

GOVERNANCE

Science-policy interfaces



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SCIENCE-POLICY INTERFACES FOR ENVIRONMENTAL GOVERNANCE IN THE MEDITERRANEAN

Science-policy interfaces (SPIs) are tools that can be used to improve environmental conservation and management in the Mediterranean region. However, in order to do so, a shared understanding of the concept needs to be established, and current gaps need to be identified.

This document is based on the work of several institutions, including Plan Bleu, and sets out to provide stakeholders in Mediterranean environmental governance with a brief analysis of the SPI concept within the regional context.

The Mediterranean context

The Mediterranean marine and coastal environment is subject to an increasing number of pressures associated with human activities that have a significant impact on the region and its rich and complex ecology and socio-economic context (UN Environment/MAP, 2012).

An array of international agreements requiring Mediterranean States to preserve the region's natural resources has nonetheless been in place for several decades. These include the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean¹ and its seven additional protocols, the General Fisheries Commission for the Mediterranean (GFCM), under the auspices of the United Nations Food and Agriculture Organization (FAO), and the ACCOBAMS² Agreement on the protection of cetaceans.

These international political instruments have brought about progress, but the current state of the Mediterranean environment raises the question of whether the effectiveness of these multilateral agreements needs strengthening.

With its ecological complexity, socio-economic disparities, numerous international agreements and particularly strong pressures on the environment, the Mediterranean is both a showcase and a testing ground for global environmental governance. The same issues are found on a worldwide scale and have led to extensive consideration of what needs to be done to resolve them. This document examines one of the many approaches that are being explored, the concept of the "Science-Policy Interface" (SPI).

Meaning of "Science-Policy Interface"

"In terms of environmental issues, there are numerous, well-established and multifaceted opportunities for researchers and decision-makers to network and mutually influence each other, which occur in local, national or international arenas" (IDDRI – AFD, 2017).

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¹ <http://wedocs.unep.org>

² Agreement on the Conservation of Cetaceans in the Black Sea Mediterranean Sea and Contiguous Atlantic Area

The United Nations Environment Programme (UN Environment) defines an SPI as a structure or process that aims to improve the identification, formulation and evaluation of policies to improve the effectiveness of governance (UN Environment, 2009). In order to do so, an SPI is based on the interrelations between the worlds of politics and science. This can involve facilitating coordination between the parties to the SPI (scientists and policymakers) or identifying the roles and opportunities for each party.

For the European research programme SPIRAL³, SPIs are seen more as a social process that engages scientists and policymakers. An SPI is therefore any process which aims to generate communication, an exchange of ideas and joint development of knowledge by scientists and policymakers together (Young, Watt, van den Hove, 2013). This kind of process should lead to the adoption of measures that are more appropriate for dealing with the issues addressed within the interface.

The two definitions (UN Environment and SPIRAL) are not contradictory and simply highlight the many forms that SPIs can take, from informal discussions between scientists and policymakers to the creation of intergovernmental bodies and the implementation of research projects to facilitate the application of certain public policies. However, the one thing that remains constant is that they all involve **deliberate interactions between scientists and policymakers in order to serve governance**.

The concept of an SPI is important in that it can offer tools to overcome communication barriers between policymakers and scientists. Environmental problems are complex and full of uncertainty, making it practically impossible to come to a single solution that is accepted by all. The obstacles to be overcome for establishing appropriate environmental policies therefore require closer dialogue between scientists and policymakers. However, this dialogue can be hindered by communication barriers between the scientific and political spheres. For instance, research timeframes are generally very different from policymaking timeframes. Policy decisions sometimes need to be made very quickly, whereas research can take years. Or the importance of research activities can be difficult to communicate effectively to policymakers as they may not contain a key message, may be too technical, or may have too subtle or localised conclusions, etc.

