

Science-Policy Interface (SPI) for Sustainable Development

Green Technologies Through
Science-Policy Interface
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The Science-Policy Interface

- ▶ The science-policy interface (SPI) is a broad concept for which various definitions exist.
- ▶ SPIs are the many ways in which scientists, policy-makers and others link up to communicate, exchange ideas, and jointly develop knowledge to enrich policy and decision-making processes and/or research.
- ▶ SPIs involve exchange of information and knowledge leading to learning, and ultimately influencing decisions and changing behavior – i.e. doing something differently as a result of the learning.
- ▶ These changes may be made by policy-makers, local-level decision-makers, scientists, other stakeholders or citizens. As such, SPIs can lead to many practical impacts.

The science-policy interface (Cont'd)

- ▶ SPIs cover a very wide range of structures, communication forums, situations and methods.
- ▶ They can be formal structures, designed for a specific purpose (e.g. scientific advisory bodies of international conventions, intergovernmental panels, scientific advisory boards, chief science advisors, national academies of science)

OR

- ▶ informal (e.g. policy workshops aiming to bring together scientists and policy-makers for discussing research results or issues).
- ▶ They can be recurring or one-off events.
- ▶ Their common feature is the potential for exchange of information, joint knowledge production and learning.

The Roles of Science-Policy Interface

► **Scientific warning and awareness raising :**

Scientific expertise can be used to bring an issue to the attention of policy-makers. Scientific warnings can steer public attention to issues that form threats to human well-being and that imply policy intervention.

► **Defining or redefining a problem:**

SPI plays a significant role not only in finding “Solutions” but also in defining a problem, its goals and the possible range of options and approaches to address it. In addition, a problem can be re-opened and redefined several times during the policy cycle so as to take into account dimensions or issues not adequately considered up front.

► **Assessing policy choices or the impacts of different policy options:**

Various scientific tools are available to support choice among policy options including, integrated impact assessments and scenario modeling. In addition, scientific expertise can play a role in validating or questioning existing policy choices by pointing out their beneficial or harmful effects.

The Roles of Science-Policy Interface (Cont'd)

Informing the judicial and legal systems:

Science plays a role in informing legislation, at the national and international levels. In addition, the judicial system is increasingly faced with litigation cases that present complex issues of science and technology, and increasingly requires access to sound science. One role of science is therefore to provide evidence on issues that are challenged or whose validity is questioned.

Monitoring and implementation:

Many policies cannot be properly implemented or do not yield the intended outcome unless they are scientifically monitored on a regular basis via scientific procedures and methodologies. This is especially true if the policy issue is still contested during implementation and if the success of the regulation depends on cooperation of stakeholders with divergent interests, an independent scientific source may be crucial for a credible monitoring process.

