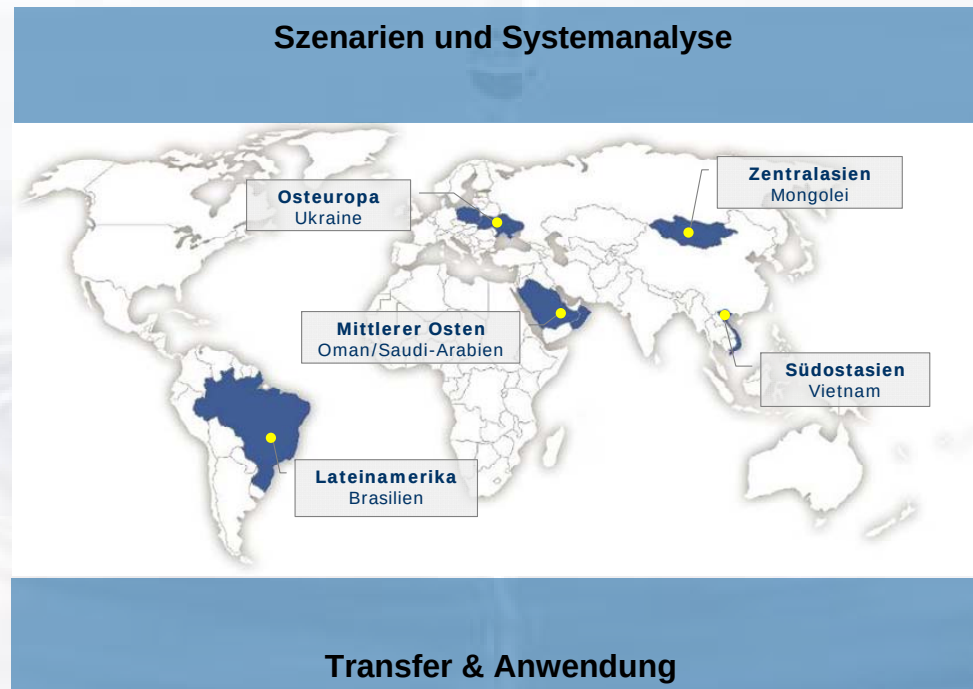


Zukunft von IWAS



Dietrich Borchardt, Peter Krebs und Gunda Röstel

What is IWRM?



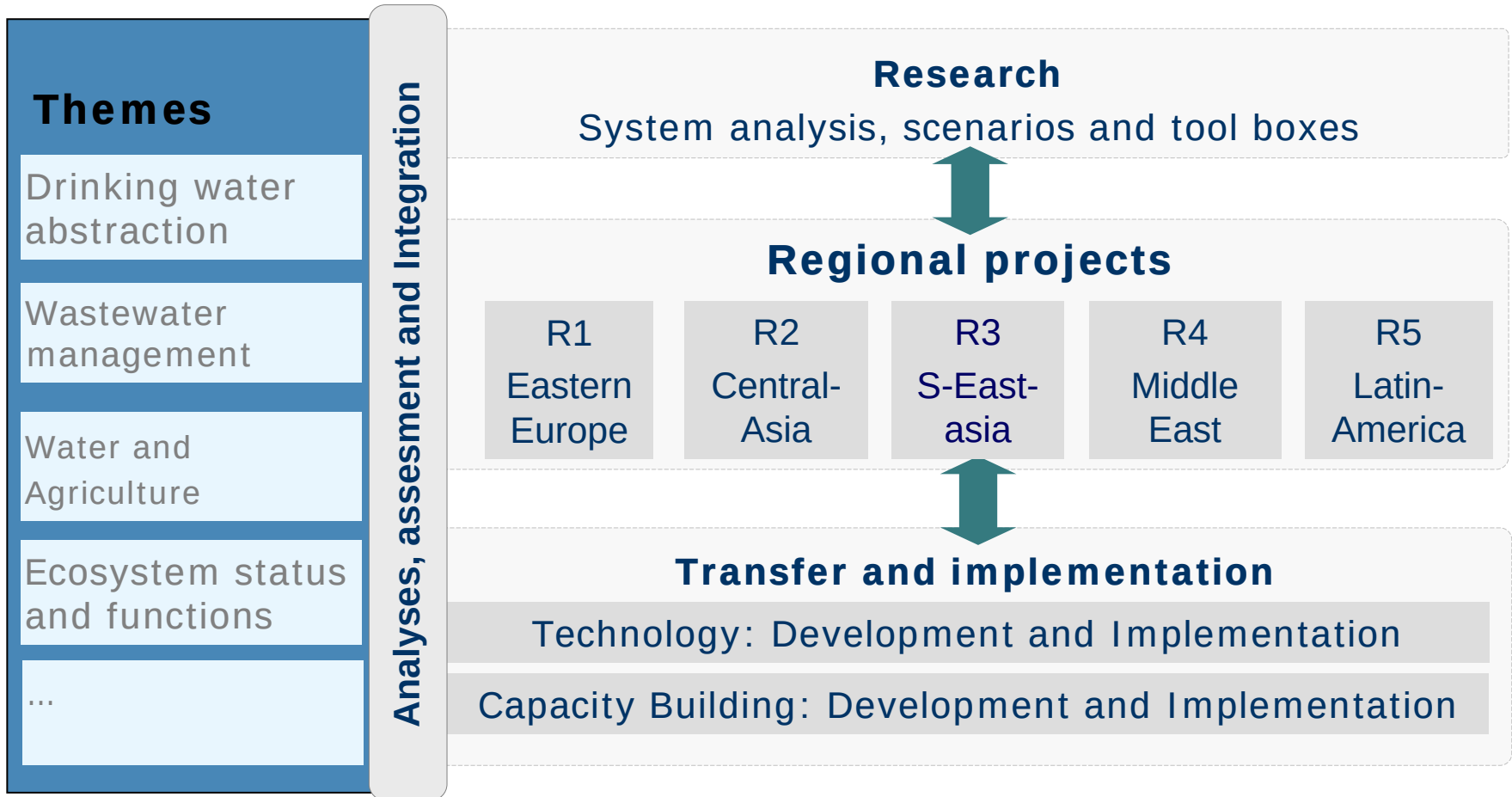
(UNESCO 2003)