SPIs seek to improve communication and also do away with a linear communication model where scientists simply pass on knowledge to policymakers, leaving them to subsequently decide what should be done and what actions should be implemented. *“These so-called “science-policy interfaces” are expected to deliver knowledge syntheses that are authoritative in their respective fields, on which to base actions that we hope to be efficient, consensual and legitimate.. (...) The collective structured work must enable, in particular, the production of knowledge syntheses on various issues, expressed in a relatively accessible and balanced language, and adapted if necessary to diplomatic constraints inherent in multilateral processes.”* (IDDRI - AFD, 2017). However, this linear approach does not seem suitable for addressing environmental issues that combine both scientific and societal issues.

³ <http://www.spiral-project.eu/>

This is where the idea of joint development comes into play. Instead of just communicating information, scientists and policymakers interact and exchange ideas in order to understand problems together. In this arrangement, policymakers can inform scientists of their research needs and expectations, their analysis of issues and current policymaking processes, while scientists can clarify the scope of their research and the way it can be translated into recommendations and concrete measures.

Therefore, since the purpose of an SPI is to influence policymaking, it must be credible, relevant and legitimate (Cash, Clark, Alock, 2003). These three criteria are unanimously recognised in the literature and official institutional documentation.

- **Credibility:** the perceived validity of the information, methods and procedures used within an SPI.
- **Relevance:** how closely the procedures and objectives of the SPI relate to the needs of the policymaking process.
- **Legitimacy:** the fairness, accuracy and political balance perceived by the parties involved in the SPI.

The role of these three criteria can be demonstrated through the practices of two major global SPIs: the IPCC and the IPBES (Box 1). This information provides a background for exploring the science-policy interface in the Mediterranean, and more specifically under the Mediterranean Action Plan⁴ (UN Environment/MAP).

The science-policy interface in the Mediterranean

Firstly, it is important to remember the role played by the scientific community in environmental governance in the Mediterranean. In his article on epistemic communities, Professor Peter Haas (1990) argues that the Mediterranean Action Plan (UN Environment/MAP) was partly born out of the action of a community of scientists who shared common convictions⁵. To a certain extent, the MAP has benefited from the contribution of scientific communities involved in a global context that highlighted the need to strengthen scientific knowledge, long before the current concept of SPI had been identified. It should probably be added that the political context of the time, especially the global conference in Stockholm in 1972, which resulted in the creation of the United Nations Environment Programme (UNEP) and an Action Plan for the Human Environment, helped ramp up environmental monitoring and new types of knowledge to support policymaking (“Earthwatch”). *“The mobilization of knowledge has mainly been used to put environmental issues on the agenda, by warning about environmental degradation and/or by supporting its inclusion on the agenda.”* (IDDRI – AFD, 2017).

⁴ www.unepmap.org

⁵ Haas (P.), *Saving the Mediterranean. The Politics of International Environmental Cooperation*, Columbia University Press, New York, 1990.

Box 1: The IPCC and IPBES - two major international science-policy interfaces

The **Intergovernmental Panel on Climate Change (IPCC)** was established in 1988 by UN Environment and the World Meteorological Organisation (WMO) to provide periodic syntheses of current knowledge on climate change. These syntheses are much more than a mere scientific exercise, and specifically address policymakers, to give them a reliable scientific basis for formulating climate policy.

The IPCC is a unique institution in that its members are States and its reports are approved by consensus among these members. As part of the approval procedure, Member States receive the reports in full, but the synthesis report, a short ten-page document covering the key points, is negotiated line by line by governments and the experts responsible for writing the reports.

To ensure the credibility and legitimacy of the reports it issues to its many Member States (currently 195), the IPCC has adopted specific procedures on several occasions. In terms of credibility, the IPCC has established a rigorous peer review mechanism whereby each of its reports are reviewed twice by a wide community of experts (Agrawala, 1998).

In addition, to ensure its legitimacy with emerging and developing countries, the IPCC has adopted procedures that ensure a balanced geographic representation of experts so that its reports are not perceived as the result of “northern dominated” science produced for and by Northern countries (Agrawala, 1998).