Criteria for effectiveness of SPI mechanisms

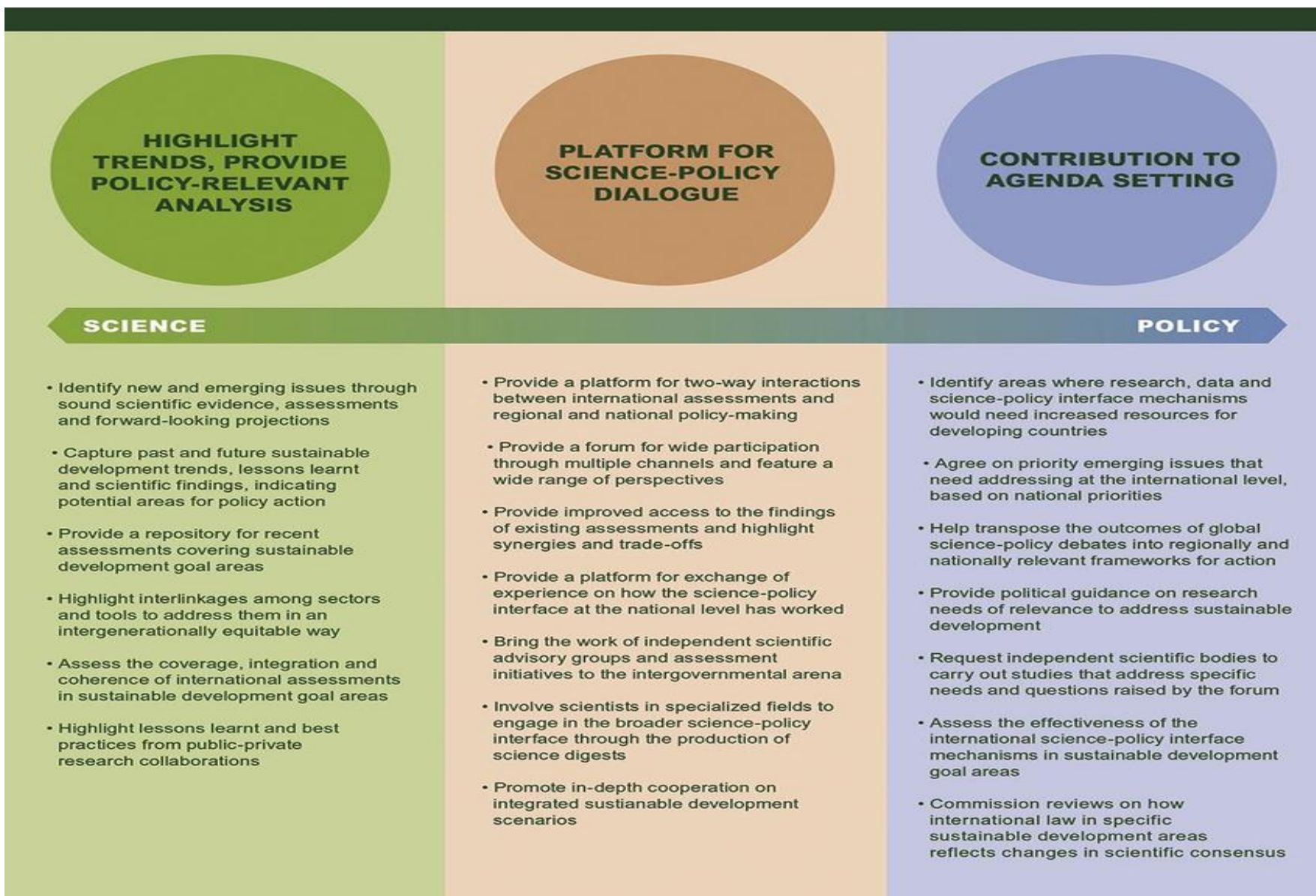
Commonly accepted criteria for assessing the effectiveness, influence and impact of science-policy interfaces are credibility, relevance and legitimacy.

- ▶ **Credibility:** the perceived quality, validity and scientific adequacy of the information generated by the SPI (e.g., hypotheses that are original and, where appropriate, predictive and testable; experiments repeated by colleagues; presentation of uncertainties in results and in predictions presented; publication of results through a quality control mechanism such as a rigorous peer-review process).
- ▶ **Relevance (or salience):** the alignment of an assessment to the needs and priorities of decision-makers (e.g. its results need to be applicable and practical for decision-makers to make informed decisions). Basically, do the assessment and its findings address the particular concerns of a user?.
- ▶ **Legitimacy:** the perception that the assessment or the production of information has been respectful of stakeholders' divergent values and beliefs, has been unbiased, and fair in its treatment of opposing views and interests.
- ▶ **Accessibility** of Scientific findings is also used as a criteria for assessing the effectiveness of SPI.

The High -Level Political Forum on Sustainable Development (HLPF)

- ▶ The United Nations High-Level Political Forum on Sustainable Development (HLPF) was established in June 2013.
- ▶ The HLPF plays a key role in monitoring and reviewing the implementation of the 2030 Agenda for Sustainable Development, including the Sustainable Development Goals.
- ▶ Among other functions, the HLPF was given the task to “strengthen the science-policy interface.”

Possible roles for the HLPF for strengthening the science-policy interface



Science for Sustainable Development

In a policy brief released by the Scientific Advisory Board of the UN Secretary-General on October 5, 2016, the Board calls upon scientists and policy-makers alike to promote a set of principles that underpin the crucial role of science for sustainable development, namely to:

- ▶ Recognize science as a universal public good that helps laying the foundation for a sustainable world and is therefore more than a tool for the achievement of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs).
- ▶ Acknowledge basic science as a principal requirement for innovation.
- ▶ Enhance diversity in science for sustainable development.
- ▶ Strengthen science education to increase science literacy and capacity-building in science at all levels.
- ▶ Raise investments in science by establishing national minimum target investments for STI for both basic and applied science.
- ▶ Promote an integrated scientific approach addressing the social, economic and environmental dimensions of sustainable development and respecting the diversity of knowledge systems.

Science for Sustainable Development (cont'd)

The Scientific Advisory Board of the UN Secretary-General recommends to maximize the contribution of science beyond being a 'means of implementation' with regard to achieving the 2030 Agenda and the SDGs through the following actions:

- ▶ Consider the 2030 Agenda for new research and integrate the SDGs into research agendas at all levels.
- ▶ Anchor science as a reliable partner in the implementation and review process and thereby enhance the science-policy interface.
- ▶ Establish independent scientific monitoring mechanisms and promote evidence-based decision-making for sustainable development.

Thank you.