

# Science-Policy Interfaces for Biodiversity Governance

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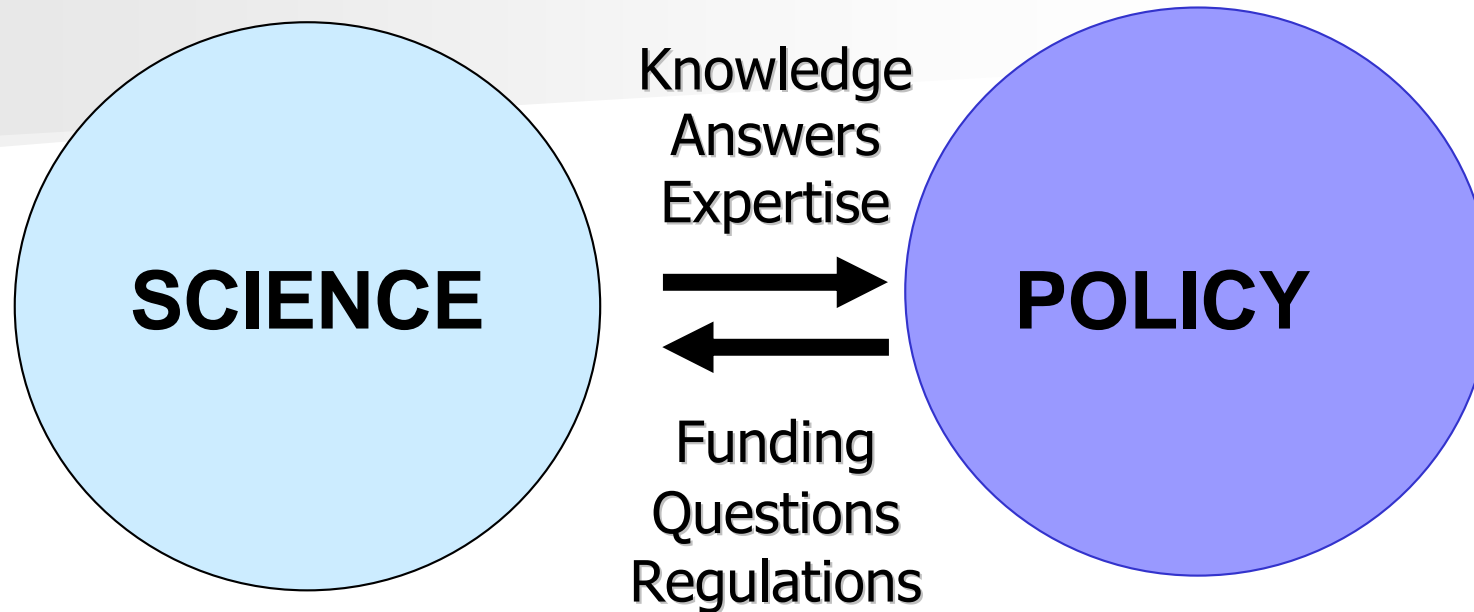
# Content

- Domains of intersection between science and policy (Why?)
- A definition of science-policy interfaces (What?)
- Normative requirements for science-policy interfaces (How?)
- Conclusions: challenges for the practice

# Preliminary Considerations

- Biodiversity science is called upon to contribute to solving a societal and environmental problem
- Complex issue: non-equilibrium, self-organising natural and social systems
- Biodiversity governance needs science
  - ⇒ ***How to link science and policy for biodiversity governance?***

# A naïve vision...



- Mutually exclusive and hermetic categories
- Science as an isolated and deterministic system providing value-free 'truths'.
- Two independent monologues which intermittently exchange products

