THE WATER FRAMEWORK DIRECTIVE GUIDELINES

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Introduction

- Directive is ambitious and complex
- For the first time ever, the European Comission and the Member States agreed in developing a complete framework for the application of a regulation

Common Implementation Strategy (CIS)

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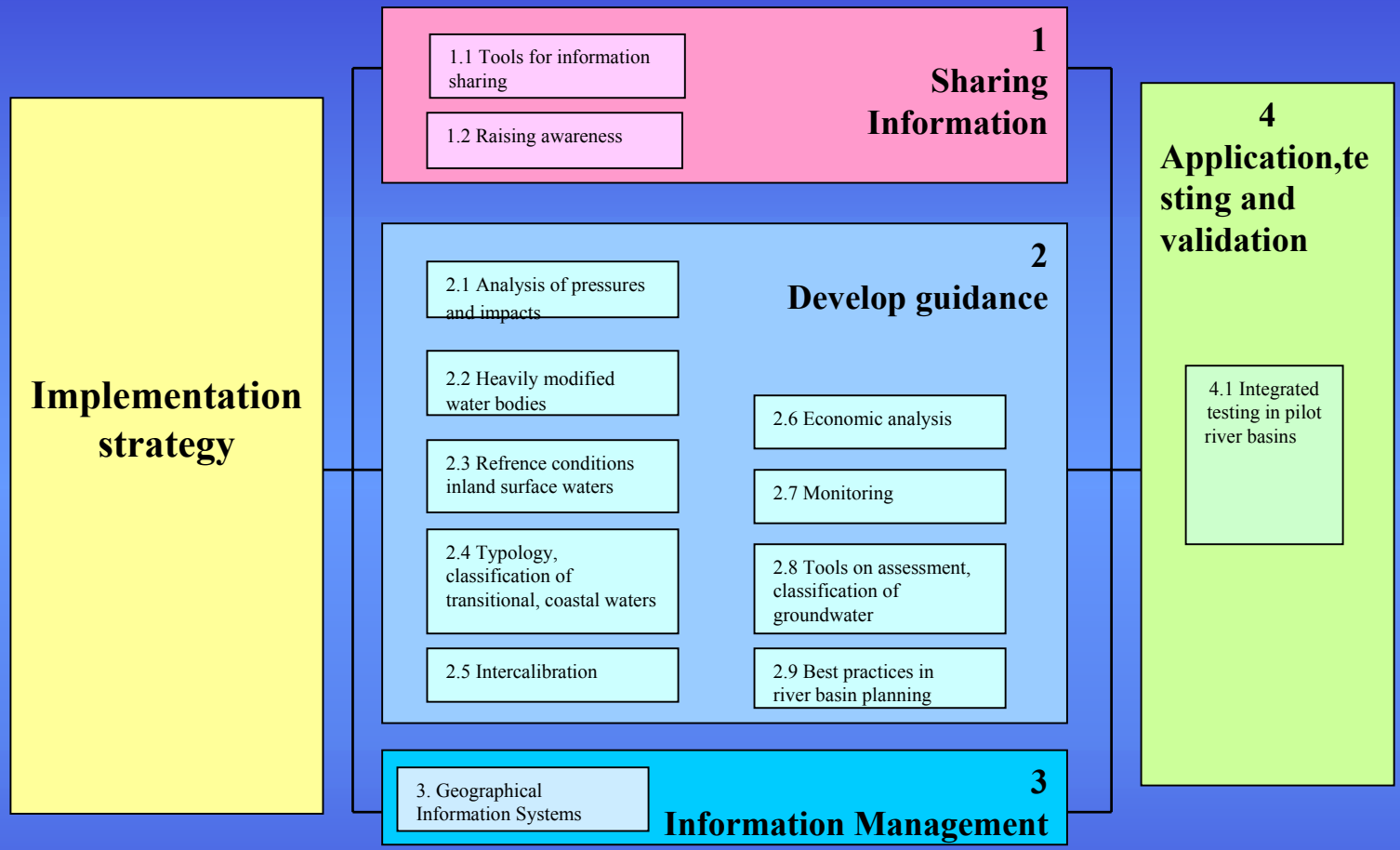

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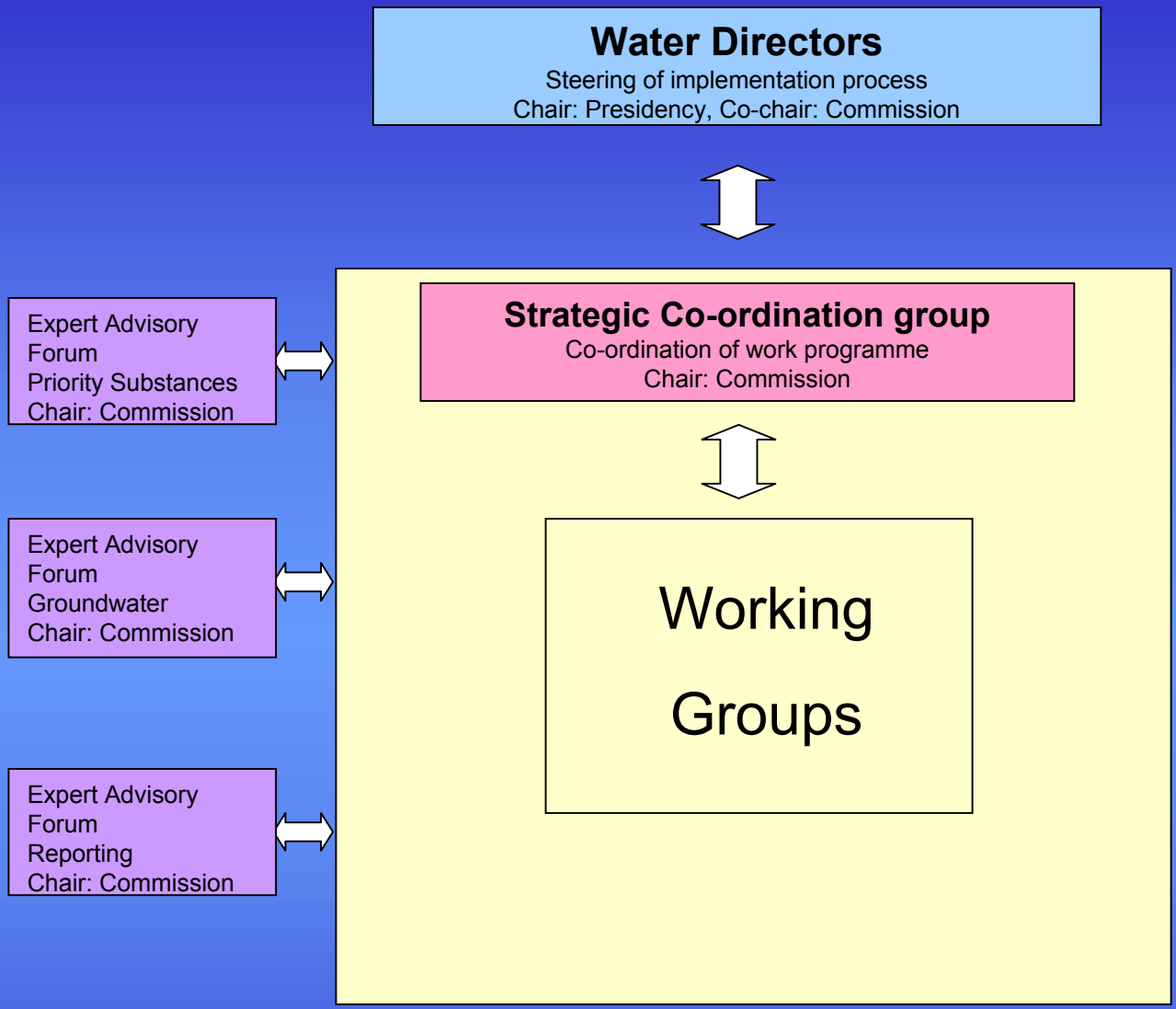

