Towards a shared ecological rationale for more integrated implementation of Nature and Water Directives

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Biogeographical process

The need

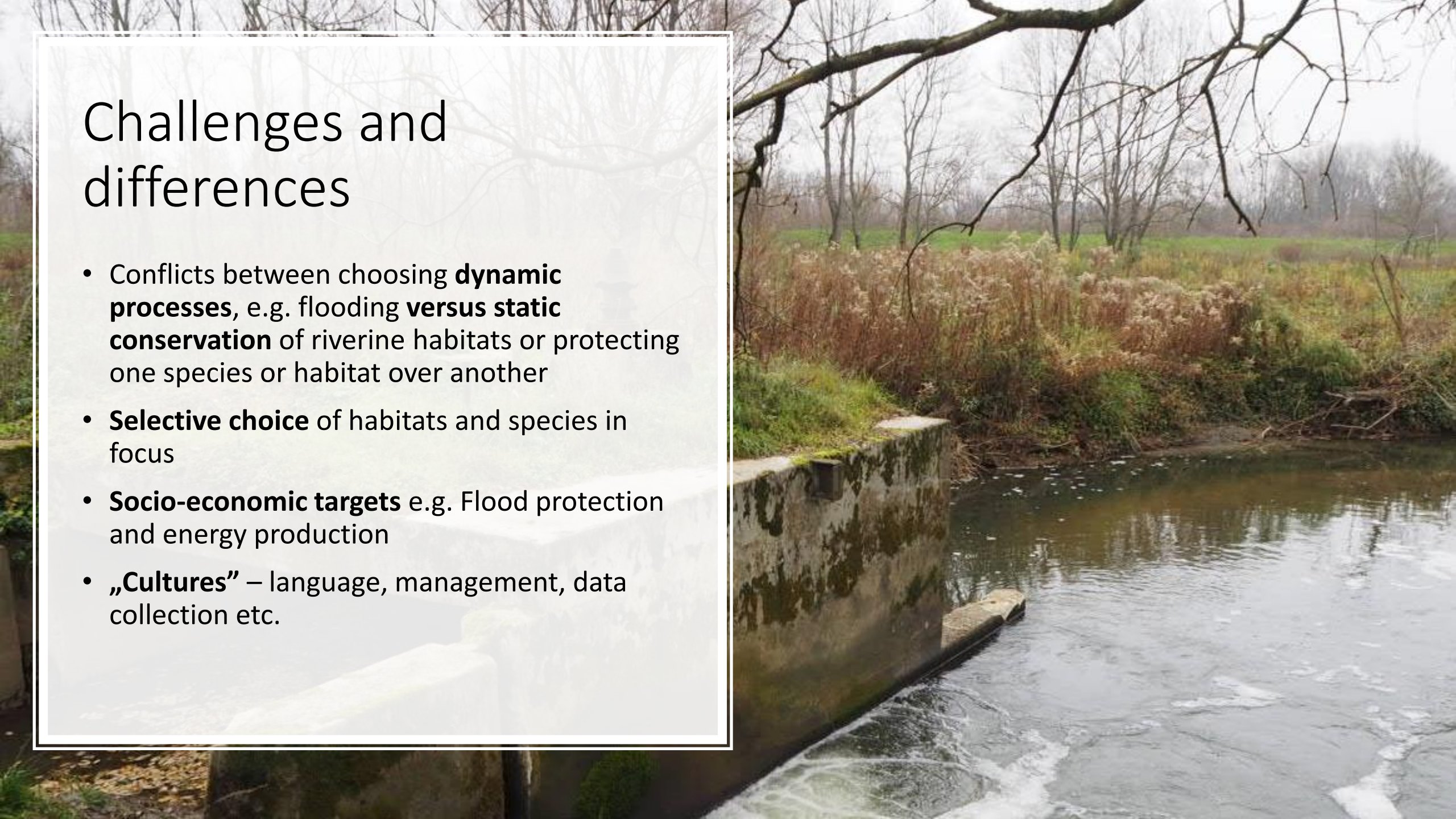
Discussion on how to better integrate decision-making and action under the nature (Habitats and Birds) and water (Water Framework and Floods) Directives

Benefits of joint implementation of BHD and WFD

- **reinforcing each other's objectives** so it is more probable to achieve set goals in time and avoid penalties or infringements
- common planning, monitoring and data collection **save money and time**
- communication between all relevant authorities can result in **coordinated actions**, future cooperation in common projects and better interaction with the wider public.