IWRM is a process:

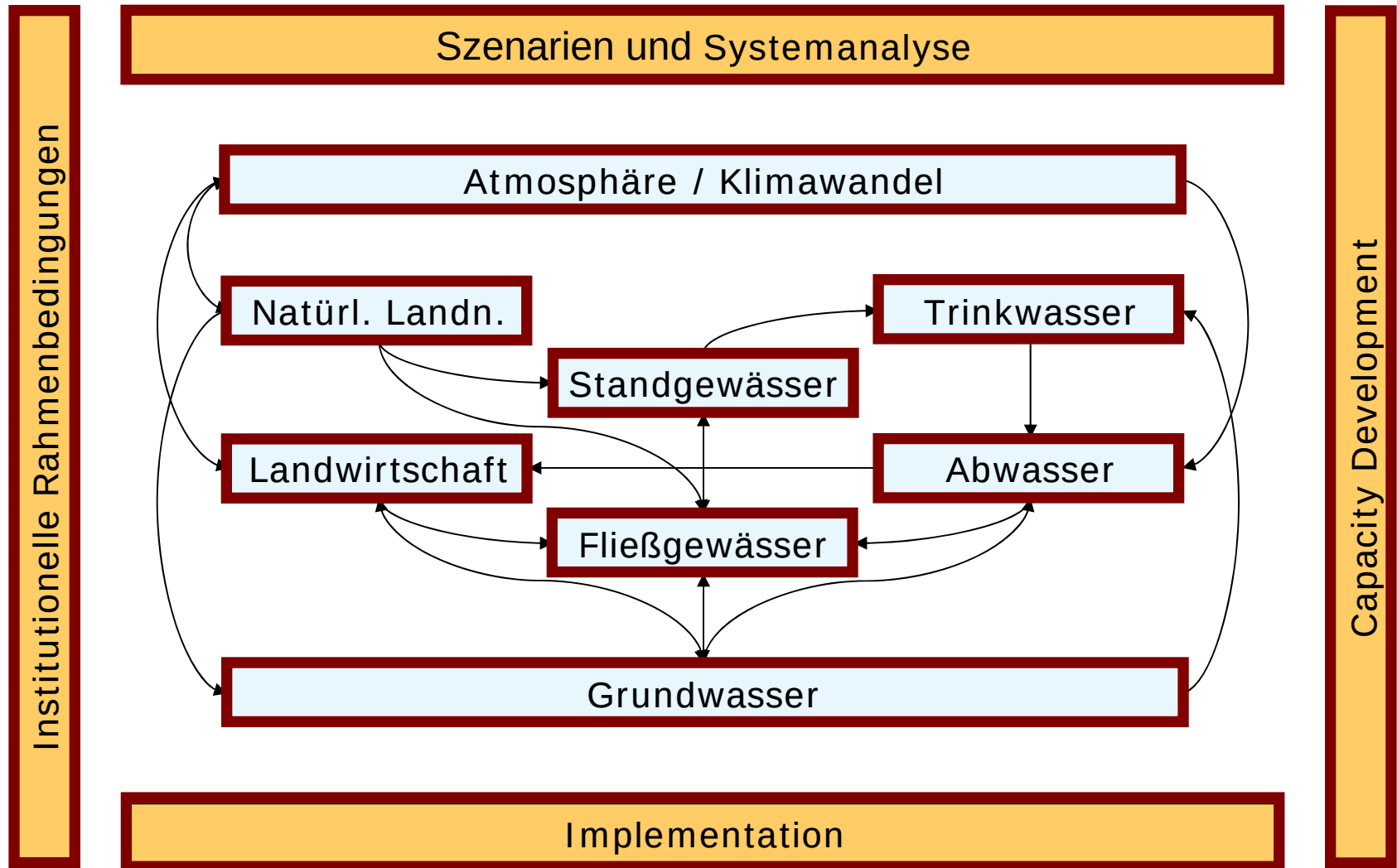
- that promotes the coordinated development and management of water, land and related resources
- order to maximize the resultant economic and social welfare in an equitable manne
- without compromising the sustainability of vital ecosystems

(Global Water Partnership 2000)

IWAS-elements and outcomes...