# (Some) Domains of **intersection** between science and policy

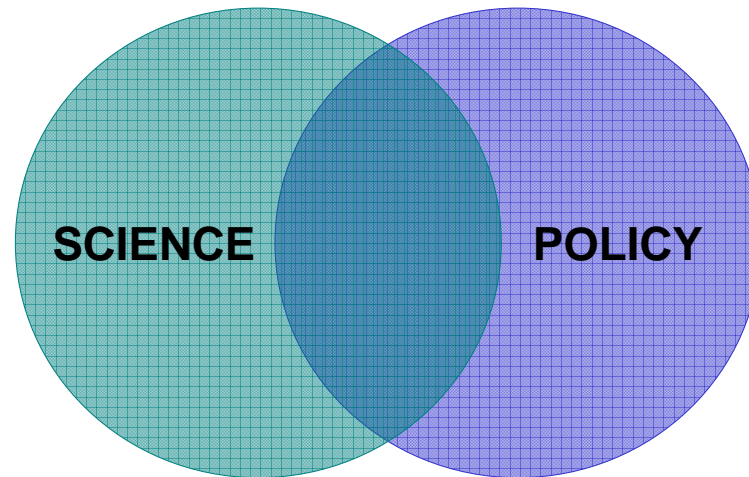
- Scientific knowledge is an ingredient of policy-making (explanations, predictions)
- Science contributes to emergence of issues on political agenda
- Defining, framing, addressing a problem, designing potential solutions: pertains to both the scientific and the policy process
- Research policy is driven by political considerations while the results of science influence policy prioritisation.

# Domains of **intersection** between science and policy (cont'd)

- Scientists are called as experts in policy processes
- Scientific actors influence policy according to their values and interests
- Technology becomes cause of major policy issues (e.g. nuclear wastes, ozone layer, ...)
- Politicisation of issues impact on the way science is conducted (e.g. climate science)

# A vision of co-evolution

- Science and policy as intersecting and coevolving domains of human activity:



- To manage the intersection between science and policy, some processes are implemented – spontaneously or not – which happen precisely at the intersection: *science-policy interfaces*

# Science-Policy interfaces: a definition

*Science-policy interfaces are social processes which encompass relations between scientists and other actors in the policy process, and which allow for exchanges, co-evolution, and joint construction of knowledge with the aim of enriching decision-making.*

# How should science-policy interfaces operate?

- A series of theoretical problems arise at the intersection between science and policy
- Looking at them one can identify some normative requirements for science-policy interfaces

# A world of complexity, uncertainty, indeterminacy, plurality

Science-policy interfaces should:

- bring about communication and debate about assumptions, choices and uncertainties, and about the limits of scientific knowledge;
- allow for articulation of different types of knowledge: scientific-, local-, indigenous-, political-, moral-, and institutional knowledges;
- provide room for a transparent negotiation among standpoints (participatory processes).

# Types of science and of knowledge

- Issue-driven vs. curiosity-driven science
  - ⇒ SPI to allow for balancing issue-driven and curiosity-driven science and their articulation in knowledge for decision-making processes.
- Explanations and predictions
  - ⇒ SPI to allow for a reemphasis of the role of scientific explanation for understanding the issue, exploring options for action, and building justifications.

# Fuzzy frontiers between science and policy

Science-policy interfaces should:

- allow for recognition of the existing dependencies between the scientific and the social systems and how they influence the knowledge that is exchanged in the interface;
- allow for continuous creation and dynamic exchange of different knowledges across the frontiers of science and society (dynamic processes).

# Organisation of science, quality and training

Science-policy interfaces should:

- include a reflection on research priorities and research organisation;
- allow for critical assessment of scientific outputs in light of users needs and other knowledges:
- allow for education and training of scientists in communication, translation and mediation.

# Input & roles of **social sciences**

Science-policy interfaces should:

- allow for genuine interdisciplinary interactions between social and natural sciences;
- recognise the potential of social scientists as designers, implementers and evaluators of science-policy interfaces, and their potential role as translators, mediators or facilitators.

# Non-neutrality and responsibility

Science-policy interfaces should:

- render explicit the values, ethics and interests of knowledge holders and allow for their articulation with (objective and subjective) knowledge;
- allow for scientists to exercise their responsibility as knowledge holders and technology developers.

# Challenges for the **practice**

- reinforcement and enlargement of scientific **quality and validation** processes;
- development of **transdisciplinary** research methodologies
- **transparency, participation** and **dynamism** of interfaces, in particular the role of other stakeholders and the public;
- **accountability** of the different actors;

# Challenges for the practice (2)

- **translation** of scientific knowledge into policy-relevant knowledge and of policy knowledge into science-relevant knowledge;
- inclusion of a **diversity** of knowledges and intelligences;
- development of dialogical **dissemination** channels for scientific knowledge, specifically targeting the various potential user groups;
- **institutionalisation** of science-policy interfaces in a democratic context.

**Thank you!**

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