

European Workshop on WFD & Hydromorphology, Prague, 17-19 Oct 2005

Workshop Session IV

- Hydromorphological risk assessment criteria
- Criteria for identifying and designation of hmwb

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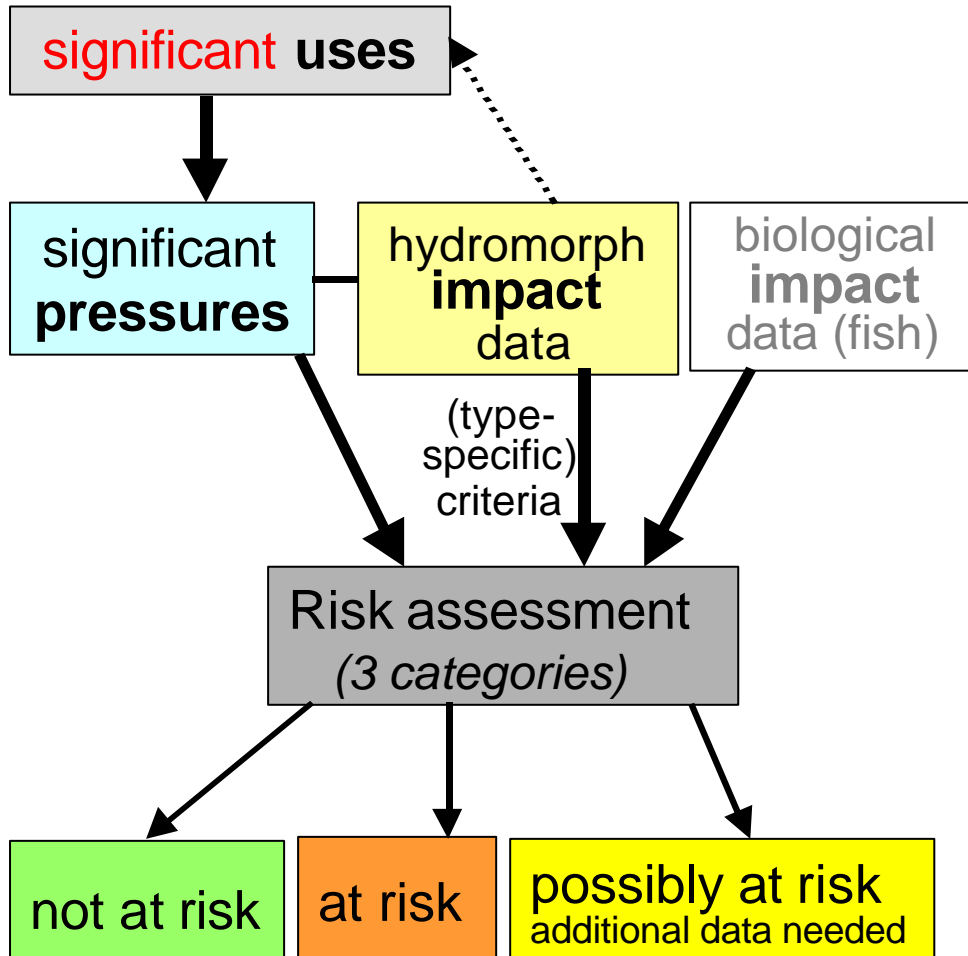
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Hydromorphological Risk Criteria



Significant* Uses	Rivers	Lakes
Power generation	X	X
Flood defense	X	X
Agriculture	X	x
Urban development	x	x
Infrastructure	x	x
Industry	x	x
Navigation	X (Danube)	(x)
Uses by water abstraction (industry, tourism, ...)	X	X
Creation of artificial wb (fishponds, historical canals, ...)	X	X

* By use of impact data it is guaranteed that „unsignificant“ uses are not underestimated

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Risk criteria for hydromorphological alterations (1)