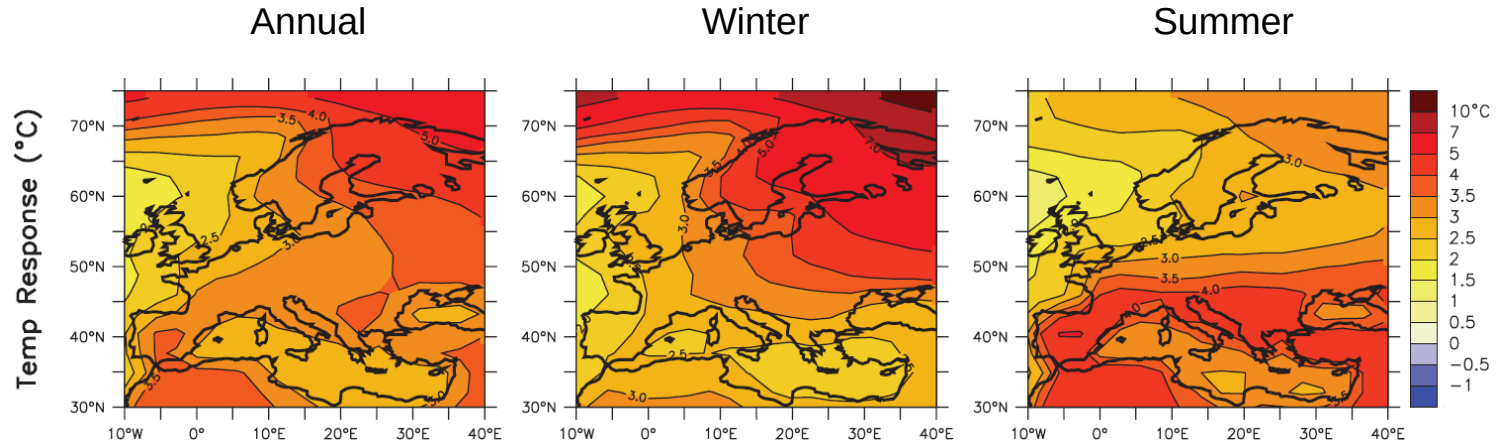


Q1, R1, R2, R3, R4, R5, Q2

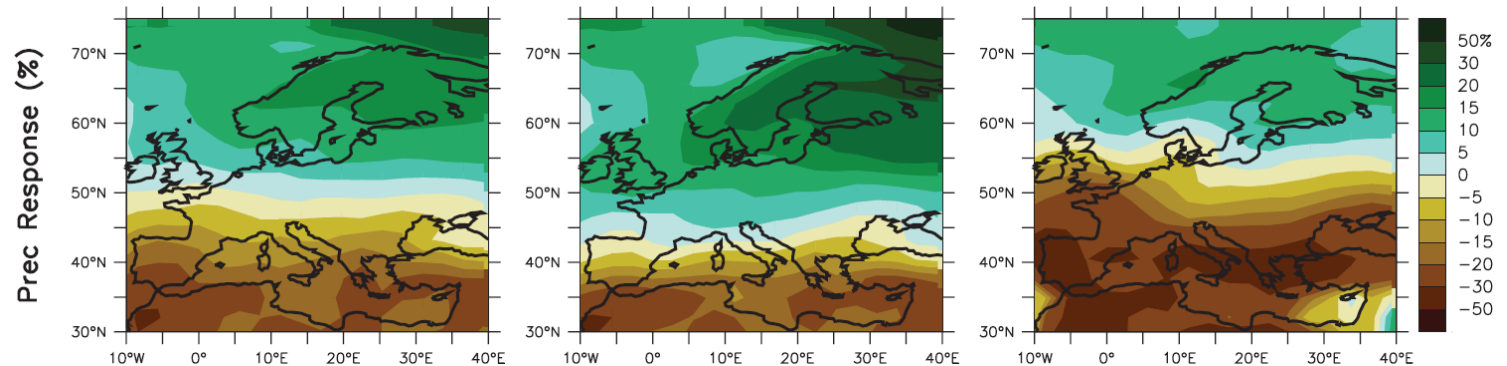


Adaptation to climate change: a key issue for the water sector

Temperature
change