Challenges and differences

- Conflicts between choosing **dynamic processes**, e.g. flooding **versus static conservation** of riverine habitats or protecting one species or habitat over another
- **Selective choice** of habitats and species in focus
- **Socio-economic targets** e.g. Flood protection and energy production
- **„Cultures”** – language, management, data collection etc.



Overlaps

- **The indicators** for Favourable Conservation Status (FCS) and Good Ecological Status (GES) e.g. *species composition, area, river continuity or substrate of the river bed* are not identical in the three directives, but do overlap
- All encourage **Nature Based Solutions**, restoration, sustainability
- Building a **network**
- **Monitoring**

What do we need for integration

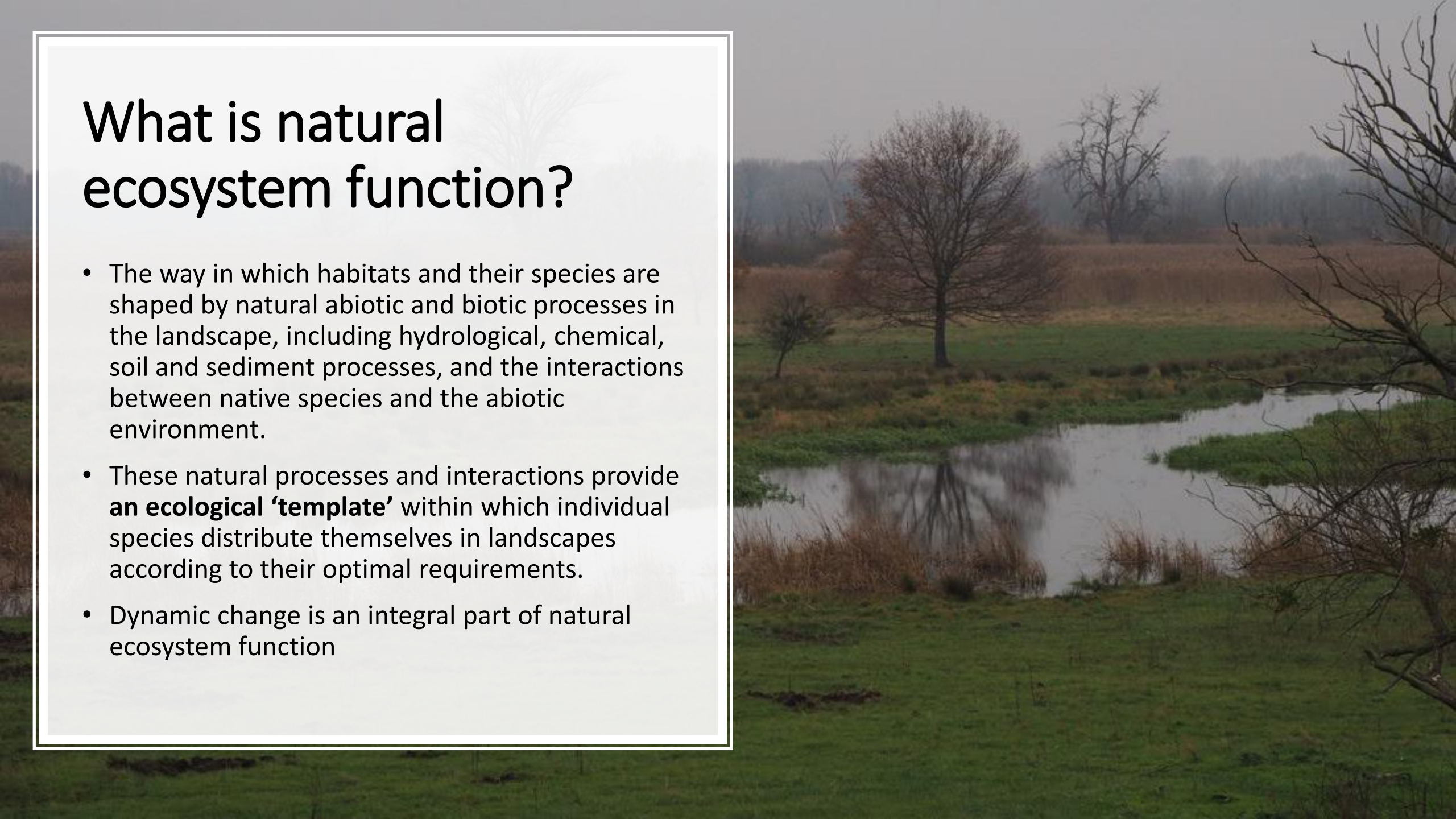
- ***"Habitat-led, but species aware"*** approach in management planning
- **Common language** that connects both sectors
- More effective and precise ***monitoring,*** data exchange and joint actions, with a potential to decrease the overall costs
- Better **inclusion** of Natura 2000 in RBMPs
- Any kind of planned ***maintenance works*** should be consistent with WFD and BHD environmental objectives
- ***Joint planning***, timetables for implementation, financing and common research
- More ***capacity building*** and training between the two sectors

