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Welcome address

**Special session on Upscaling from individual ecosystems
to groundwater bodies in the light of the WFD
implementation**

HydroEco2011 Conference

Vienna, 4 May 2011

Philippe QUEVAUVILLER

(1) European Commission, DG Research

(2) Vrije Universiteit Brussel (VUB)

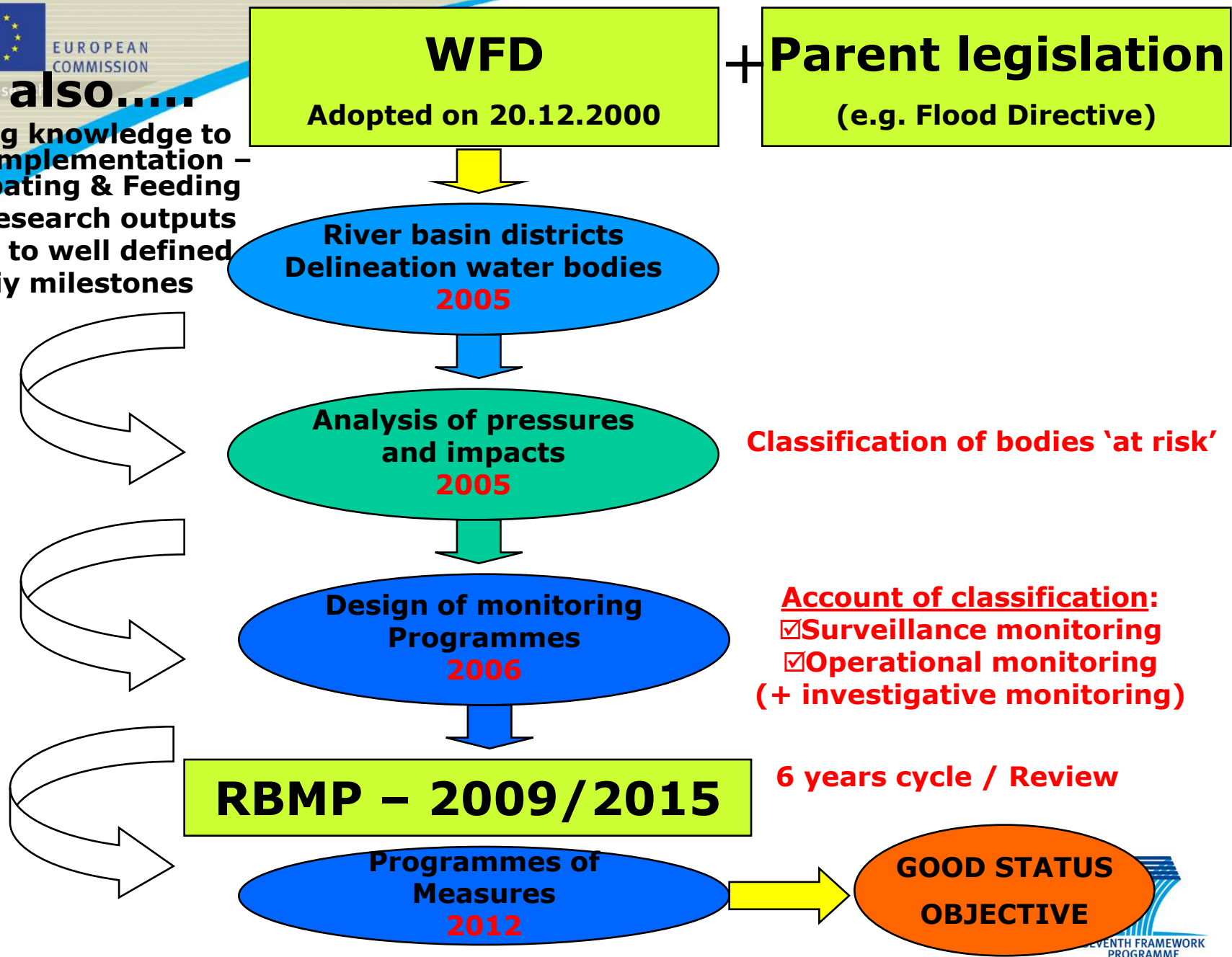




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But also.....