The **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)** is a more recent institution. It was formally established in 2012 after seven years of negotiation and is often presented as the “IPCC for biodiversity”. However, the platform is not just a simple carbon copy of IPCC mechanisms, and includes a number of innovative aspects. For instance, the procedure for determining the research programme is based on requests and suggestions sent by platform members and stakeholders. This consultative approach creates a research programme that meets the expectations of all parties involved in biodiversity governance.

Multiple institutions and projects interacting within and with the MAP system

UN Environment/MAP and the Barcelona Convention are a unique set of legally-binding instruments to tackle the current problems and challenges of environmental degradation and to protect marine and coastal ecosystems in the Mediterranean Sea. The MAP is the first Regional Seas Programme created under the auspices of UN Environment and has been a relevant and effective working framework for regional cooperation since 1975. It is the only institutional and environmental governance cooperation framework that includes the 21 Mediterranean and European Union countries, the Contracting Parties to the Barcelona Convention. After 40 years of experience in regional environmental cooperation, the MAP system was revised in 1995 (MAP Phase 2) and maintains its ambition and relevance in promoting a peaceful, prosperous and sustainable Mediterranean region where societies enjoy a high quality of life within healthy marine and coastal ecosystems.

The SPI approach is incorporated into a number of environmental institutions and various research projects on Mediterranean marine and coastal environments that interact with the MAP institutional network.

In order to implement its pollution reduction programme, the UN-Environment/MAP has developed a network of resources and stakeholders via national focal points to promote technical cooperation between the Contracting Parties to the Barcelona Convention. One example of the emergence of this kind of network is MEDPOL⁶, the first MAP programme with the aim of monitoring pollution in the region and helping

helping Mediterranean countries to develop action plans to reduce land-based pollution.

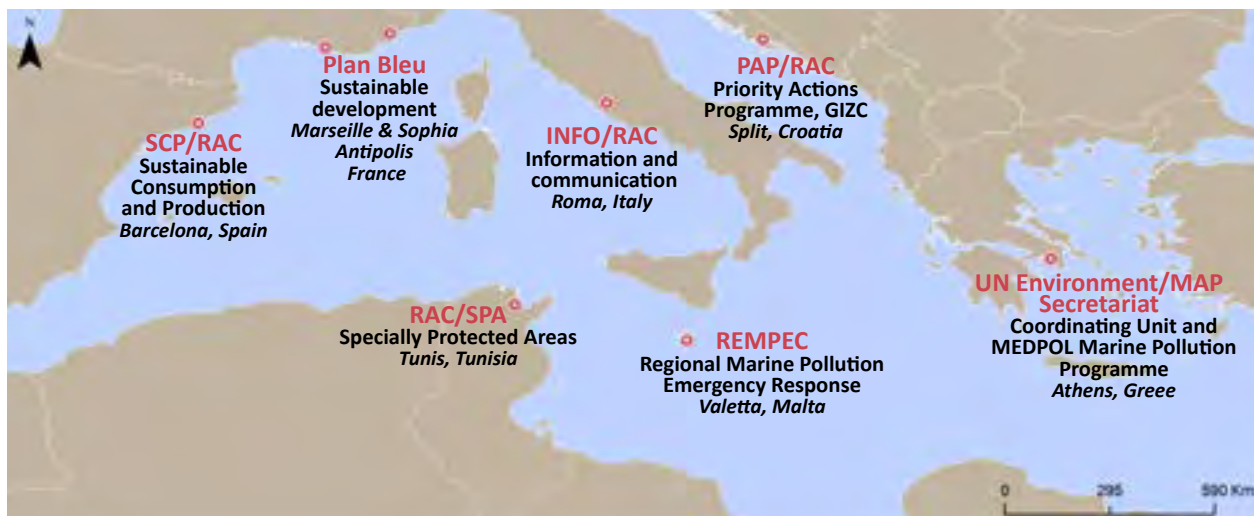
The Regional Activity Centres (RACs) are key components in implementation of the UN-Environment/MAP and are located in various Mediterranean countries, with specific expertise on themes promoted by the UN-Environment/MAP. These RACs help Mediterranean States and stakeholders carry out their obligations, particularly by providing them with relevant information on the state of the environment.