Key principle of the integration relate to:

the **use of natural ecosystem function** as a spatial planning template for freshwater, wetland and wider biodiversity conservation, providing a common language between biodiversity and water decision-making;

What is natural ecosystem function?

- The way in which habitats and their species are shaped by natural abiotic and biotic processes in the landscape, including hydrological, chemical, soil and sediment processes, and the interactions between native species and the abiotic environment.
- These natural processes and interactions provide **an ecological 'template'** within which individual species distribute themselves in landscapes according to their optimal requirements.
- Dynamic change is an integral part of natural ecosystem function



Decision-making considerations:

1. The current level of natural ecosystem function
2. The need to avoid unintended (negative) consequences to the existing biodiversity value of sites (restoration will enhance biodiversity)
3. Scale of socioeconomic constraints
4. The occurrence of Natura 2000 sites
5. Timescales – focus on a long-term perspective
6. Scale of improvements in natural capital (The value of restored naturally functioning habitat mosaics to ecosystem services such as water and carbon storage and flood attenuation may tip the balance in favour of restoration)

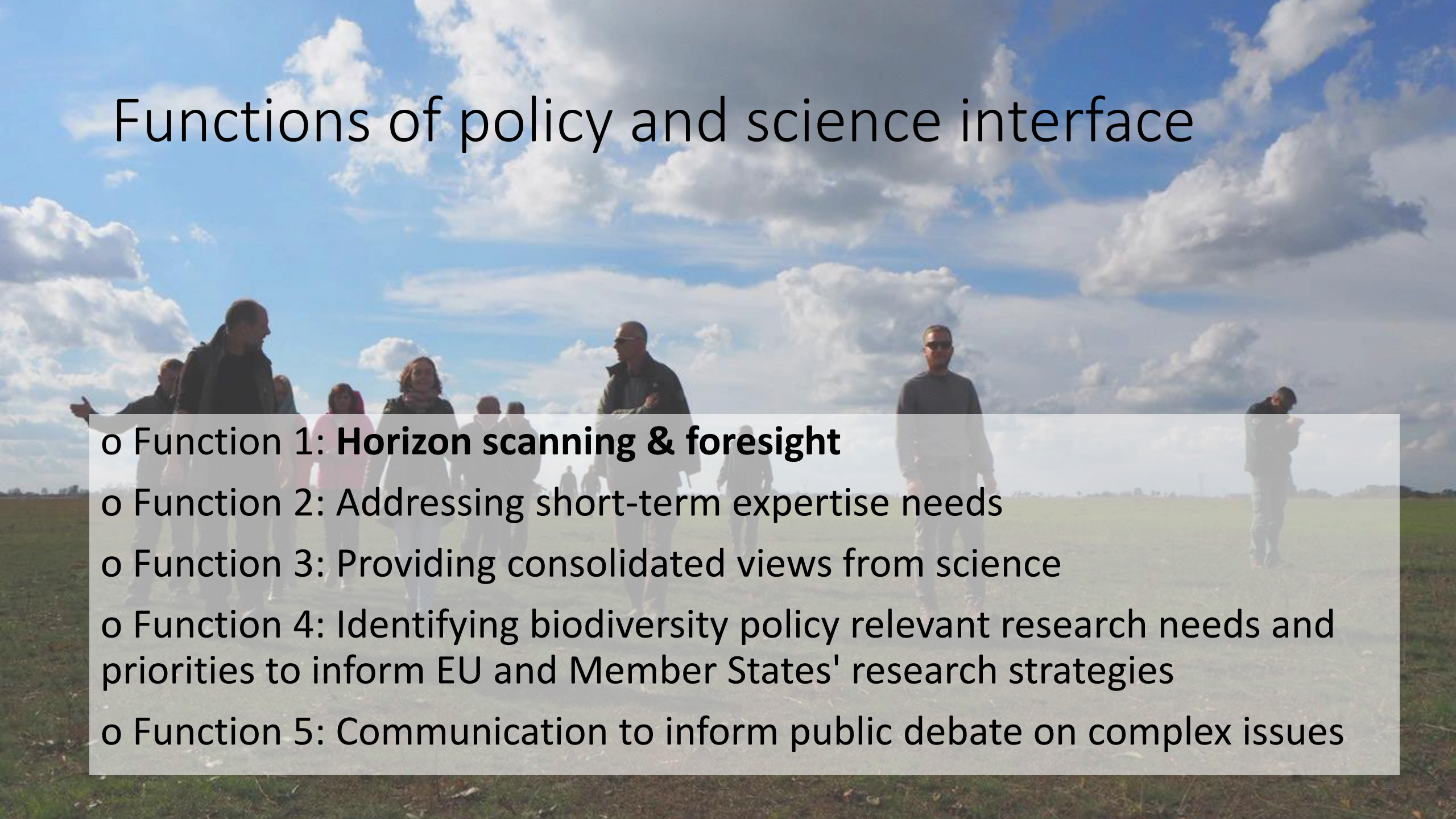
- Defining unimpacted **reference conditions**, similar reference points (for some habitats and species), historical baselines when the cultural management of a particular habitat or species was considered optimal;
- **Ecological targets** of BHD and **ecological status** in WFD as well as ecological thresholds (biological and abiotic) can vary between MSs, are not intercalibrated
- Preparing **management plans** that combine all perspectives, answer current pressing challenges AND are settled in the long-term perspective

Where do we need data?

Thank you for your attention!