Structure CIS (Until end of 2002)

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Guidance Documents (13)

- Article 5 requirements (Status Review)
  - Analysis of characteristics (3 GD)
  - Assessment of pressures and impacts (1 GD)
  - Economic Analysis (1 GD)
- Groundwater (1 GD)
- Monitoring (1 GD)
- Planning Process
  - Identification of RBDs (1 GD)
  - Public Participation (1 GD)
  - Planning Process (1 GD)
- Intercalibration (1 GD)
- Other
  - GIS (1 GD)
  - Definition of Water Bodies (1 GD)

Analysis of Characteristics (3 GD)

	Article in Water Framework Directive	**Deadlines**[1]
Entry into force	25	around 4th quarter 2000
Legal implementation		
1. Adopting statutory provisions	24	Dec. 2003
2. Identification of the competent authority	3 (7)	Dec. 2003
3. Notifying the EC of competent authorities	3 (8)	June 2004
Status review		
4. Analysis of characteristics of a river basin district	5 (1)	Dec. 2004
5. Register of areas requiring protection	6 (1)	Dec. 2004
6. Reviewing and assessing significant impacts	5 (1)	Dec. 2004
7. Economic analysis of water use	5 (1)	Dec. 2004
8. Updating of reviews and analyses	5 (2)	Dec.2013/ Dec. 2019
EC regulation of groundwater		
9. Adoption of measures to protect groundwater by EC	17 (1)	Dec. 2002
10. Criteria for chemical status and trend reversal by EC	17 (2)	Dec. 2002
11. Criteria on a national basis (if necessary)	17 (4)	Dec. 2005

Analysis of Characteristics

- Three guidance documents:
  - Identification and designation of Heavily Modified Water Bodies
  - Definition of Reference Conditions
  - Typology, reference conditions and classification systems for transitional and coastal waters

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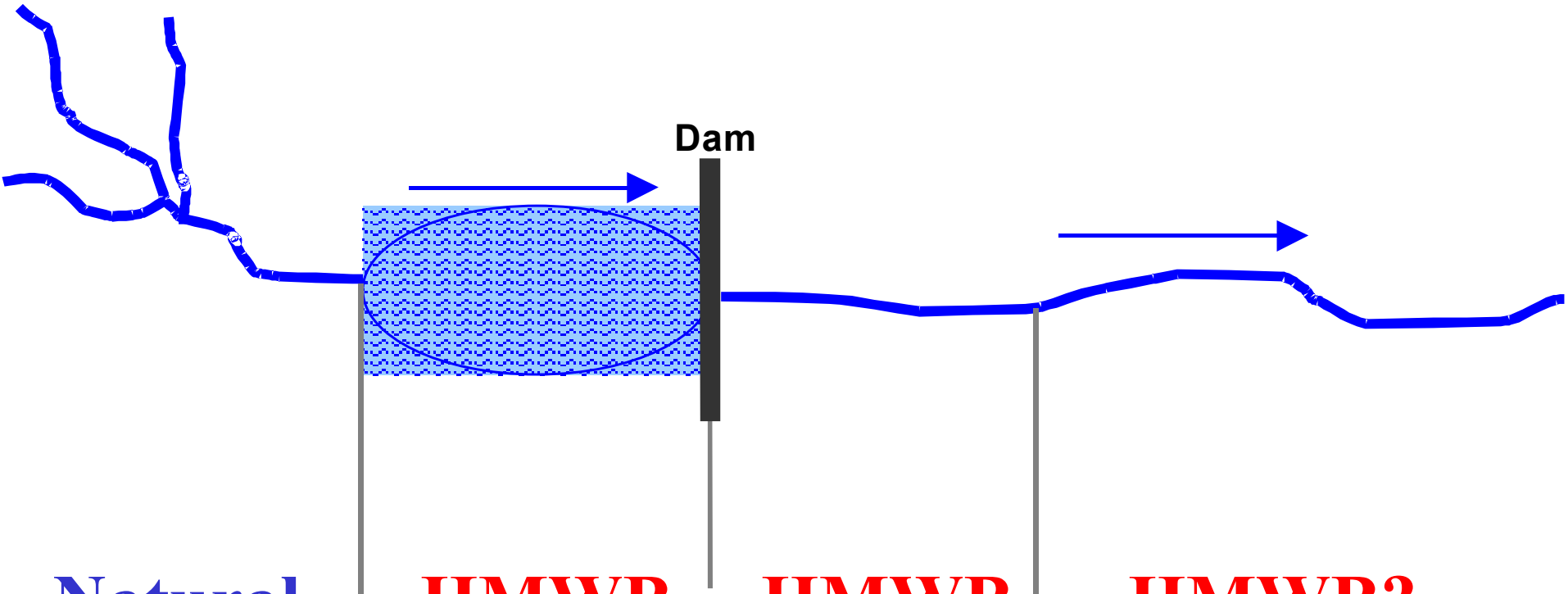
Case 1 in the box



Natural

WB neither shows substantial changes in morphology nor in hydrology

HMWB

WB is part of a former river, shows subst. changes in both hydrology and morphology