projection

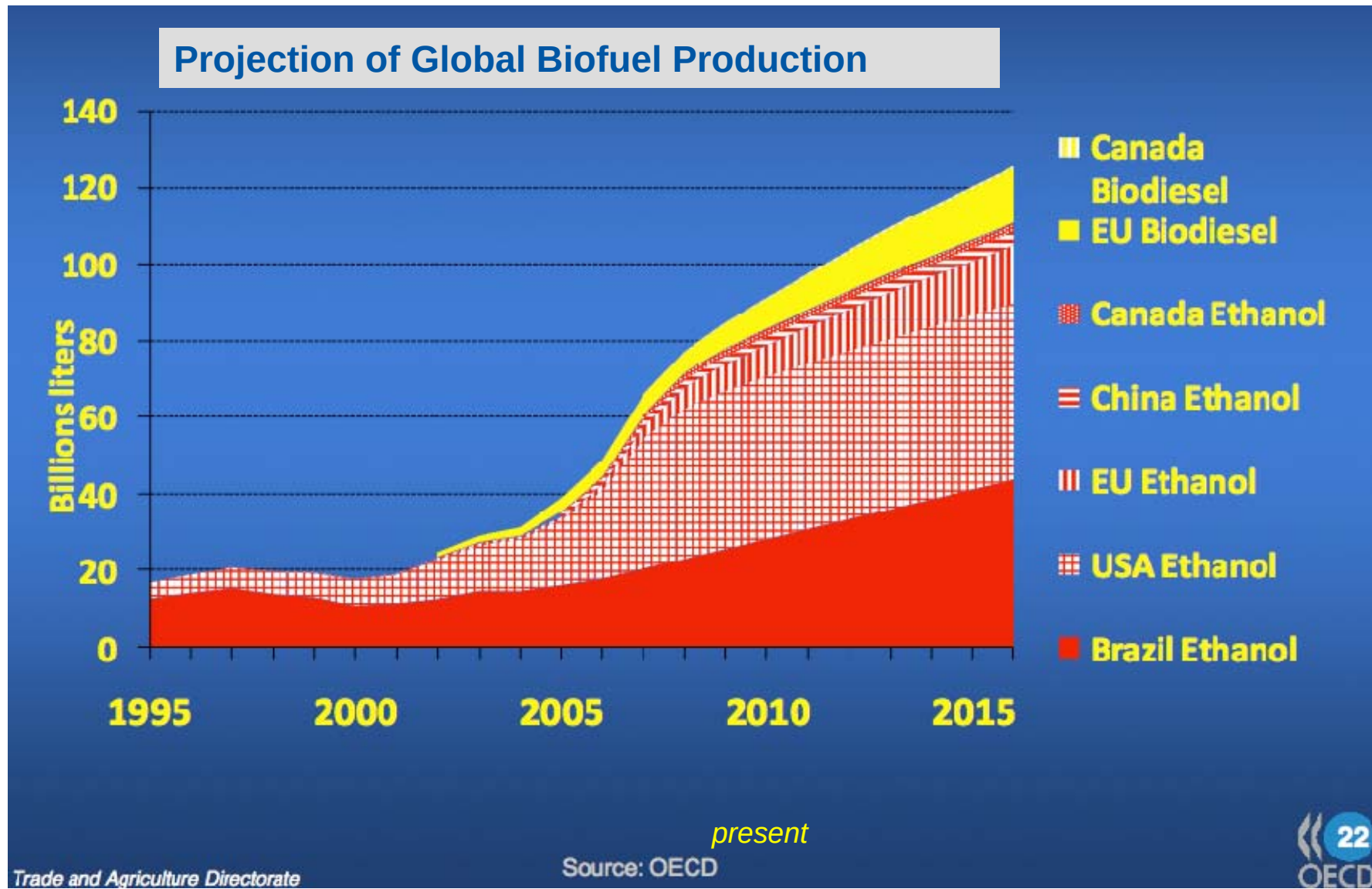


Precipitation
change
projection

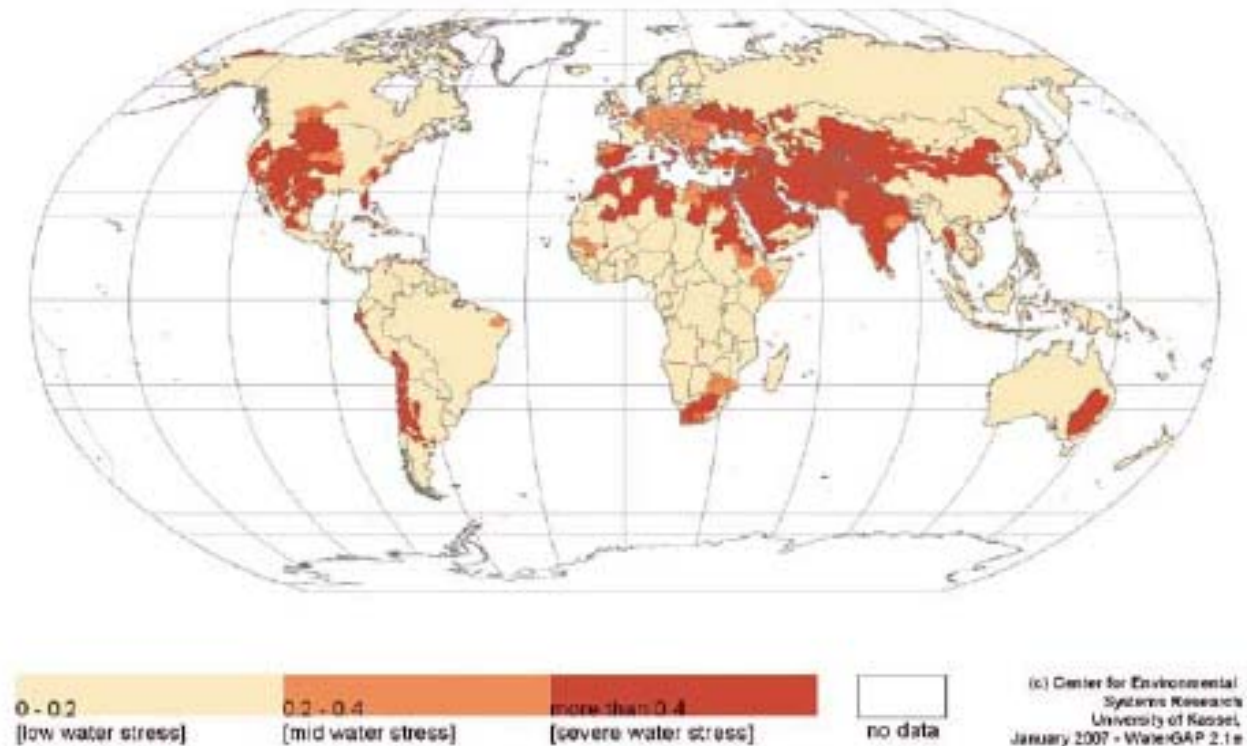


For Europe; 21 Models; between 1980-1999 and 2080-2099; Source IPCC (2007)