The UN-Environment/MAP coordination unit, acting as the Secretariat under the Barcelona Convention, plays a diplomatic, political and communication role, coordinating RAC activities and organising meetings to ensure that the work of the UN-Environment/MAP is carried out with the Contracting Parties.

The Mediterranean Commission on Sustainable Development (MCSD) was created in 1996 as an advisory body for the Contracting Parties to the Convention. The MCSD brings together representatives from the 21 Mediterranean and European Union countries and from local authorities, socio-economic players, non-governmental and intergovernmental organisations, the scientific community and members of parliament, all of whom are qualified on environmental and sustainable development issues. The MCSD is an advisory body for the Parties and other regional or national players to support them in their efforts to incorporate environmental issues into their socio-economic programmes and thereby promote sustainable development policies in the Mediterranean region.

⁶ <http://web.unep.org/uneppmap/who-we-are/institutional-framework/secretariat/map-components>

Figure 1: The Coordination Unit of UN Environment/MAP - Barcelona Convention, and its components



The meetings and workshops organised by the RACs help support the science-policy interface. They also generally contribute to the implementation of decisions adopted at the Ordinary Meetings of the Contracting Parties to the Barcelona Convention, organised every two years (COP). During these meetings, focal points appointed by governments (policymaker representatives), draw up what may potentially become the future orientations of UN-Environment/MAP policy and instruments.

The UN-Environment/MAP also cooperates with other international bodies, including the FAO/GFCM and ACCOBAMS. Memoranda of Understanding, including provisions on data sharing and cooperation, have recently been signed with the Secretariats of these bodies. These partnerships provide guarantees for the UN-Environment/MAP science-policy interfaces, ensuring top-quality expert opinions.

However, science-policy interfaces in the Mediterranean are not only confined to institutions. They can also exist through the various research projects that focus on the region (Box 2). The European Union makes a substantial contribution to research on the marine and coastal environment in the Mediterranean.

Box 2: PERSEUS, Policy-oriented marine Environmental Research in the Southern European Seas

The PERSEUS Project⁷ has the explicit objective of providing scientifically-based recommendations for developing policies to achieve good ecological status in the Mediterranean and Black Sea. This type of project can be considered a science-policy interface because it addresses policymakers and contributes to achieving their objectives. This is just one example of many, especially given the fact that the European Union is an important contributor to policy-oriented research projects that promote closer ties between the academic and political worlds in order to contribute to achieving EU objectives. However, unlike the institutional framework referred to earlier, these projects do not necessarily have an explicitly defined interface component. Although their ultimate purpose may be to serve “policy”, they do not necessarily involve joint development of knowledge.

⁷ <http://planbleu.org>

Dozens of projects have been funded by the EU and most implicitly or explicitly have components that make them science-policy interfaces.

Other organisations act as an interface between science and policy. For example, the Mediterranean Science Commission CIESM⁸ is now over 100 years old and is an important player in scientific research in the Mediterranean, producing reports for policymakers. The MedECC initiative (Box 3) can also be mentioned. It seeks to create a science-policy interface in the region, with a focus on climate change and environmental issues.

Discussions initiated on improving the science-policy interface

At the 19th Ordinary Meeting of the Contracting Parties to the Barcelona Convention (COP19) held in Athens in February 2016, the Parties adopted several decisions calling for a stronger science-policy interface. Examples include the Mediterranean Strategy for Sustainable Development – MSSD 2016-2025⁹, the Regional Climate Change Adaptation Framework Programme¹⁰ and the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast¹¹. This requirement to strengthen the science-policy interface also features in the biannual UN-Environment/MAP Work Programme¹². The Parties are therefore calling for efforts to structure relationships between the UN-Environment/MAP system and scientific communities by creating scientific committees and expert groups with an advisory role to support policymaking processes.

