Reality check for science-policy interfaces

The Brief in brief

SPIRAL used real life science-policy interface (SPI) 'test cases' to confront practice with theory and identify examples of effective practices, as well as facilitating and hindering factors for SPIs. SPIRAL both studied-- and fed-back its expertise and findings into-- the planning, design, implementation and assessment of those test cases. This brief presents some lessons learnt and three cross-cutting issues: the crucial role of individuals in making an SPI work, the still dominating sector-based silo mentality and the importance of engagement with stakeholders.

Introduction and Rationale

Science-policy interfaces are the many ways in which scientists, policy makers and other stakeholders link up to communicate, exchange ideas, and jointly develop knowledge for enriching policy and decision-making processes and/or research.

SPIRAL used 'test cases' to study and test specific, real-life science-policy interfaces at various levels: national, European and international. The specific objectives of this work were to: learn from the processes of planning, designing, implementing and assessing SPIs; contribute to those processes; and extract lessons and examples of best practices incorporating other aspects of SPIRAL's work.

These objectives were achieved by interacting directly in SPI test cases design, operation and assessment, and being engaged in hands-on testing, reality-checking and feeding-back its findings from other elements of SPIRAL's work. As such, it was an opportunity to confront theory and real life practice, to evaluate the relevance and applicability of SPIRAL's results and to further develop recommendations.

The nine SPIRAL test cases:
The Intergovernmental platform for Biodiversity and Ecosystem Services (IPBES); the AfriBES Network; A Biodiversity Science-Policy Interface Mechanism for Europe; Towards strengthening environmental science-policy interfaces at EU level: the SEPI exploration; The Economics of Ecosystem and Biodiversity – TEEB; The Society for Conservation Biology (SCB) – European Chapter; The implementation of the Water Framework Directive in Romania; Het Instituut voor Natuur en Bosonderzoek (INBO); and The Royal Netherlands Institute of Sea Research (NIOZ).

Helpful lessons

A non-exhaustive set of lessons were distilled from SPIRAL's exploration. They are organised here in relation to SPIRAL's 4-part conceptual framework for SPI analysis.

(a) Structure

The challenge of a multi-level structure: SPIs intending to play a role at various levels may end up facing difficulties to maintain coherence and common goals with their wide range of local, national, regional activities or nodes, each with various priorities and unevenly distributed resources.

The role of individuals: an SPI can be strongly dependent on the involvement of individuals committing their time and energy but also potentially influencing it with their own perceptions and priorities, which may not necessarily be in tune with the objectives of the SPI.

Champions: the use of 'champions' or charismatic 'ambassadors' who are well-respected and highly-placed can contribute to improving visibility and credibility of an SPI, especially very formal and high level ones, and facilitate access to other resources.

Leadership and coordination: a charismatic leadership is a key component but should be complemented by efficient coordination and a reliable knowledge basis (ensured through e.g. appropriate quality assessment processes).

The trade-off between formal and informal approaches: there is a trade-off between top-down formally organized and managed SPIs on the one hand, and the need for adaptability and to allow for informal science-policy relations that may function without such top-down orchestration, and even may be hampered by it on the other hand.

Membership and coordination: bottom-up approaches require an initial pool of motivated and active members, and efficient coordination.

Governance, adaptability and legitimacy: light governance of a SPI contributes to its adaptability but might hinder legitimacy, especially in cultural contexts where formal arrangements are seen as more legitimate, reliable or sustainable.

Political mandates: a clear political mandate may generate the dynamics needed in both the policy and scientific communities as it may provide a sense of mission for the various actors operating in the SPI.

Representation and diversity: a good and relatively balanced diversity of relevant participants is necessary to avoid an SPI being seen as a private club or becoming dominated by specific disciplines.

Transparency and inclusiveness: an open architecture format where anyone could contribute evidence (e.g. via calls for evidence) can support transparency but needs to be complemented by an active recruitment of contributors and careful review processes to ensure credibility.