IWRM and the wider „environmental legislation“

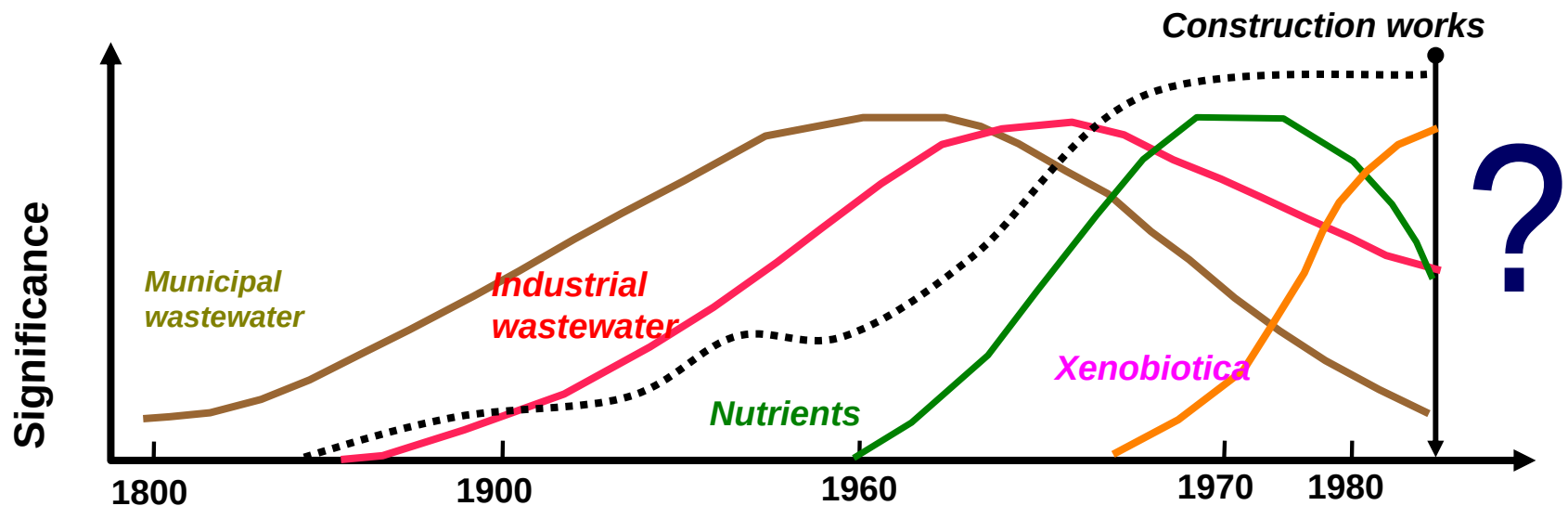


Water quantity problems worldwide...



The map indicates the regions of the world suffering from dwindling water supplies (year: 2000). It is assumed that water stress will occur if more than 40% of the available water is used (Rothman et al. 2007)

The European experience...



The „German experience“ ...

Contaminated Land



New Land Uses



Mining Landscapes



Recreational Landscapes



The “first waves” of Water Directives...