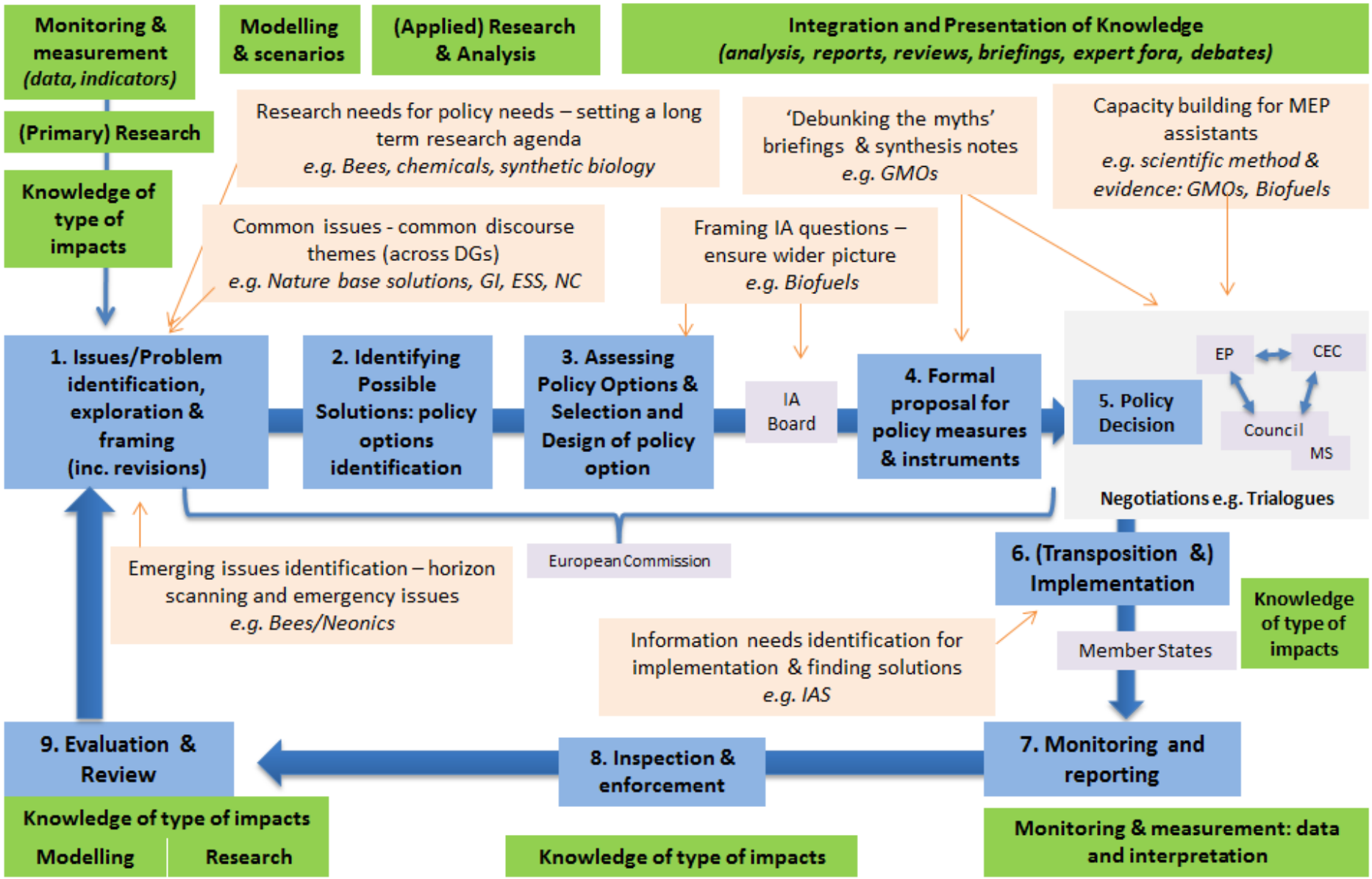
Science and policy integration