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PRESSURE /IMPACT indicator	At risk	Possibly at risk
WATER ABSTRACTION MQ of residual flow (compared to natural $MJNQ_T$)	- $MQ_{res} < MJNQ_T$ and $< NQ_T$ - no obligations for residual flow	Figure for MQ_{res} unknown
HYDRO PEAKING flow amplitude	-large rivers: any existing -small/medium: flow amplitude > 1:5	----
MIGRATION BARRIERS* <div style="background-color: #e6f2ff; padding: 5px; margin: 5px 0;"> rivers $MQ < 0,2 m^3/s$ $> 0,2 m^3/s$ - type <i>Rhital</i>: 30 cm 70 cm - type <i>Potamal</i>: 10 cm 30 cm </div> number of MB within water body <i>in rivertypes < 500 m (altitude):</i> 500-1.200 m > 1.200 m	1 or more than 1 - -	- 1 or more than 1 2 or more than 2

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Risk criteria for hydromorphological alterations (2)



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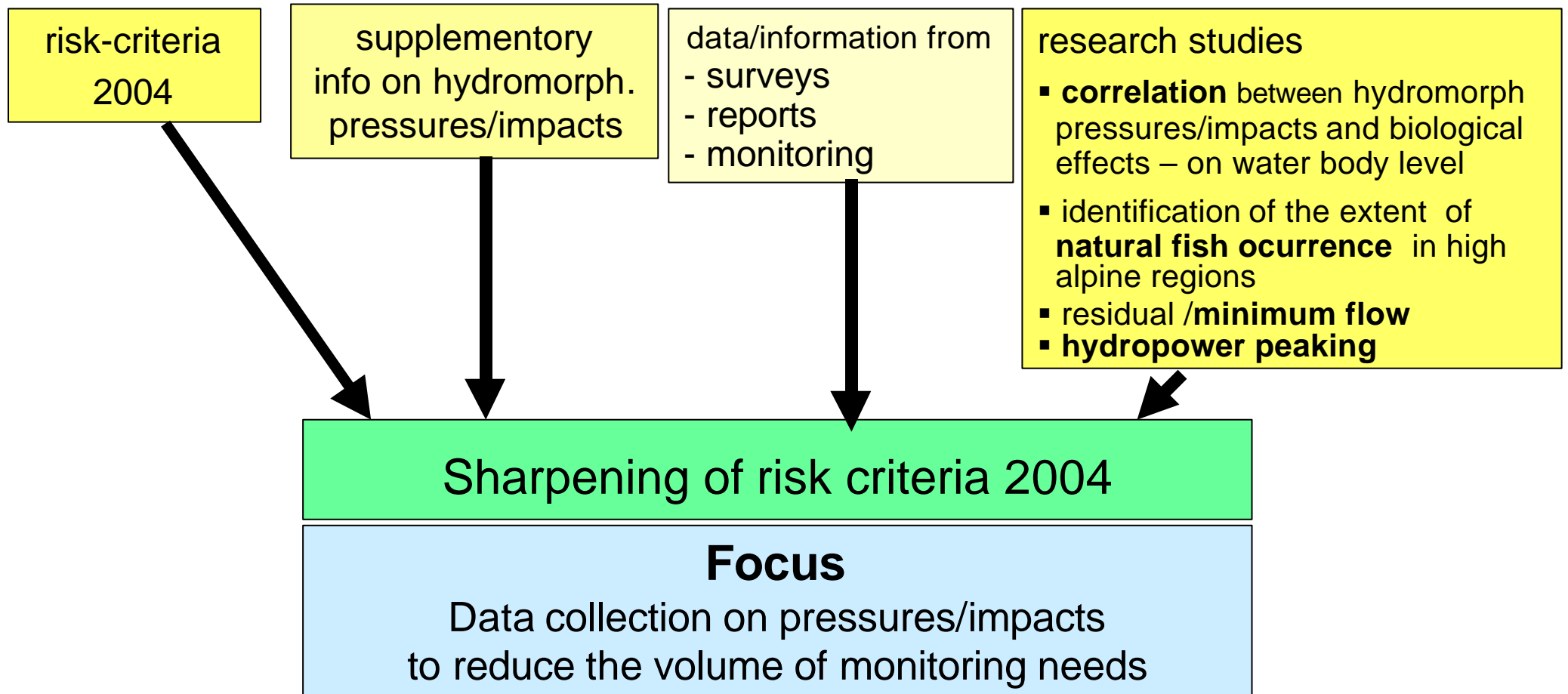
PRESSURE /IMPACT indicator	Wb „at risk“	Wb „possibly at risk“
<p>IMPOUNDMENTS (rivers > 100 km²: backwater > 500m) (rivers < 100 km²: backwater > 100m)</p>	<p>character) or chain of impoundments or many (small) impoundments</p>	<p>one or few (small) impoundments (~ less than 15% of wb length)</p>
<p>RIVER ASSESSMENT of MORPHOLOGICAL ALTERATIONS Typespecific parameters: channel patterns, sediment structure, bank structure, riparian vegetation, etc. (5-class system) length of wb > class 2</p>	<p>(~ more than 15% of wb length) more than 70% in class >2 or more than 30% in class >3</p>	<p>30%-70% in class > 2</p>
<p>Lakes: WATER LEVEL FLUCTUATIONS (damage of riparion/litoral zone) Amplitude of monthly min and max</p>	<p>> 1 m</p>	<p>---</p>