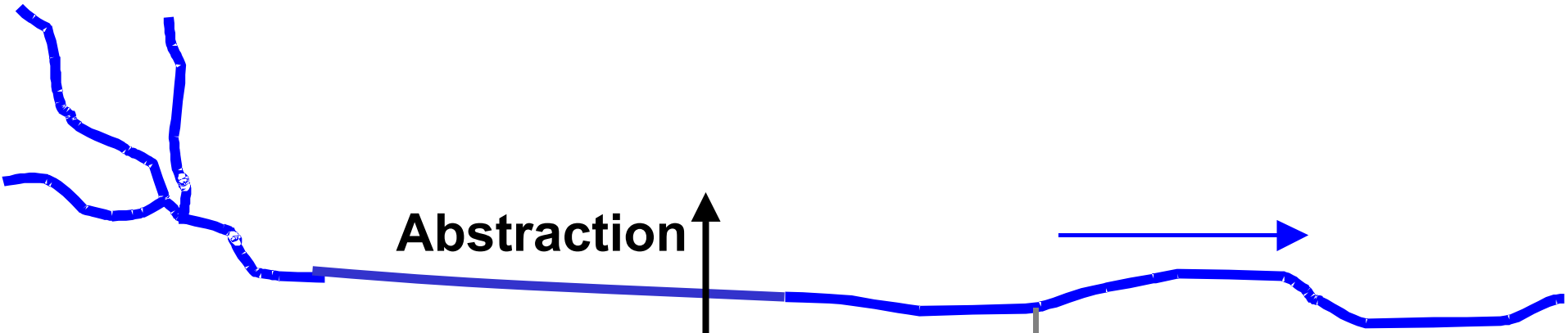
HMWB

WB shows subst. changes in hydrology and subsequent subst. changes in morphology

HMWB?

WB shows substantial changes in hydrology and subsequent non-subst. changes in morphology in the short term

Case 2 in the box



Some Countries disagree

Natural

WB neither shows substantial changes in morphology nor hydrology

Natural

WB neither shows substantial changes in morphology nor hydrology

HMWB

WB shows subst. changes in hydrology and subsequent subst. changes in morphology

HMWB?

WB shows substantial changes in hydrology and subsequent non-subst. changes in morphology in the short term

Final decision

- To include a text in the guidance (WD Copenhagen 11/2002):

" A slightly different approach could be taken for limited stretches of rivers e.g. downstream of dams. Under these circumstances, substantial hydrological changes that are accompanied by subsequent non-substantial morphological changes would be sufficient to consider the water body for provisional identification as HMWB"

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Assessment of presures and impacts (1 GD)

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Economic Analysis (1 GD)

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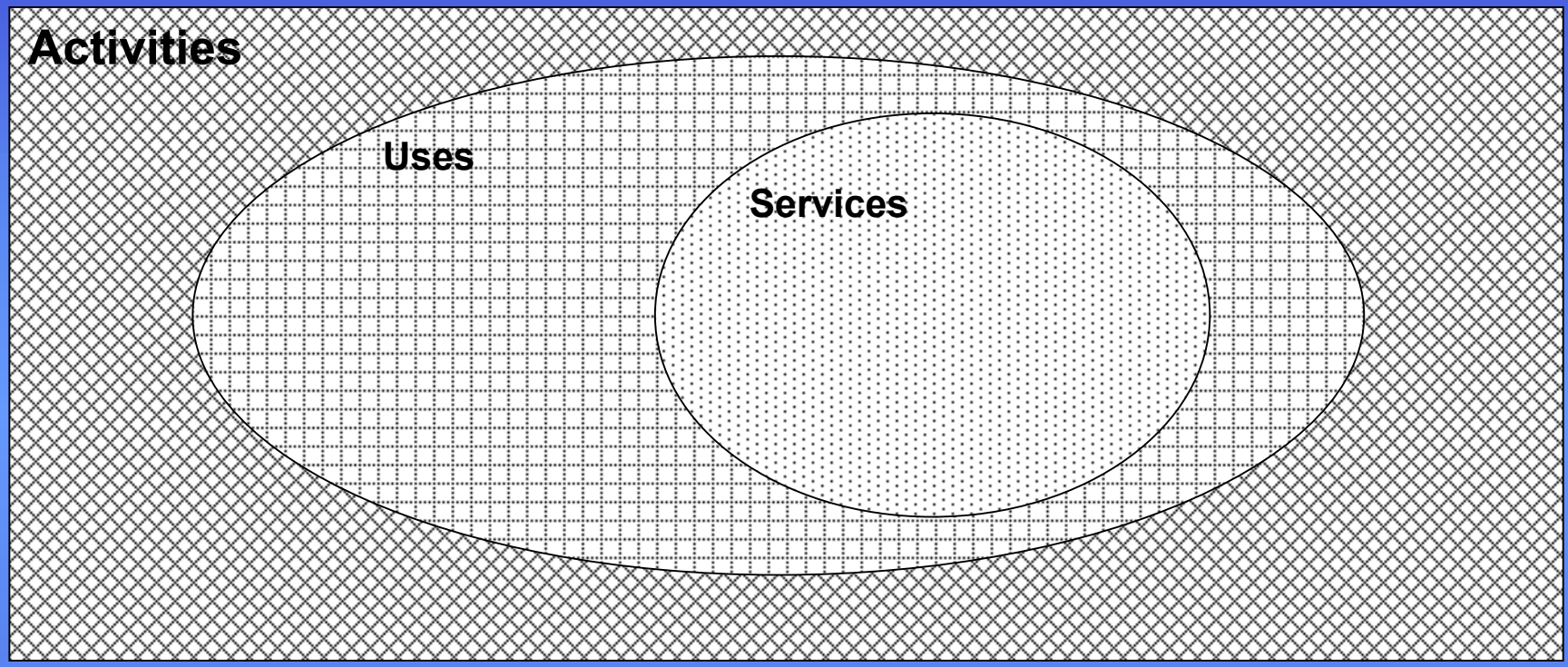
Economic Analysis



Services:

a) Abstraction, impoudment, storage, treatment and distribution of surface water or groundwater.

b) Waste water collection and treatment facililities which subsequently discharge into surface water

Uses:

Services together with any other activity having a significat impact on the status of water

Cost recovery: Only of water services

Common understanding (WD Valencia 6/2002)