Linking knowledge to
policy implementation –
Anticipating & Feeding
with research outputs
linked to well defined
Policy milestones

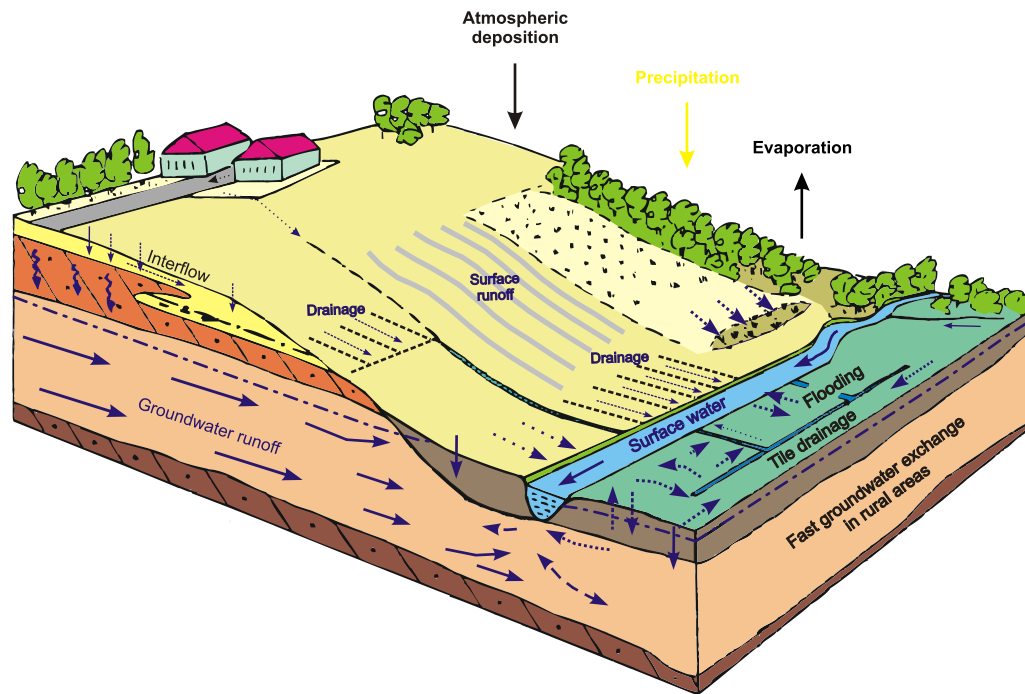




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When delineating groundwater bodies ...



Natural influences

- Geology
- Petrography
- Hydrodynamics
- Hydrology
- Interactions with ecosystems

Anthropogenic impact

- Land use
- Policies
- Mining activities
- Point source pollution
- Diffuse pollution sources (agriculture and atmospheric sources)