(b) Functions/Objectives

Walking the fine line between advocacy and "neutrality": a difficult choice for an SPI is to engage more in an advocacy role for conservation (or other environmental issues) or to remain in a more informative "honest brokering" role, thus reducing the risk that scientific credibility be compromised. Scientific credibility is not only linked to scientific quality, but also of transparency.

Trade-offs between credibility and legitimacy: there is a trade-off between independence/credibility and the legitimacy (political mandate, intergovernmental process) of SPIs.

Levels: there is a need for integration across levels from local to member state to EU level;

The linear model: the persistent dominance of the linear model (one-way transfer of knowledge from science to policy) hinders the development of more dynamic SPIs; SPI activities are often restricted to a one-way communication putting emphasis on involving scientists with great communication skills or translating the scientific knowledge into more digested messages for policy makers: a useful yet insufficient approach.

Transparency of objectives and motivations: clarity on objectives and internal common understanding of the participant's motivations to join the SPI contribute to the success of SPIs.

Connections and gaps between interfaces: environmental policies build on an evolving mosaic of interfaces, which need to be connected in a flexible manner with the active consent of those involved.

(c) Processes

Incentives, ownership and engagement: bottom-up SPIs are challenging as potential actors need incentives to engage time and effort; it is then important to foster their ownership of the process and ensure continued engagement and real added-value for them.

Conflict management: building capacity of all actors is a major condition for effective conflict management. As relevant actors engaged in the SPI work might have conflicting needs and demands, mediation tools to build trust and better understanding of each other from the start of the SPI are important.

Interdisciplinarity and transdisciplinarity: Complex environmental issues require interdisciplinary SPIs whereby a broad diversity of relevant experts are engaged, and transdisciplinary approaches to integrate various scientific disciplines and other types of knowledge, and build common understanding and trust.

Transparency of processes is a major criteria for effective SPIs and entails clarification of who is involved, when and how, who funds, who influences etc.

Responding to changing policy drivers: flexibility and adaptive management are needed as user needs and concerns change and evolve according to the changing policy landscapes and priorities, the demands on an SPI become more challenging and face increasing trade-offs between credibility, relevance and legitimacy.

The issue of scaling and context dependency: biodiversity issues are usually quite context-dependent both in terms of knowledge availability (including different type of knowledge) and in terms of policy development and implementation. As a consequence, EU and international SPIs (e.g. IPBES) face a challenge of scaling up and down for

both integration and applicability of the knowledge they will review and analyse.

Learning Institutions: SPIs addressing complex interrelated biophysical, socioeconomic and institutional issues should be established as learning institutions to deal with complexity – which implies uncertainty, ambiguity, indeterminacy, non-linearity, and ignorance.

Cross-cutting issues

Three inter-related, over-arching themes emerged as cutting across most test cases: (i) ***the role that individuals play in making SPIs work***, (ii) the recognition that many actors or institutions still tend to operate within ***a sector-based silo mentality*** and (iii) widespread concerns about ***how best to engage*** stakeholders and other actors.

The development of effective SPIs requires effort, time and resources for the development of interpersonal relationships to enhance communication and, thus, successful collaboration between scientists and policy-makers. These interpersonal relationships can focus on such things as how actors understand themselves and one another, how they communicate, collaborate, and work together through finding common ground.

Many test cases were hindered by a 'silo mentality' both in the science and in the policy realm:- an attitude found in some organisations that occurs when several departments or groups do not want (or are unable) to share information or knowledge with others, resulting in missing key information, feedbacks and/or connections. If individuals or sectors had clearer understandings of, and communications/interactions with, other relevant individuals or sectors, then considerable benefits might accrue.

Finally there were consistent concerns that many important stakeholders were not effectively engaged or were totally ignored, and that there was often a tension between actors that required participative engagement and conflict management being part of the SPI from the start.