**Urban
Wastewater**

**Drinking
Water**

**Nitrate
Pollution**

**Hazardous
Substances**

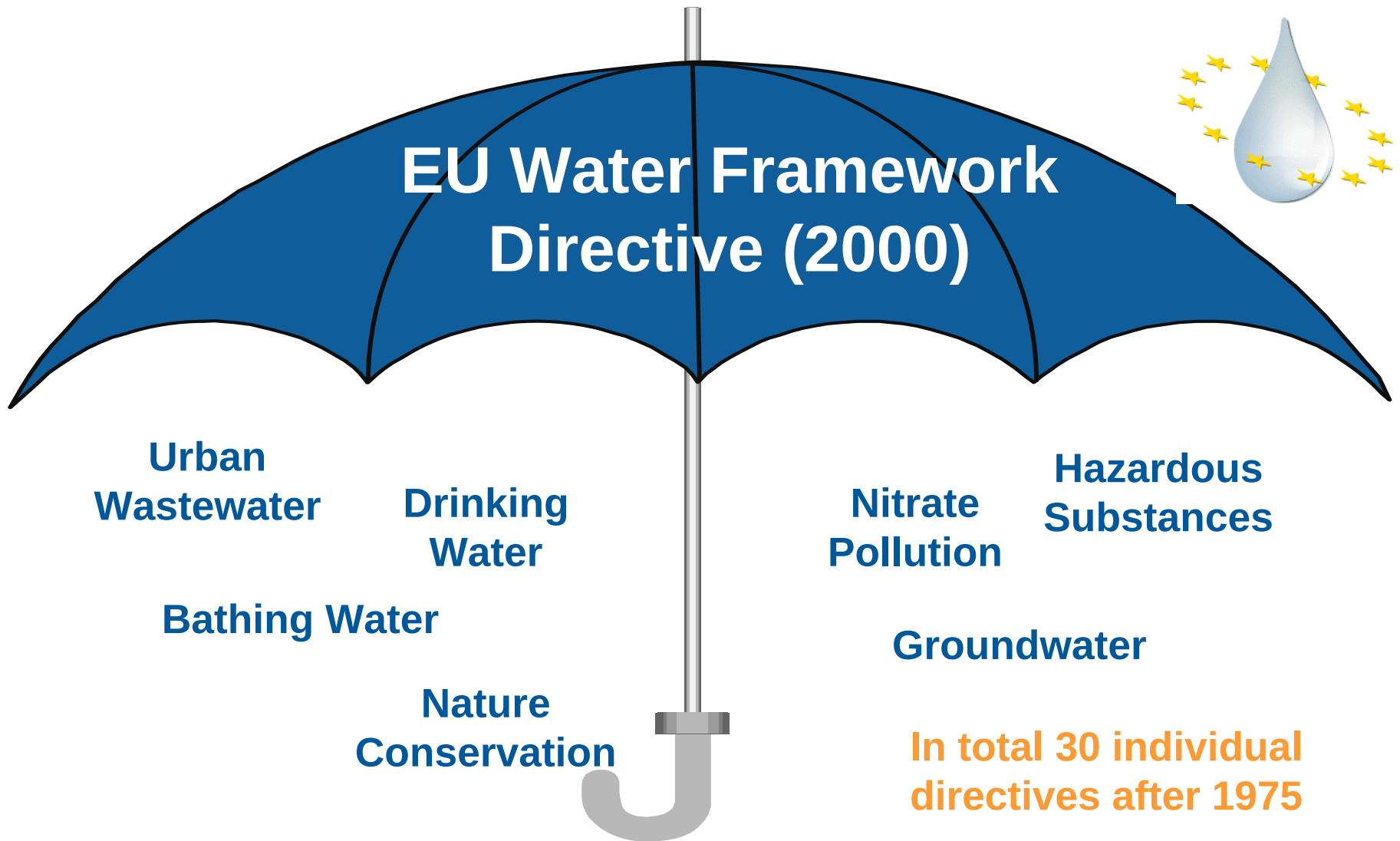
Bathing Water

Groundwater