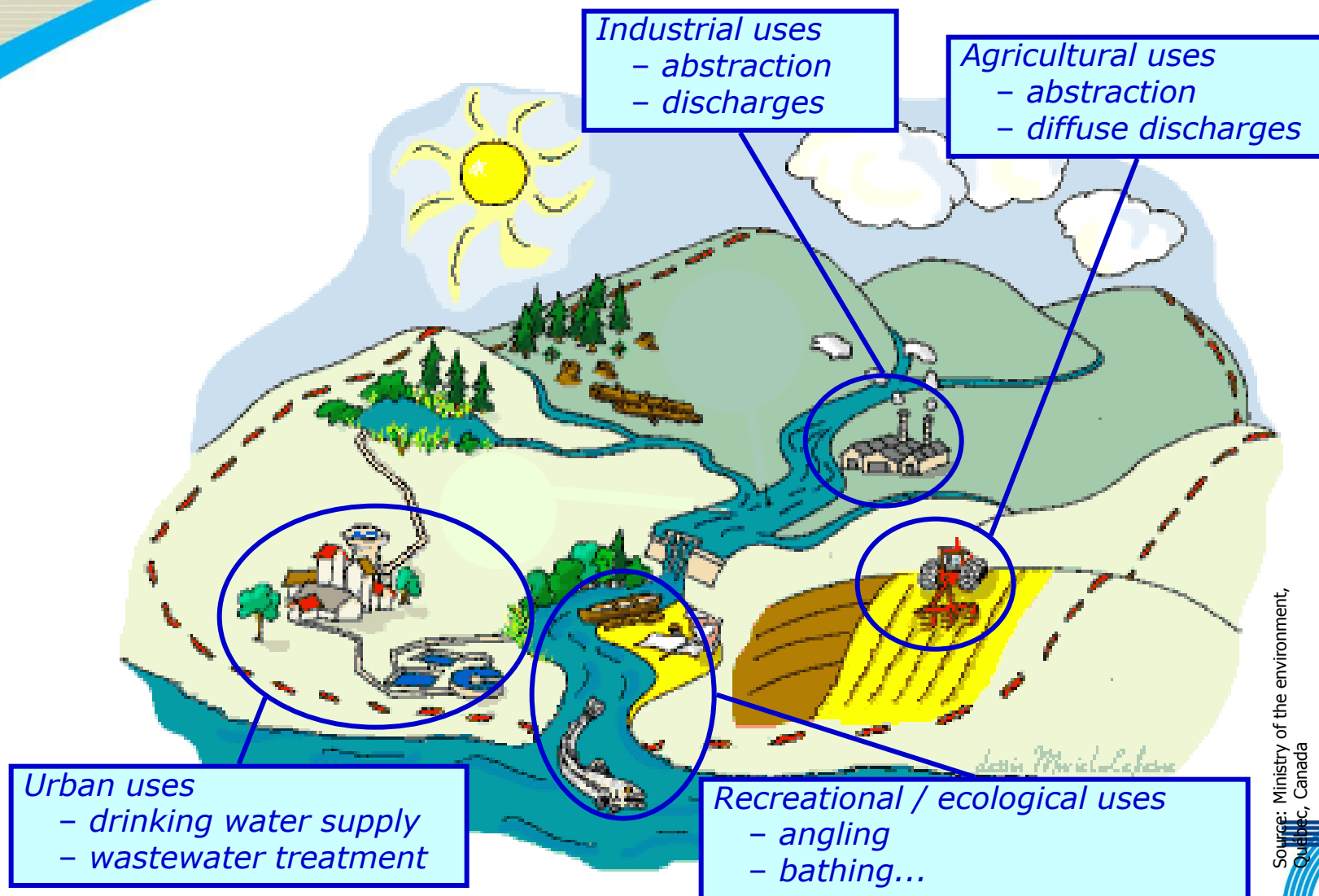


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At catchment scale

Impacts on ecosystems?



Source: Ministry of the environment,
Québec, Canada



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Many different situations.....

Is the knowledge about groundwater-ecosystem interactions sufficient?





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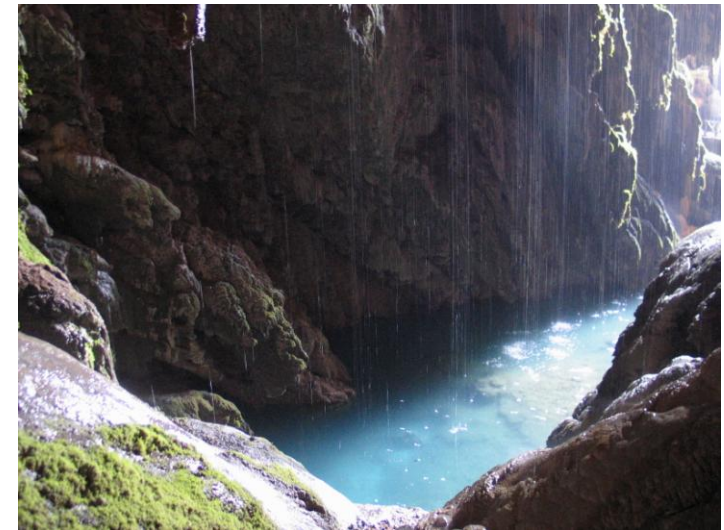
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On-going research

Impacts on groundwater

GENESIS: **Groundwater and dependent ecosystems**

- Development of integrated model to better trace pollution pathways and impacts from groundwater to relevant ecosystems.
- Better understanding on how ecosystems depend on groundwater
- Understand how changes in land-uses and climate change affect groundwater dependent ecosystems