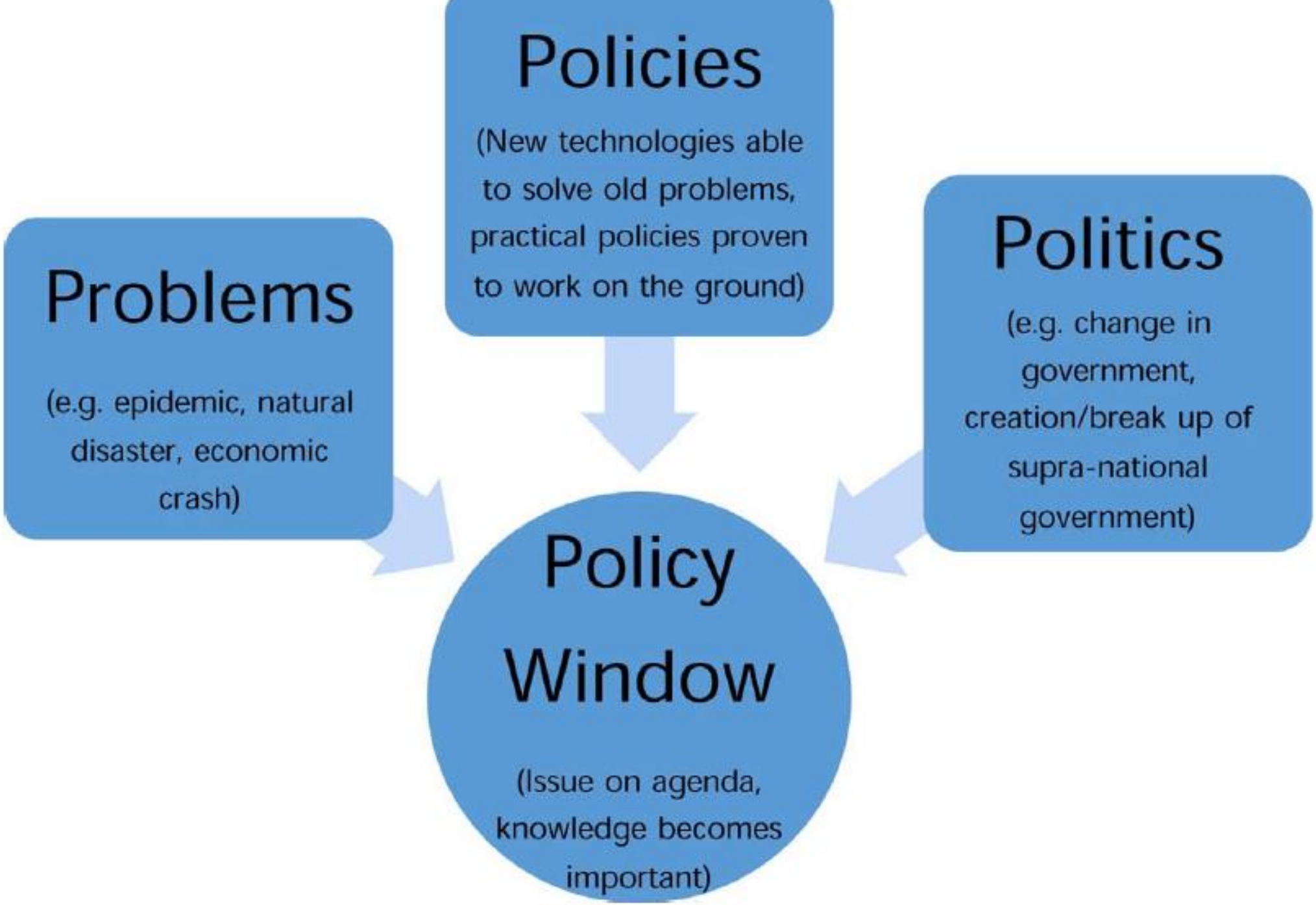
Functions of policy and science interface