	Examples of Water Services (all activities irrespective of private or public ownership and irrespective of public or private customers served)	**Activities which are not covered by the definition of Water Services**
1	Water supply (including abstraction, treatment, distribution)	• Diffuse pollution from agriculture and industry
2	Waste water (including collection, treatment and discharge)	• Emissions from accidents and leakages
3	Impoundment (e. g. drinking water supply, irrigation, navigation and hydropower generation)	• Navigation
4	Drainage (including discharge of the drained water)	• Fishery
5	Groundwater recharge (including abstraction of surface water)	• Recreational activities

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Groundwater

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Only guidance on statistical aspects regarding pollution

Groundwater

- Method for the treatment of measurements below DL

Iterative calculation of log normal distribution parameters μ and σ by maximisation of

$$\ln L = -n \ln \sigma - \frac{1}{2\sigma^2} \sum_{i=1}^{n} (y_i - \mu)^2 + \sum_{j=1}^{k} m_j \ln[1 - \Phi\left(\frac{c_j - \mu}{\sigma}\right)] + const.,$$

Median = exp{μ}

Mean = exp{μ+0.5σ²} = Median x exp{0.5σ²}

70-percentile = exp{μ+0.524} = Median x exp{0.524σ}

If σ =3, then: **Mean = 18.7 x 70% percentile**

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Monitoring (1 GD)

	Monitoring programmes		
1.	Setting up networks and putting them into operation	8	Dec. 2006
	Public information and consultation		
2.	Active involvement of all interested parties in implementation		ongoing
3.	Publication of a timetable and work programme1	14 (1a)	Dec. 2006
4.	Publication of the most important water management issue2	14 (1b)	Dec. 2007
5.	Publication of drafts of the management plan2	14 (1c)	Dec. 2008
	Management plan and programme of measures		
6.	Drawing up and publishing the management plan	13 (6)	Dec. 2009
7.	Drawing up a programme of measures	11 (7)	Dec. 2009
8.	Implementing the measures	11 (7)	Dec. 2012
9.	Updating the management plan	13 (7)	Dec. 2015
10.	Updating the programme of measures	11 (8)	Dec. 2015
	Achieving objectives		
11.	Good surface water status	4 (1a)	Dec. 2015
12.	Good groundwater status	4 (1b)	Dec. 2015
13.	Compliance with objectives for protected areas	4 (1c)	Dec. 2015
14.	Extension of deadlines to meet objectives	4 (4)	Dec. 2021/ 2027

Planning Process: Public Participation (1 GD)

Monitoring programmes		
1. Setting up networks and putting them into operation	8	Dec. 2006
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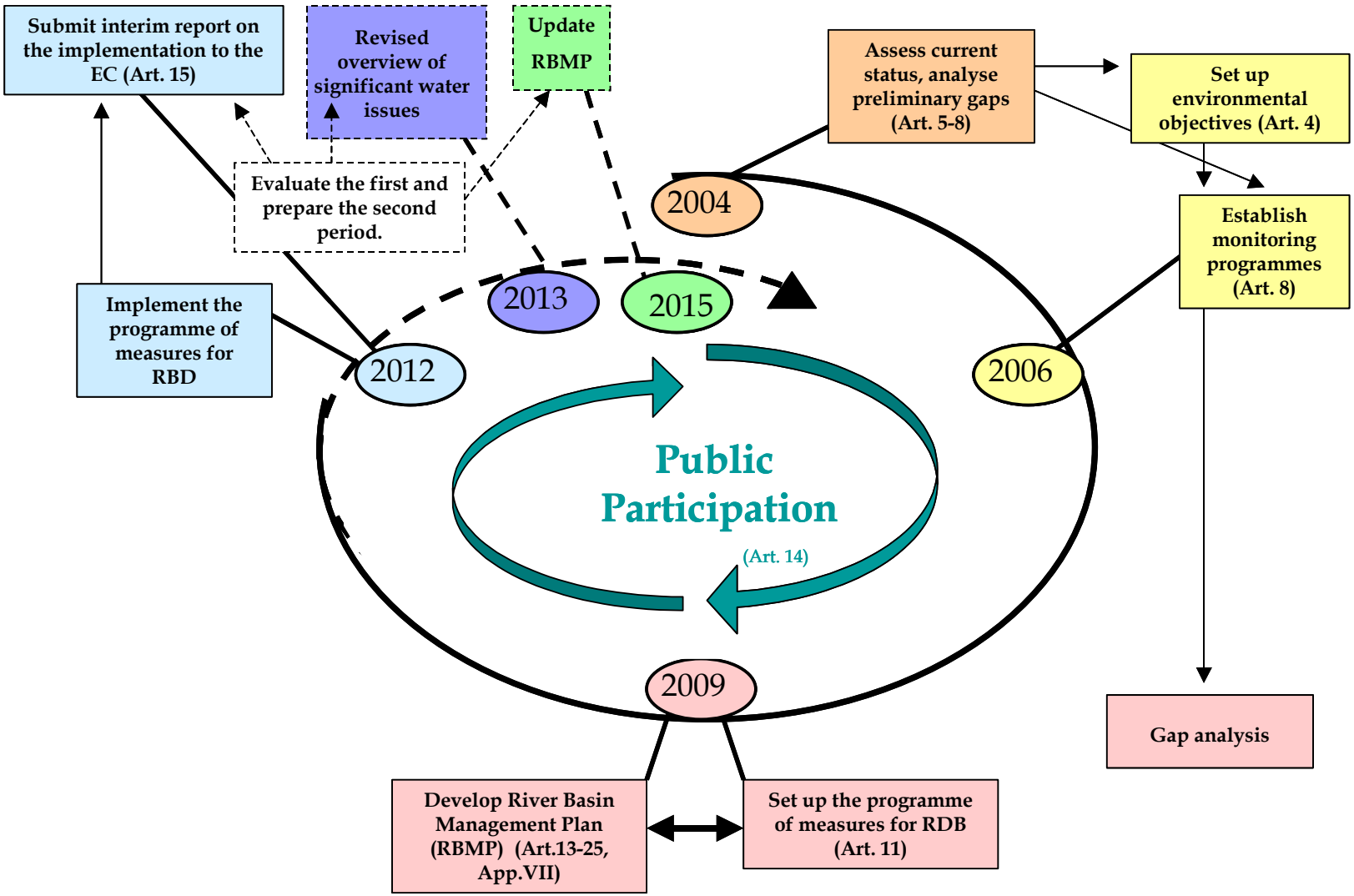
Guideline on Planning Process (1 GD)



Guide documents in the web

http://forum.europa.eu.int/Public/irc/env/wfd/library

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New CIS (since beg. 2003)