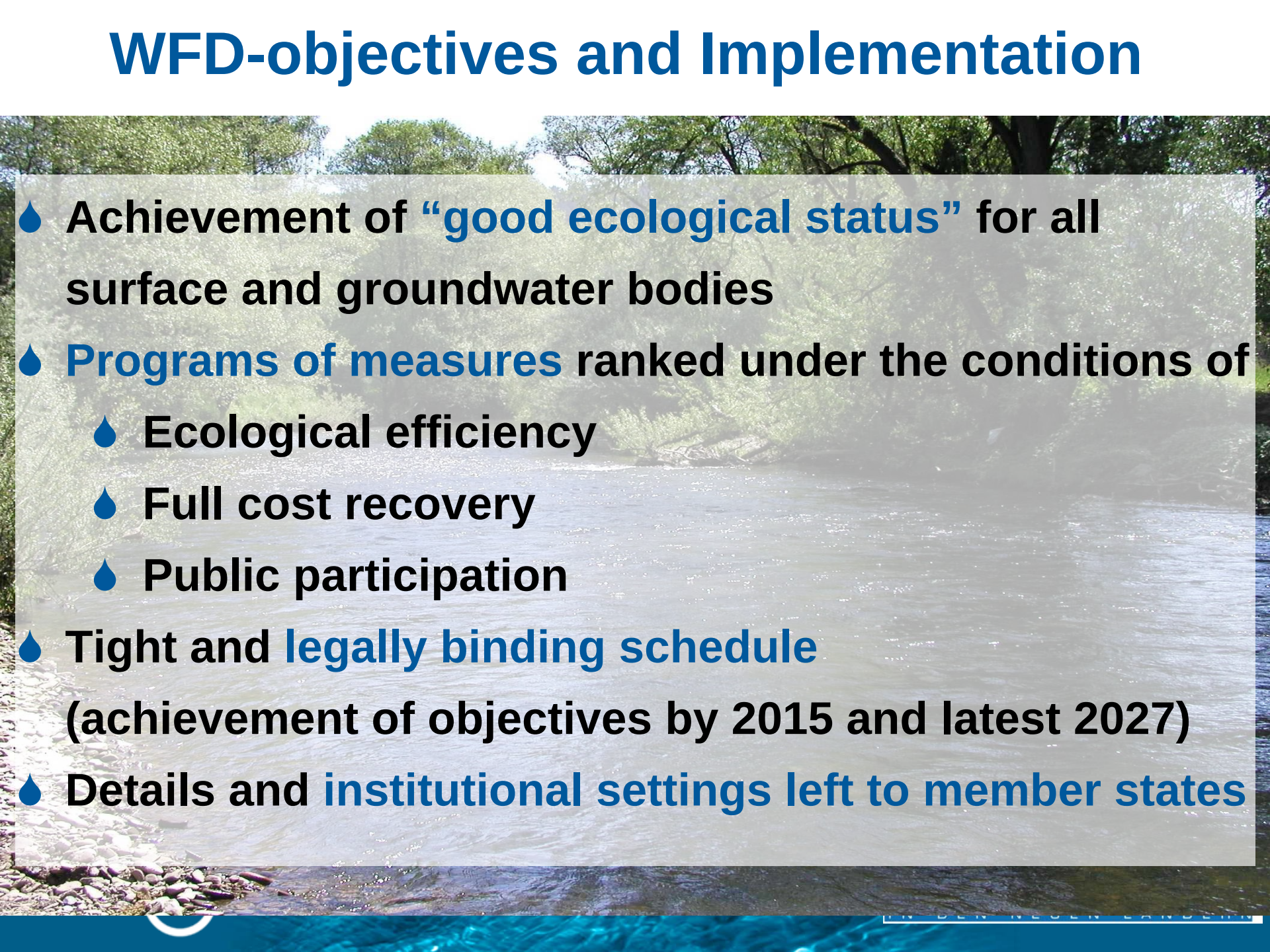
**Nature
Conservation**

**In total 30 individual
directives after 1975**

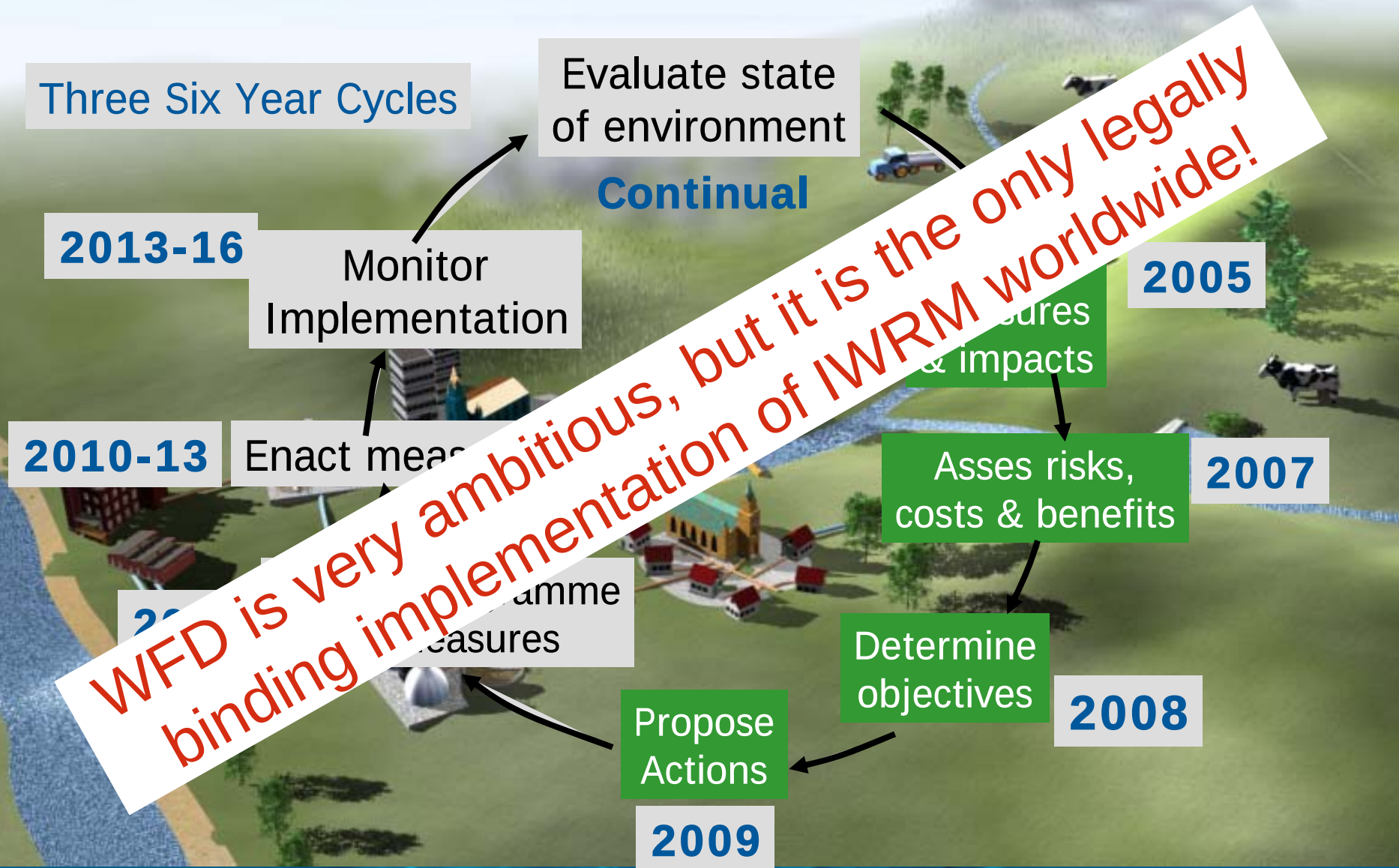
The realisation of integration...