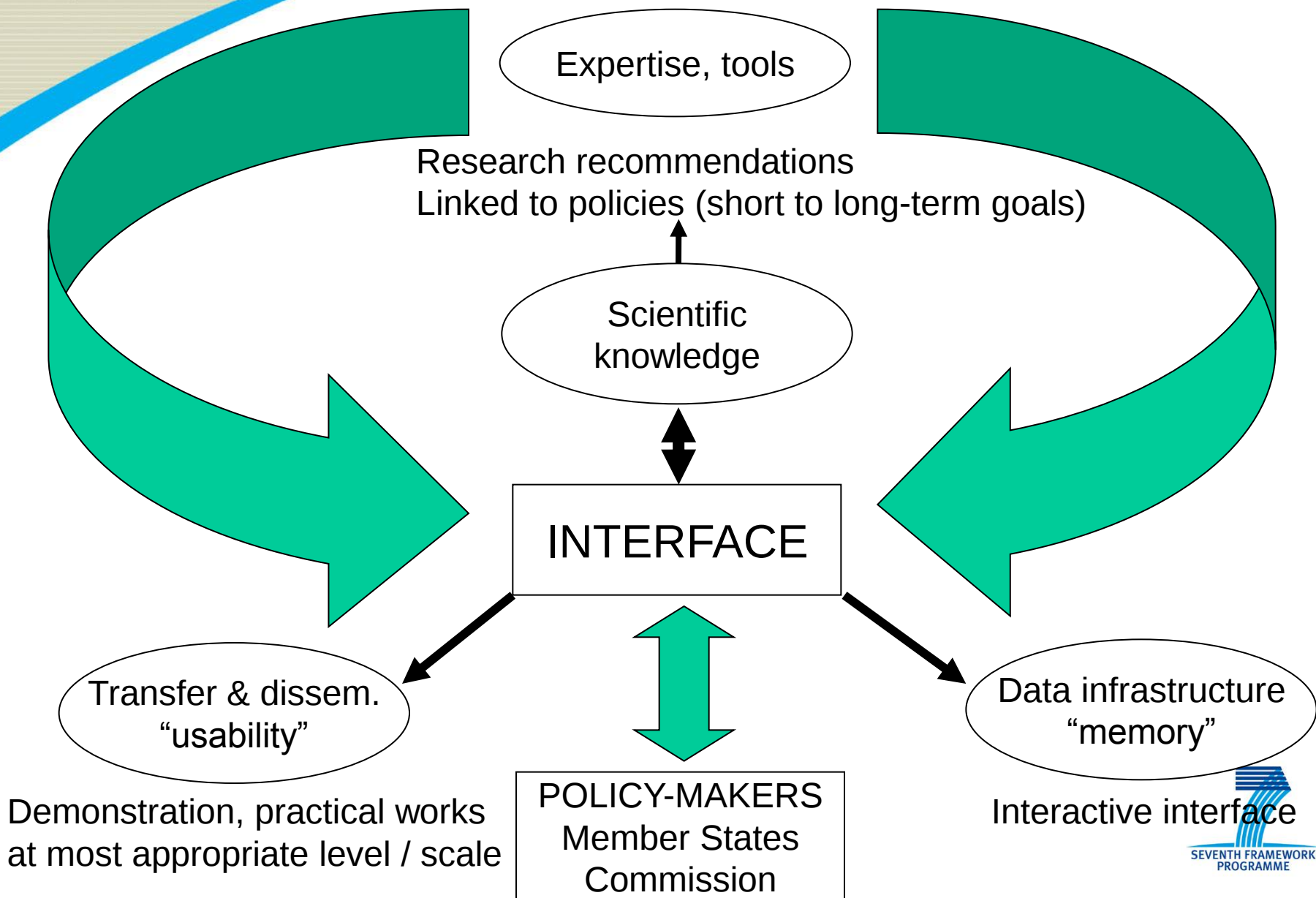
**25 partners from 17 European countries –
EC contribution of 7 M€, end April 2014**



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But is the scientific knowledge flowing into policy developments?





This session is about:

- **EU Policy framework** – Johannes Grath
- Examples from Denmark and regional scale flow and transport modelling
- **Inputs of science**
- Lectures on multi-scale approaches to the upscaling problem, and study of diffuse chemical impacts on groundwater-dependent ecosystems
- **Gaps filled in by the GENESIS project** – Bjorn Klove

With possibilities to debate with the panel, namely Johannes Grath (UBA, Austria), Alice Aureli (UNESCO), Martina Bussettin (ISPRA, Italy) and Rüdiger Wolter (UBA, Germany)

Final information: the outcome of this session will be reported to the CIS Working Group C, contributing to a technical report and possibly to an article

Have a good session!!