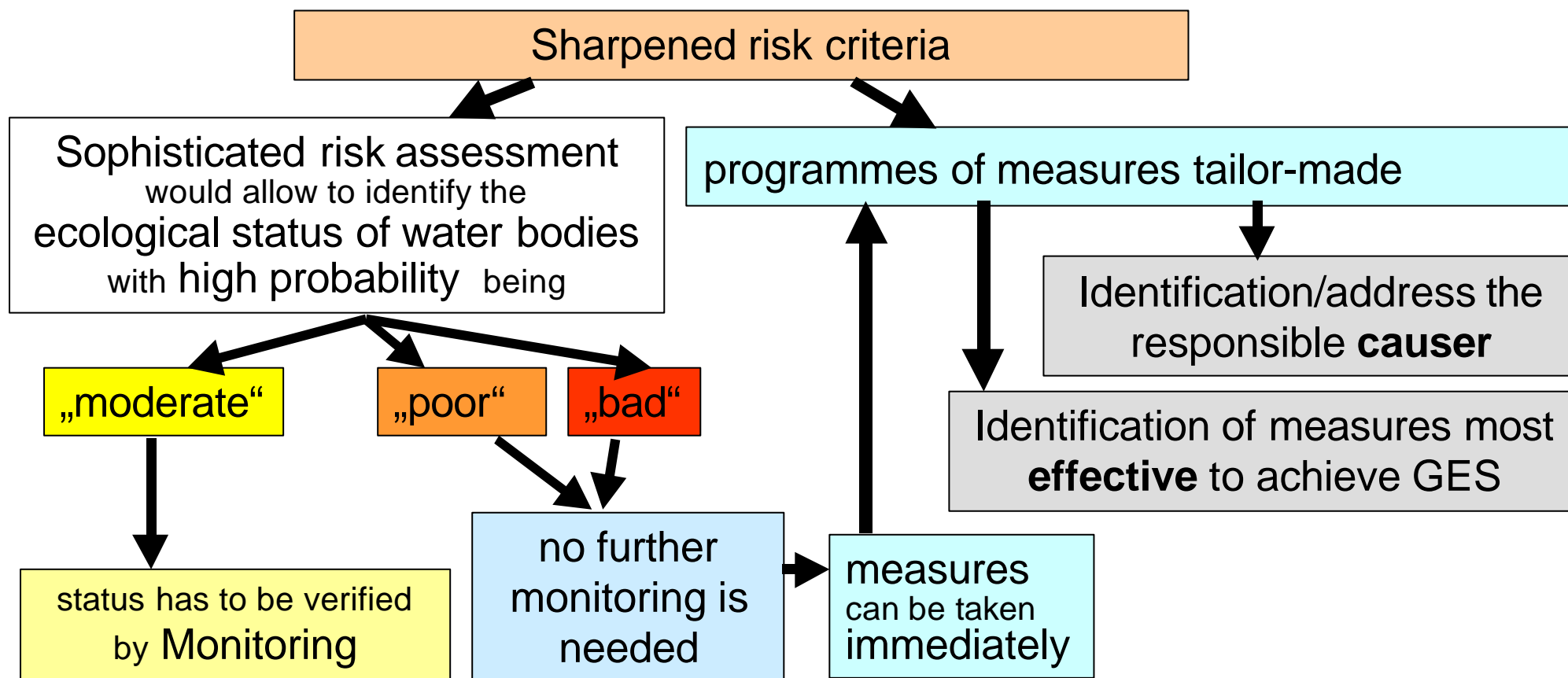
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Method planned to be used for next round of characterisation



