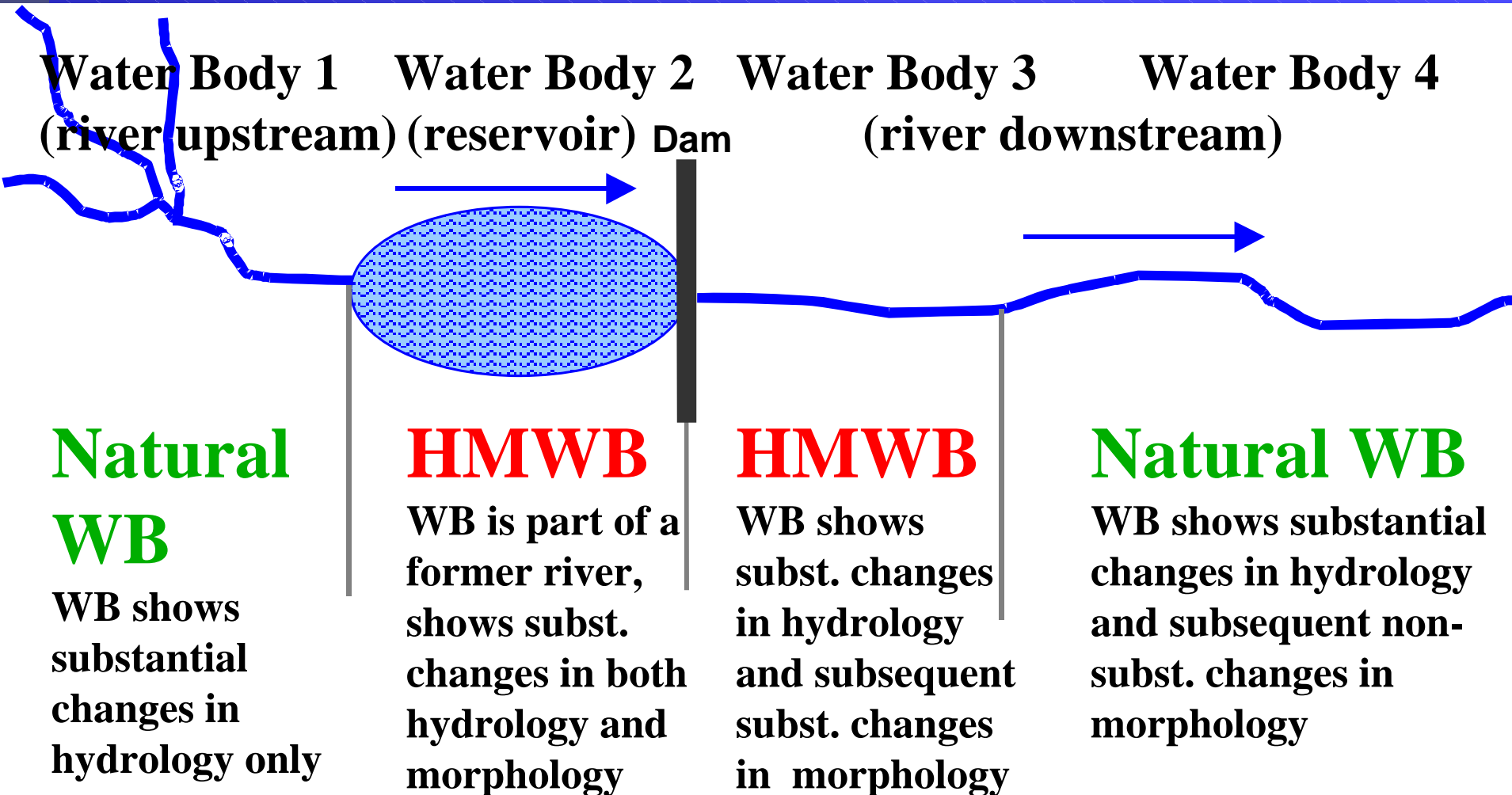


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„Narrow“ HMWB Definition

Substantial changes in both hydrology and morphology



HMWB in the Riverbasin Management Plan (RBMP)

- ⇒ Description underpinning that the requirements of Art. 4 (3) are fulfilled
- ⇒ Definition of MEP/GEP
- ⇒ Assessment of current ecological status
- ⇒ If „good ecological potential“ is not achieved
---> Programme of measures

Reassessment every 6 years!



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