The UN-Environment/MAP experience and international examples provide a number of guidelines for strengthening the science-policy interface.

⁸ www.ciesm.org

⁹ COP 19 decision IG.22/2 http://planbleu.org/sites/default/files/upload/files/MSSD_2016-2025_final.pdf

¹⁰ COP 19 decision IG.22/6 <https://wedocs.unep.org>

¹¹ COP 19 decision IG.22/7 <https://wedocs.unep.org>

¹² IG.22/20, Strategic Outcome 1.4.4 <https://wedocs.unep.org>

Box 3: MedECC – Build a science-policy interface on climate and environmental change in the Mediterranean: towards implementation of a flagship MSSD 2016-2025 initiative

Network of Mediterranean Experts on Climate and Environmental Change¹³ (MedECC)

During a side-line event at the Conference “Our Common Future under Climate Change (CFCC)” held in Paris, France, on 9 June 2015, it was decided that a network of scientists and a regional science-policy interface mechanism would be created on climate and environmental change in the Mediterranean.

MedECC has two, complementary objectives:

- Publish improved assessments and a comprehensive synthesis of knowledge on environmental change in the Mediterranean region and its impacts;
- Build a relevant regional science-policy interface on climate and environmental change in the Mediterranean.

This network was developed in response to a number of intentions expressed within regional institutions: (i) in the UN Environment/MAP with the Mediterranean Strategy for Sustainable Development 2016-2025 (MSSD 2016-2025) and the Regional Climate Change Adaptation Framework (2015); (ii) in the Union for the Mediterranean with the Climate Change Expert Group (established in 2014)¹⁴.

In particular, MedECC is a real opportunity to implement key initiatives from the MSSD 2016-2025. The main initiative of Objective 4 of the MSSD (*Addressing climate change as a priority issue for the Mediterranean*) plans to “Establish a regional science-policy interface mechanism, including the social and behavioural sciences, endorsed by all the Contracting Parties to the Barcelona Convention, with a view to preparing consolidated regional scientific assessments and guidance on climate change trends, impacts and adaptation and mitigation options.”

¹³ www.medec.org

¹⁴ <http://ufmsecretariat.org>

The establishment of this kind of network is supported by a number of national and transnational research programmes and initiatives. A number of research institutes in the region have pledged their support and infra-regional expert networks are likely to cooperate. In addition to intergovernmental organisations, the MedECC initiative also benefits from the increasing support of many Mediterranean countries.

An important step was the regional workshop in Aix-en-Provence (France, 10-12 October 2016 - UNFCCC-COP22), jointly funded by the Principality of Monaco. The aim of this workshop was to define the thematic scope and structure of the first MedECC report, under the provisional title of “Assessment report covering the driving factors and environmental risks related to climate change in the Mediterranean, including solutions”. Following this regional workshop, thematic workshops were organised in 2017 to bring together the coordinators and main contributors to the three chapters of the first MedECC report. Finalisation and publication of this report are scheduled for 2019.

Since its creation, the MedECC initiative has succeeded in building and mobilising a network of scientific experts (approx. 360 scientists from 30 countries) and obtaining political recognition from Mediterranean countries and regional organisations, although these two components need to be consolidated. The aim is now to institutionalise the network by confirming governance, strengthening dialogue with policymakers and stakeholders, and publishing the first report in 2019. This work will contribute to the ongoing Med2050 foresight exercise being prepared with the support of Plan Bleu.