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Criteria for Identification and Designation of HMWB

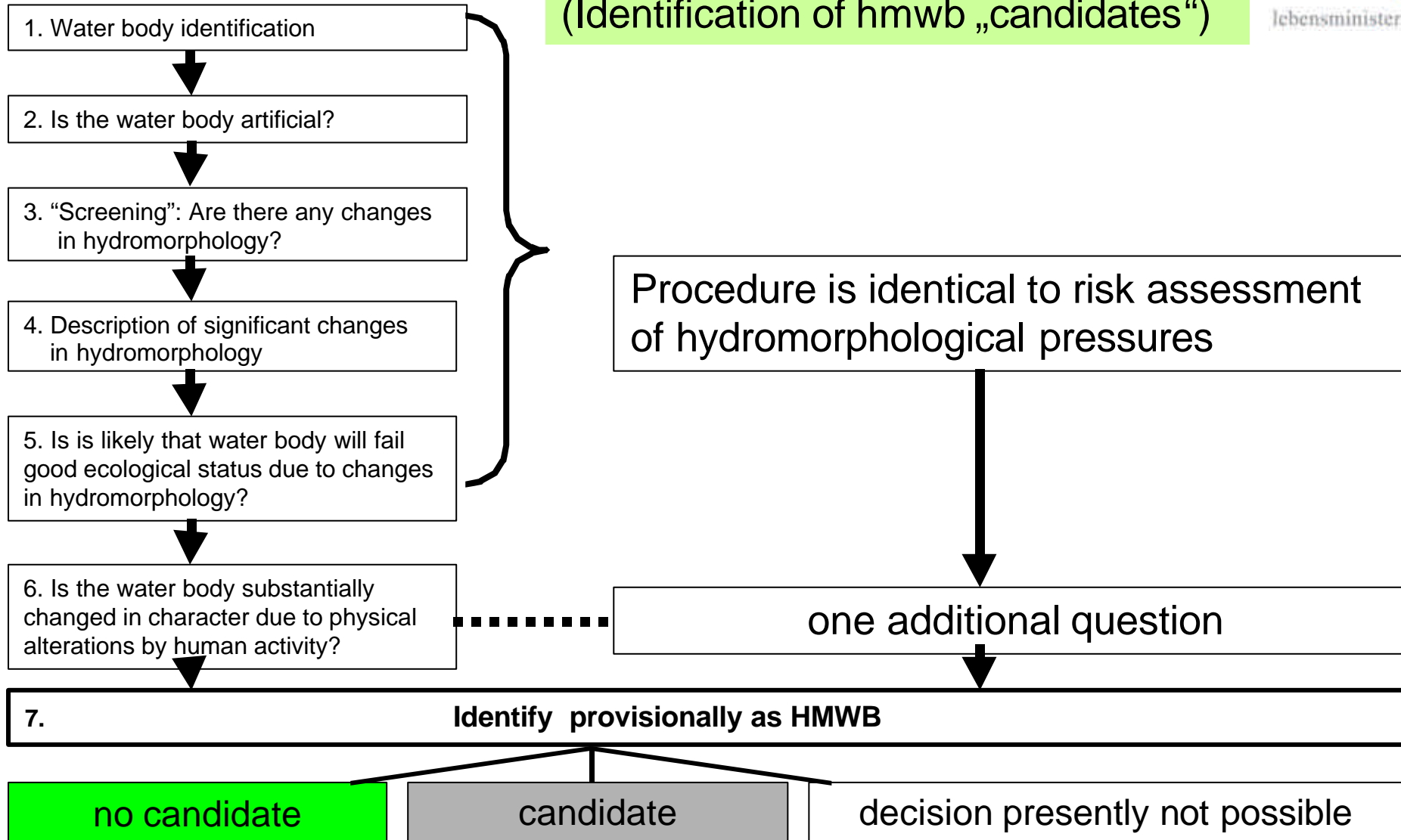
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Designation process for “provisional” hmwb identification



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(Identification of hmwb „candidates“)