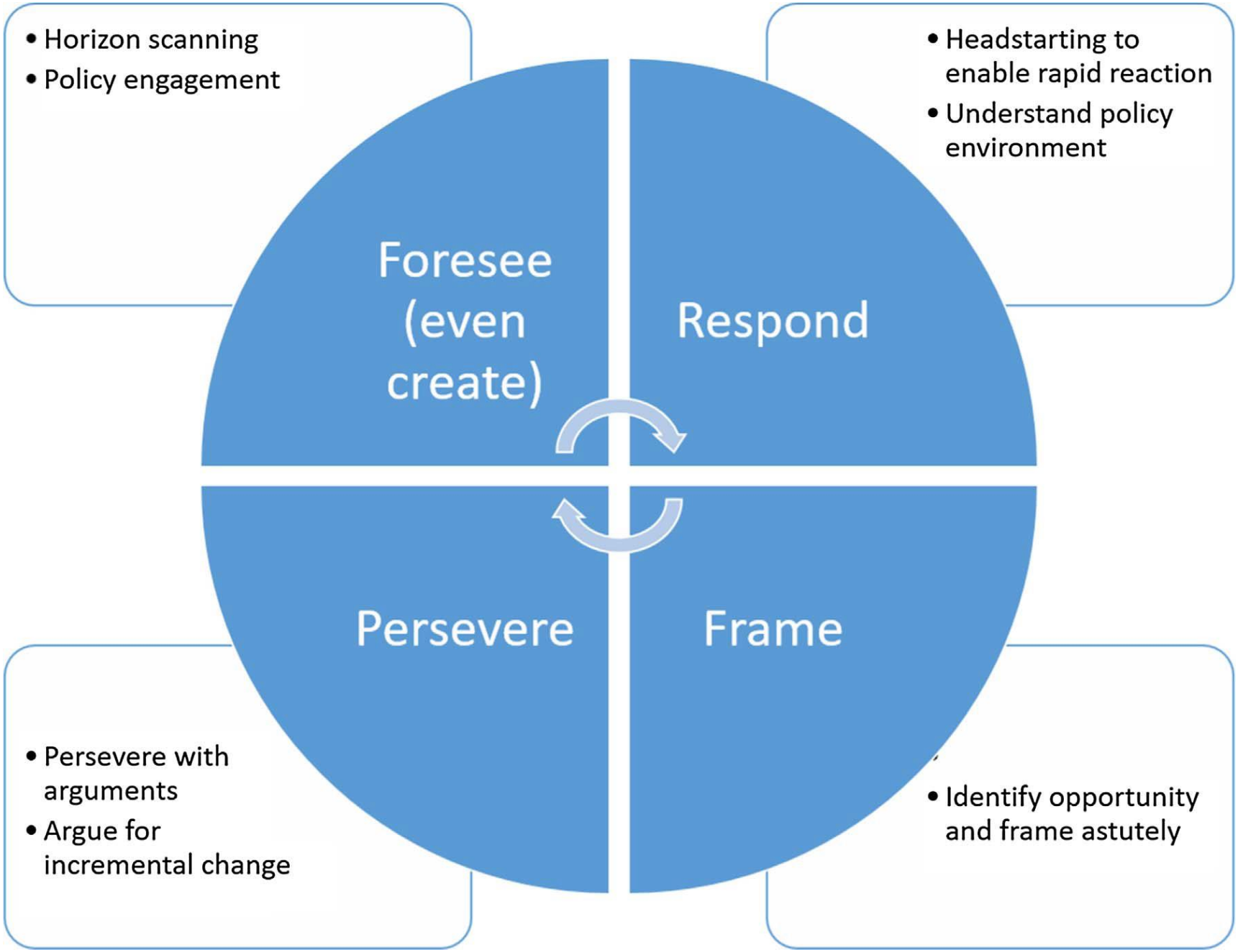
- Function 1: **Horizon scanning & foresight**
- Function 2: Addressing short-term expertise needs
- Function 3: Providing consolidated views from science
- Function 4: Identifying biodiversity policy relevant research needs and priorities to inform EU and Member States' research strategies
- Function 5: Communication to inform public debate on complex issues

Overview of types of contributions that an EU mechanism could deliver for a Science and Policy Interface for Biodiversity




Policies
(New technologies able to solve old problems, practical policies proven to work on the ground)
Problems
(e.g. epidemic, natural disaster, economic crash)
Politics
(e.g. change in government, creation/break up of supra-national government)
Policy Window
(Issue on agenda, knowledge becomes important)

Tips for responding to policy windows



Current need of science in policy

Biodiversity policies	Needed biodiversity data
CBD	Genetic composition
Ramsar	Species populations
CMS	Species traits
Habitats and Birds Directive	Community composition
MSFD	Ecosystem function
WFD	Ecosystem structure

EU BON: barriers to the use of evidence in policy

1) different worlds of science and policy;
2) poor communication between science and policy;
3) differing priorities of academics and policy-makers;
4) private interests;
5) complexity of problem.

They suggest strategies for overcoming related complexities and communication gaps. The strategies include:

(i) training scientists and policy-makers via joint research projects

(ii) making better use of knowledge brokerage systems including boundary organisations e.g. the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and individuals

(iii) telling appropriate policy-relevant narratives

Threats

- Post-truth democracy
- Governance crisis