- ⇨ **Working Group on "Ecological Status" (Cluster WG 2A)**
- ⇨ **Working Group on "Integrated River Basin Management" (Cluster WG 2B)**
- ⇨ **Working Group on "Groundwater" (WG 2C) (after last meeting of EAF Groundwater)**
- ⇨ **EAF Reporting (WG 2D)**

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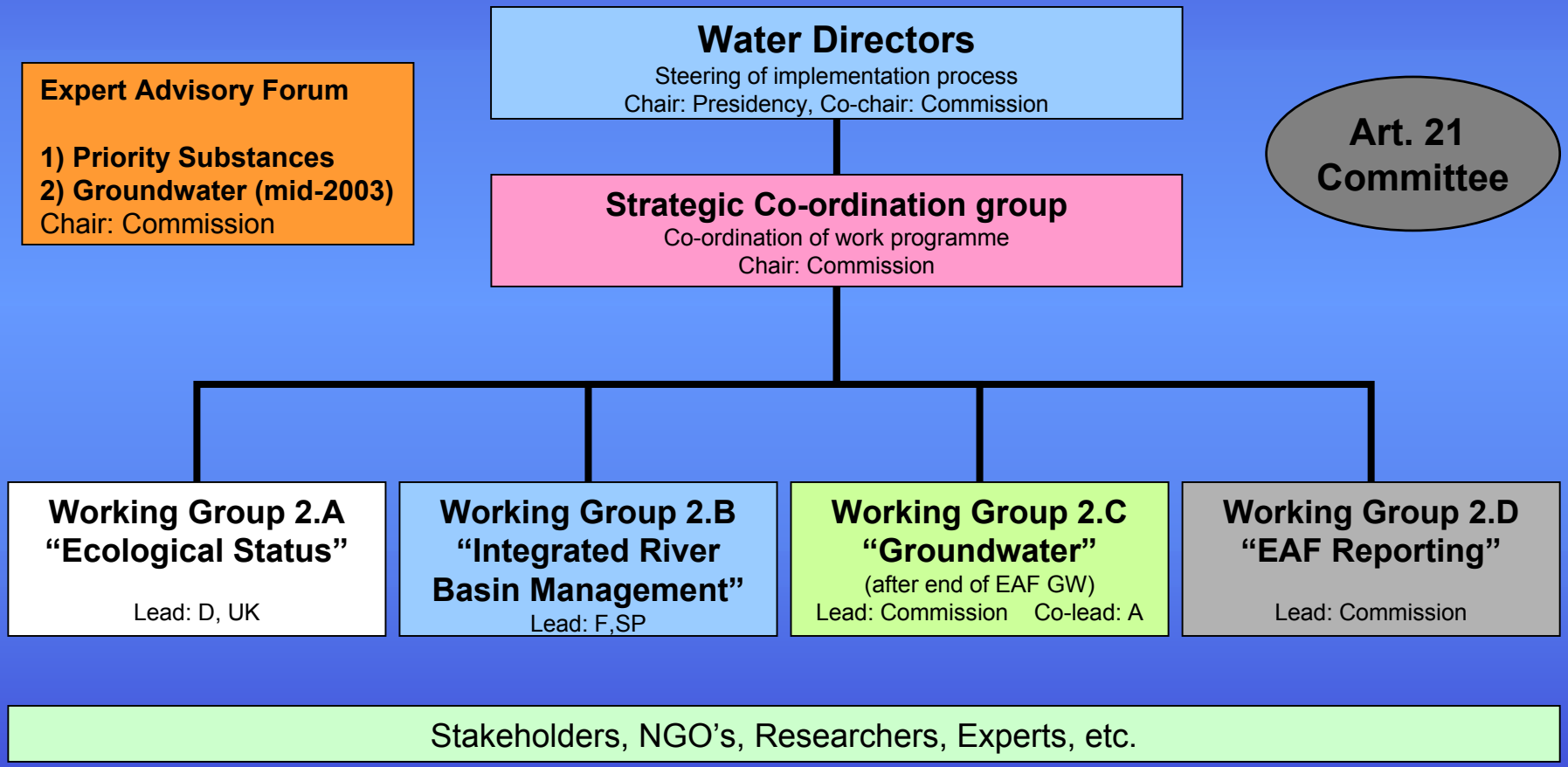
New organisation



Attribution of existing WGs

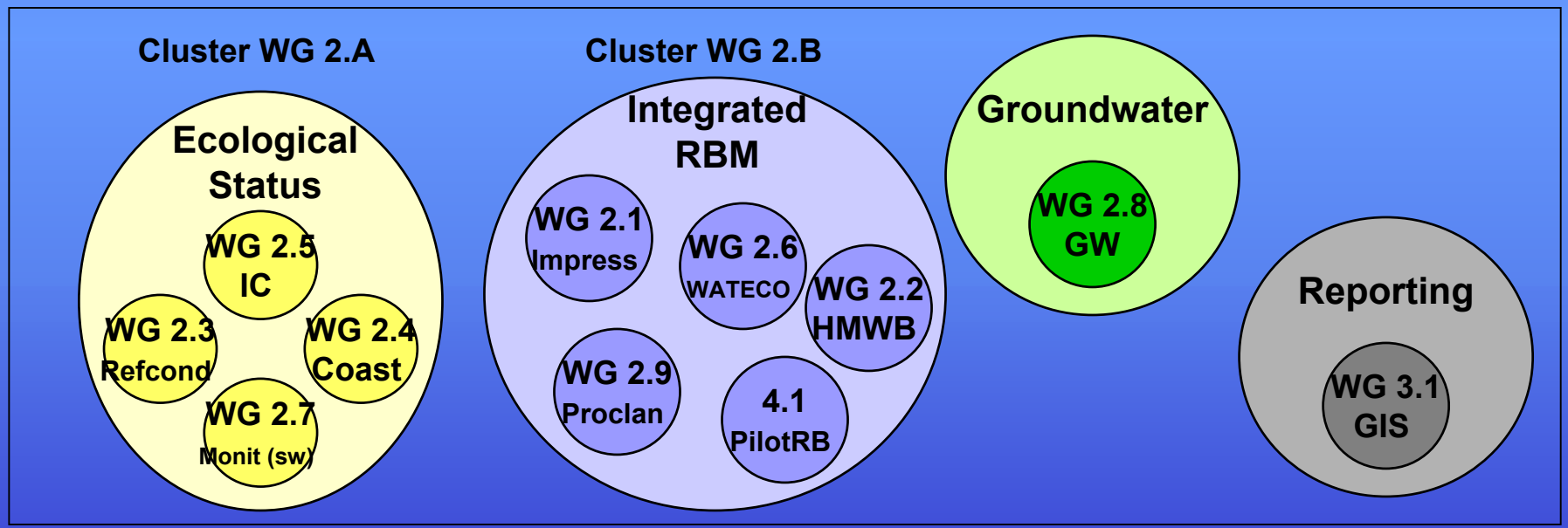
Expert Advisory Forum

1) Priority Substances
2) Groundwater

Chair: Commission

Water Directors
Steering of implementation process
Chair: Presidency, Co-chair: Commission

Strategic Co-ordination group
Co-ordination of work programme
Chair: Commission



Stakeholders, NGO's, Researchers, Experts, etc.