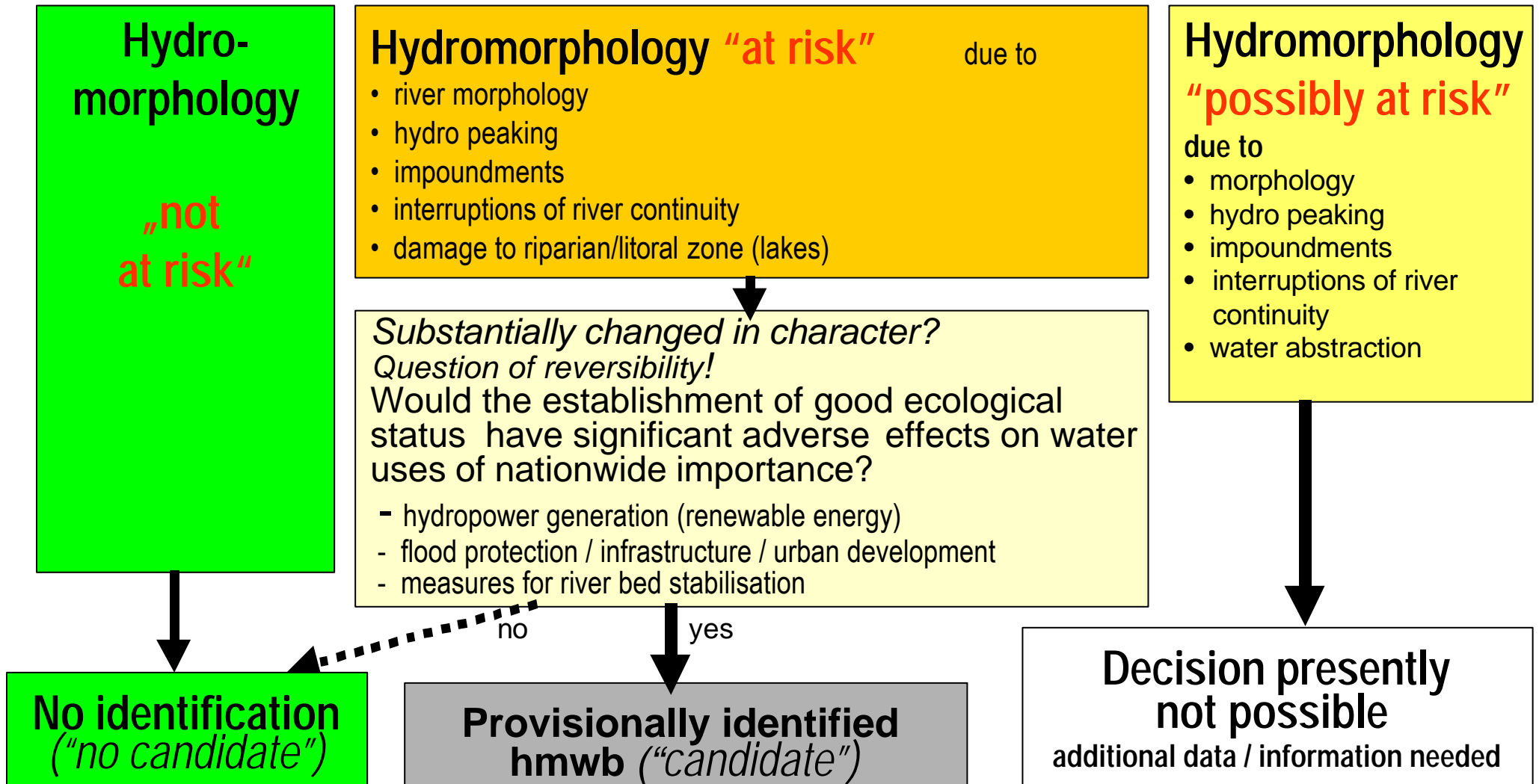


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Provisional identification of hmwb