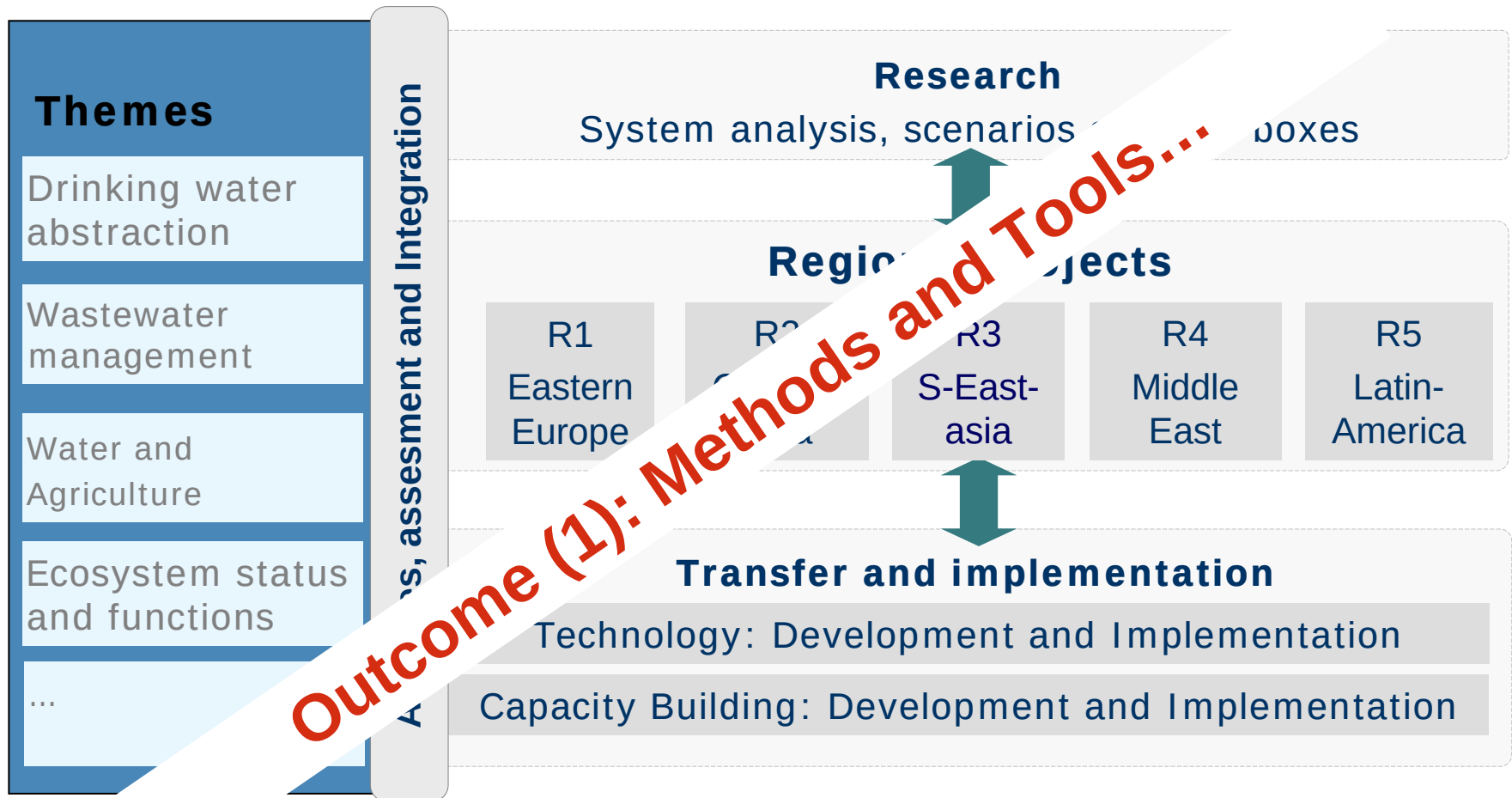
WFD-objectives and Implementation

- 
- Achievement of “**good ecological status**” for all surface and groundwater bodies
 - **Programs of measures** ranked under the conditions of
 - Ecological efficiency
 - Full cost recovery
 - Public participation
 - Tight and **legally binding schedule**
(achievement of objectives by 2015 and latest 2027)
 - Details and **institutional settings left to member states**

The WFD management approach



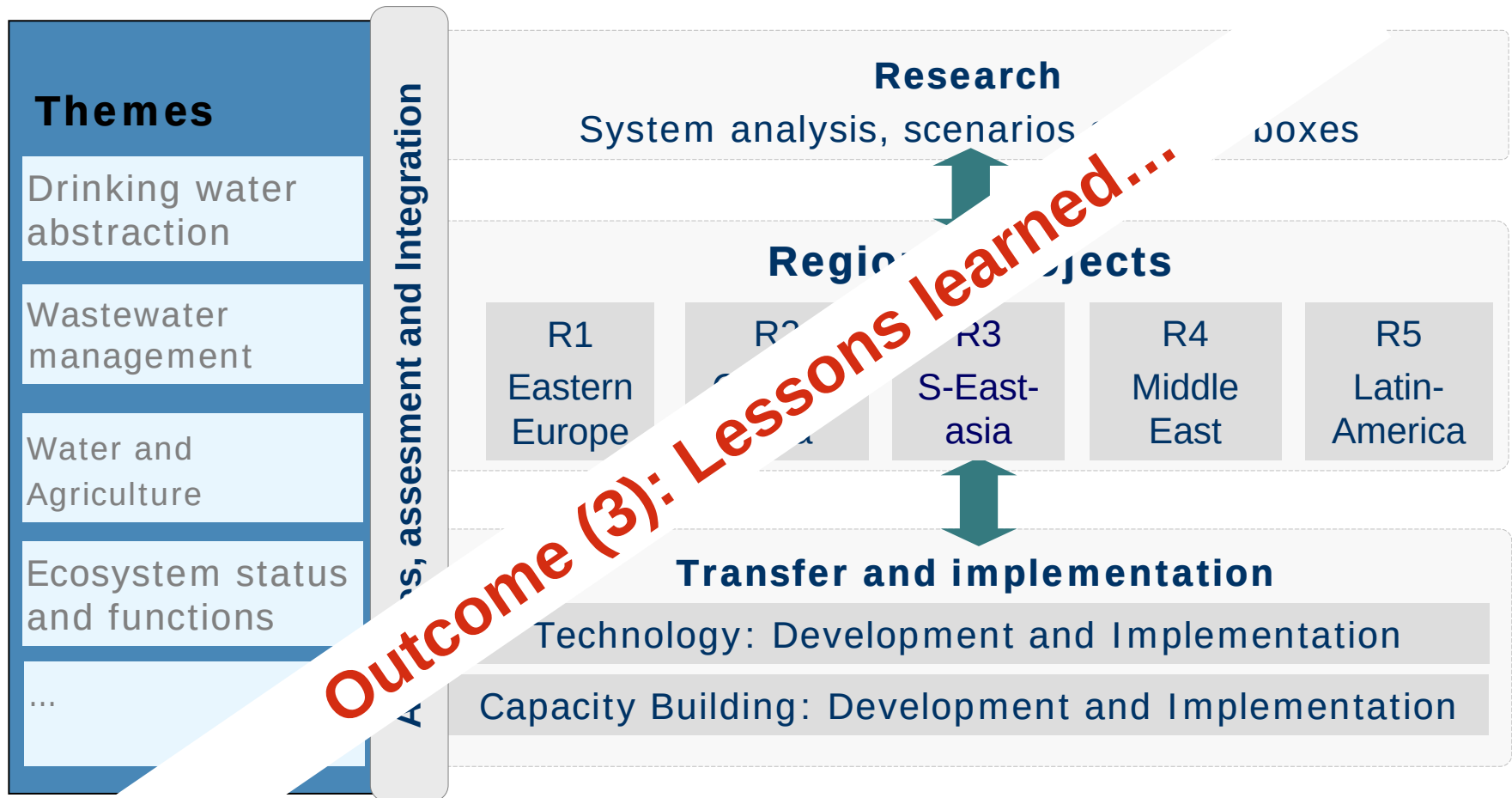
Syntheses of IWAS-elements and outcomes...



Syntheses of IWAS-elements and outcomes...



Syntheses of IWAS-elements and outcomes...



Summary and outlook...

- IWRM is not only a conceptual, but an operational strategy for adaptation to Global Change!
- IWRM leads to sustainable uses of water resources
↳ ...if it is performed properly!
- „IWAS“ (and related IWRM-projects) will develop methods and tools for a large variety of regions and „settings“
↳ ...this scientific knowledge is outstanding!
- „IWAS“ (and related IWRM-projects) will demonstrate real-world implementations
↳this practical knowledge is outstanding!