Key activities in new CIS (since beg. 2003) (2/2)

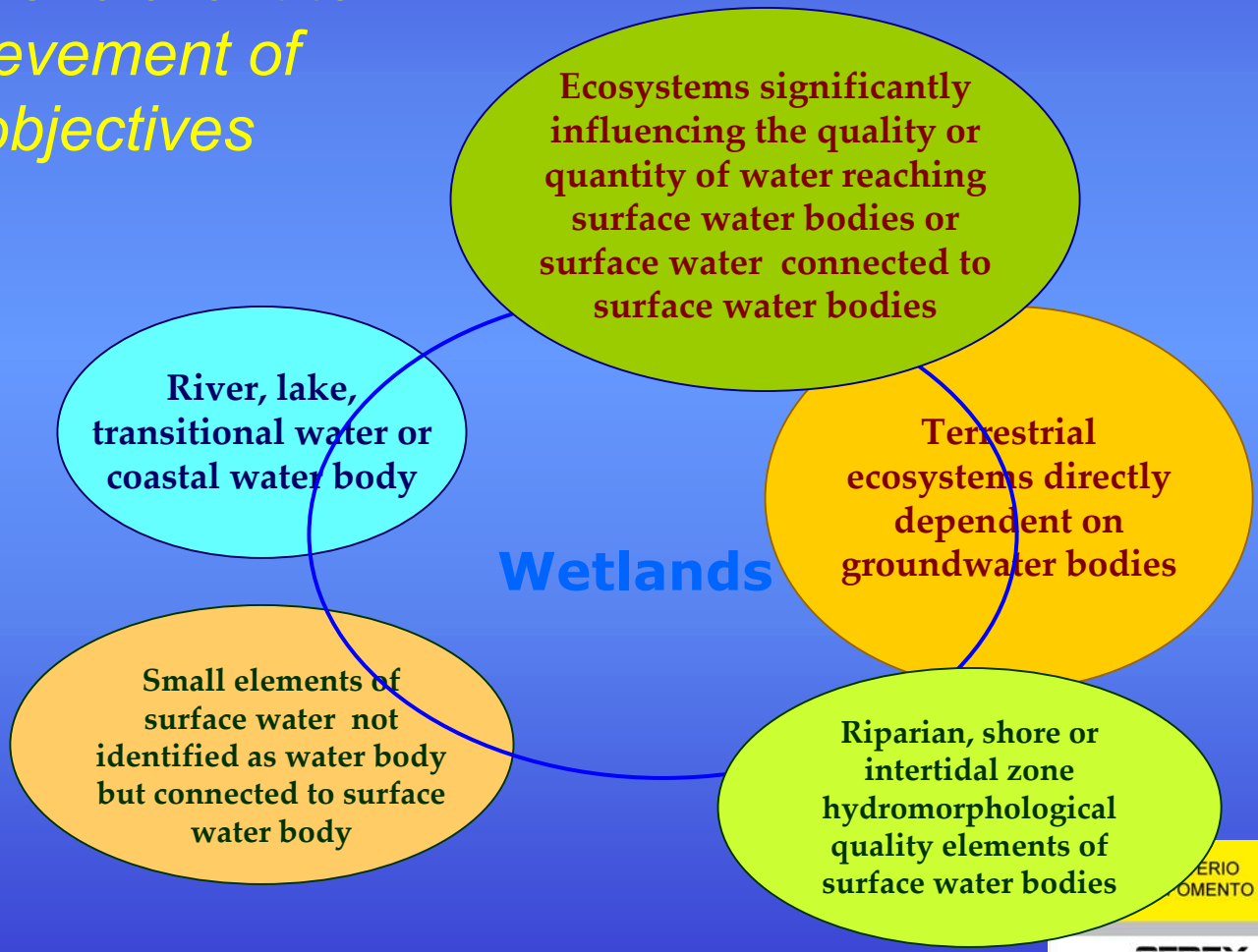
No	Issue	Working Group	Timeframe
6	Addressing of economical methodological aspects (such as the assessment of environmental costs or the assessment of the incentive dimension of pricing)	WG 2.B – IRBM (drafting group to be established as follow-up of WATECO)	Start: Feb. 2003 End: Nov. 2004
7	Preparation of river basin management plans and programmes of measures including the integration of different river basin management tasks	WG 2.B – IRBM (link to EAF Reporting)	Start: Sept. 2003 End: Dec 2004
8	Guidelines for reporting under the WFD	EAF Reporting (for preparation of Art. 21 Committee)	Start: already End: Jan 2004
9	Characterisation and monitoring of groundwaters	EAF GW and after termination of EAF, new WG 2.C Groundwater	Start: March 2003 End: March 2004
10	Flood protection – best practices document	WG 2.B: IRBM (drafting group to be established)	Start: May 2003 End: May 2004
	Others?		

Key activities in new CIS (since beg. 2003) (2/2)

No	Issue	Working Group	Timeframe
1	Management of wetlands in the context of the WFD	WG 2.B – IRBM (drafting group already established)	Start: Nov 2002 End: May 2003
2	Classification of ecological status including the use of physico-chemical and hydromorphological parameters	WG 2.A – Ecological Status (drafting group to be established)	Start: Dec 2002 End: Oct 2003
3	Harmonisation of typology (in particular for transitional and coastal waters)	WG 2.A – Ecological Status	Start: Feb 2003 End: Nov. 2003
4	Assessment of eutrophication in the context of different European directives	WG 2.A – Ecological Status	Start: May 2003 End: May 2004
5	Integration of economic issues in new guidance documents (baseline scenario, scale)	WG 2.B – IRBM (drafting group to be established)	Start: Feb. 2003 End: May 2004