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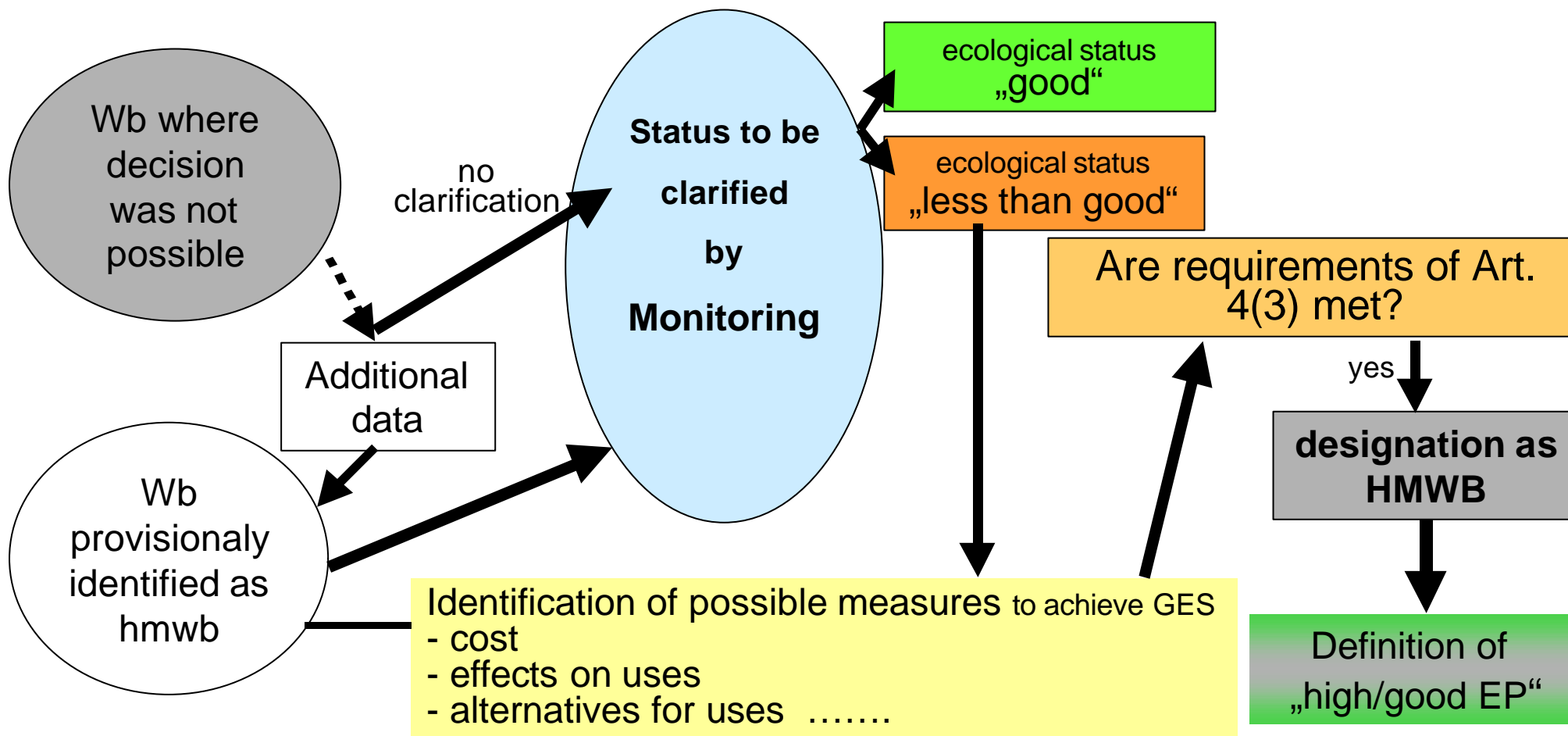
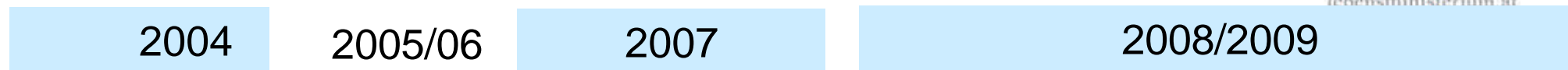


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Designation of hmwb



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Designation of hmwb – first ideas for criteria



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Monitoring results proved that status is less than „good“

Significant adverse effect ...

- **wider environment:** negative impact on habitats /species of FFH-Directive, Birds Directive, ...

- **specified uses**

HYDROPOWER : (national level)

- reduction **renewable energy production** - possibility for replacement?
- reduction of **security of supply**
- Reduction of „**Regelleistung**“
- **financial loss**
- **costs** of restoration measures - disproportionality

- many open questions
- time pressure

FLOOD PROTECTION:

- ability to gain land ?????? – detailed information needed
- Costs of restoration measures ??? – How many km are really needed for restoration?
- Public acceptance (catastrophies of the last 3 years)