IDENTIFYING WETLANDS UNDER THE WATER FRAMEWORK DIRECTIVE

Ecosystems relevant to the achievement of WFD objectives



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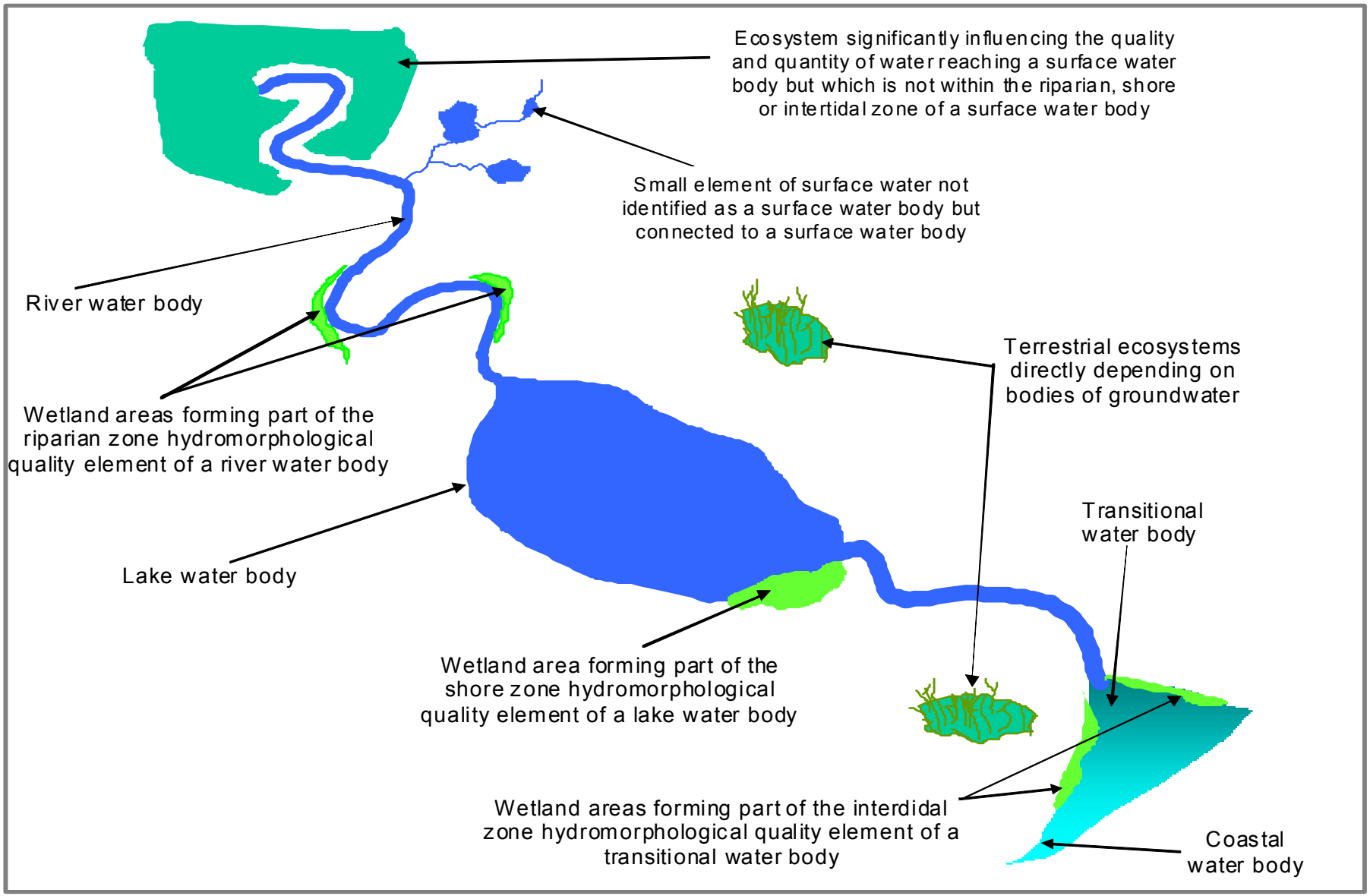
New Guidances: Wetlands



New Guidance:Ecological classification

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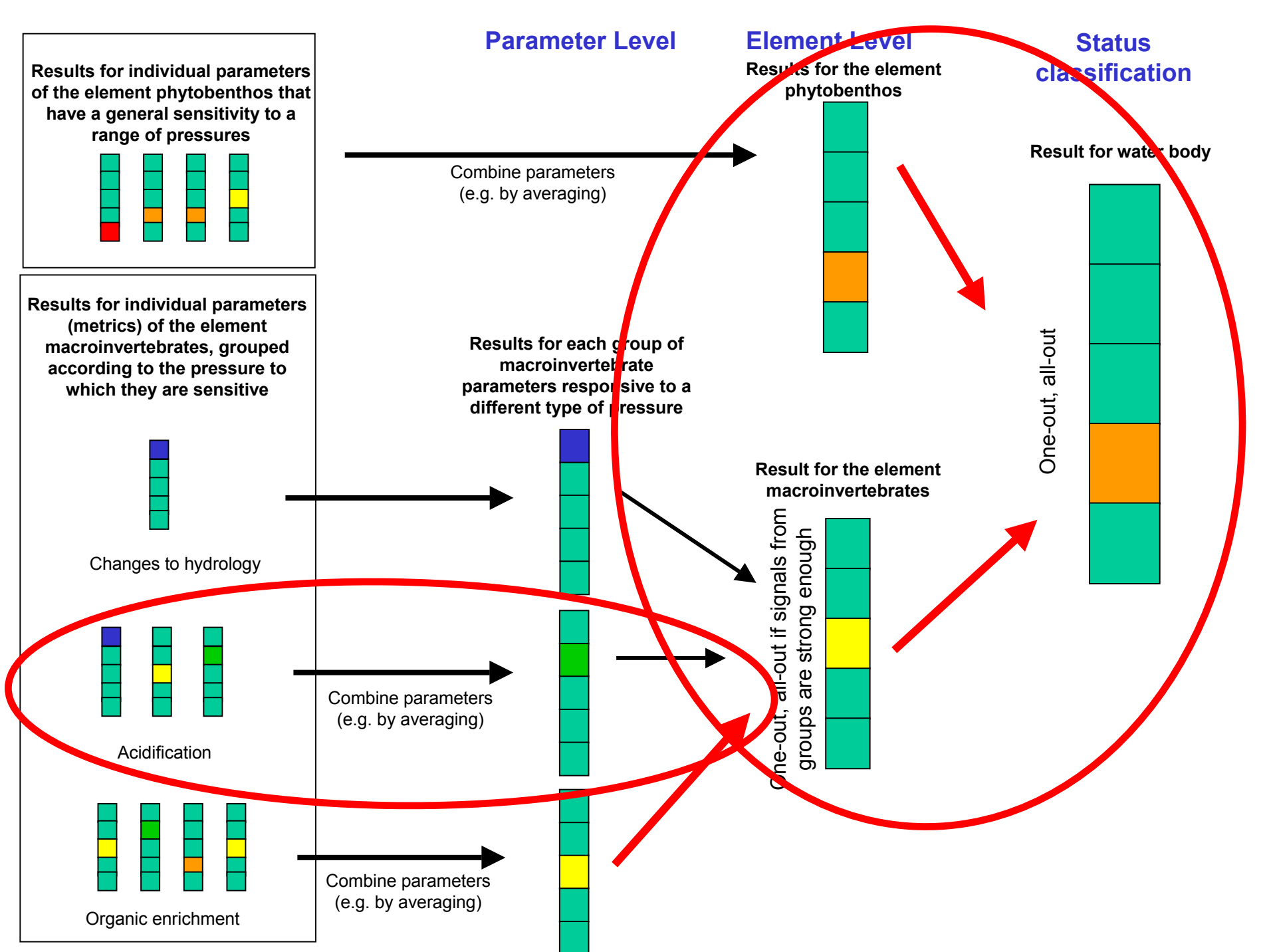
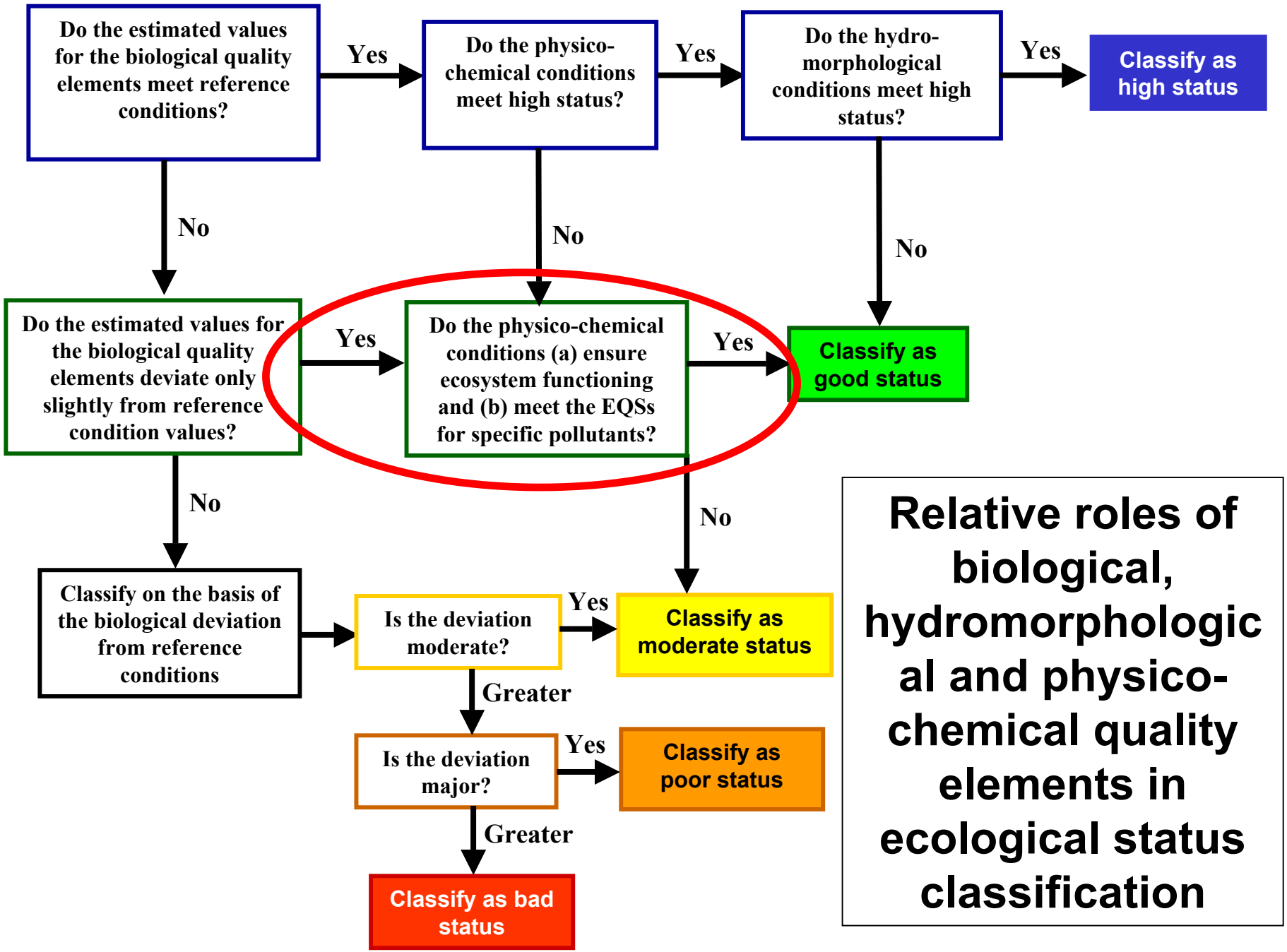

Parameter Level
Element Level
Status classification
Results for individual parameters of the element phytobenthos that have a general sensitivity to a range of pressures
Combine parameters (e.g. by averaging)
Results for the element phytobenthos
Result for water body
Results for individual parameters (metrics) of the element macroinvertebrates, grouped according to the pressure to which they are sensitive
Results for each group of macroinvertebrate parameters responsive to a different type of pressure
Result for the element macroinvertebrates
One-out, all-out
Changes to hydrology
Acidification
Combine parameters (e.g. by averaging)
One-out, all-out if signals from groups are strong enough
Organic enrichment
Combine parameters (e.g. by averaging)


Do the estimated values for the biological quality elements meet reference conditions?
Yes
Do the physico-chemical conditions meet high status?
Yes
Do the hydro-morphological conditions meet high status?
Yes
Classify as high status
No
No
No
Do the estimated values for the biological quality elements deviate only slightly from reference condition values?
Yes
Do the physico-chemical conditions (a) ensure ecosystem functioning and (b) meet the EQSs for specific pollutants?
Yes
Classify as good status
No
No
Classify on the basis of the biological deviation from reference conditions
Is the deviation moderate?
Yes
Classify as moderate status
Greater
Is the deviation major?
Yes
Classify as poor status
Greater
Classify as bad status
Relative roles of biological, hydromorphologic al and physico-chemical quality elements in ecological status classification