Designing interfacing activity before the launch of research projects:

For example, in December 2015, Plan Bleu initiated a series of workshops called “Implementation of the Ecosystem Approach in the Mediterranean: strengthening the science-policy interface”. The first workshop¹⁵ was held within a specific framework with the aim of identifying the scientific gaps that need to be filled as a priority in order to implement the UN-Environment/MAP Integrated Monitoring and Assessment Programme. It highlighted the fact that the SPI component was not integrated early enough into the research projects presented at this event¹⁶. The interface is rather incidental and is not deliberately thought through when research projects are being designed. This leads to situations where a lack of resources for appropriate dialogue between scientists and policymakers leaves significant parts of these projects without any concrete political relevance.

For example, interface activities could be facilitated through better coordination between research projects. Although many projects exist, the data produced cannot easily be used to implement environmental policies.

There may be an overabundance of data for some issues and gaps in the data for others, from a policy standpoint, since research has focused mainly on generating knowledge in general. The information may often lack interoperability and is very rarely available together in one place. In short, data overabundance and gaps, non-interoperability and scattered access hinder the effective communication of the findings of these scientific projects to policymakers.

The conclusions of the workshop are very similar to UN Environment’s findings in its assessment of science-policy interfaces as part of IPBES negotiations¹⁷. These similarities between the regional and global contexts suggest that the gaps identified in December 2015 are an important focus for general reflection about science-policy interfaces in the Mediterranean.

The following workshops provided other proposals for strengthening science-policy interfaces in the Mediterranean (Box 4).

¹⁵ <http://planbleu.org>

¹⁶ *Ibid.* Mainly projects funded by the European Union

¹⁷ UNEP/IPBES/2/INF/1, Gap analysis [...], op. cit.

Box 4: Workshops on science-policy interfaces (SPIs) for strengthening implementation of the IMAP

Strengthening SPIs for the “ecosystem approach” and Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast - support from Plan Bleu

Following on from Decision IG. 17/6 (COP 15 of the Barcelona Convention, 2008), the Contracting Parties to the Barcelona Convention began gradual implementation of the ecosystem approach to the management of human activities by applying a road map with a number of steps to achieve Good Ecological Status for marine and coastal ecosystems in the Mediterranean by 2020. The following COPs and resulting decisions led to an agreement on the definition of the 11 Ecological Objectives, indicators and a road map for the Ecosystem Approach, and the adoption of the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast (IMAP). The ecosystem approach is currently supported by a project funded by the European Union (EcAp-MEDII), which aims to support Southern Mediterranean countries in applying this and the IMAP approach, working with and in line with the Marine Strategy Framework Directive (MSFD).

Plan Bleu is responsible for coordinating the “strengthening the science-policy interface” component of the EcApMEDII project to promote and encourage exchange between scientists and environmental public policymakers. Although the importance of science for environmental public policies is recognised, dialogue between scientists and policymakers remains difficult, particularly due to time-scale differences between research and management. Furthermore, strengthening the SPI is especially important for implementing IMAP as it allows scientists to better support public policymakers through the monitoring and assessment activities implemented to achieve Good Ecological Status (GES). Finally, the SPI keeps policymakers up to date with the various research projects and provides them with recommendations. Given that only a fraction of relevant scientific knowledge on the marine environment is really used for management purposes and the application of marine policy, four regional workshops with scientists and policymakers were organised to discuss scientific knowledge gaps and other issues for full application of IMAP.

Four objectives for strengthening the SPI were identified:

1. Highlight the critical role of science in drawing up relevant and suitable environmental policy. Ensuring that environmental policy is based on strong scientific knowledge on the environment and changes helps said policy to be more effective and legitimate. .
2. Make scientific research more “action”-oriented by more precisely targeting social and political needs, moving beyond structural obstacles such as semantic or ideological misunderstandings that can limit the effectiveness of dialogue between policymakers and scientists.
3. Strengthen “marine and coastal governance” in a context involving multiple stakeholders working on social or economic themes.
4. Coordinate collaboration between scientific communities and between scientists and national or regional public policymakers in order to guide them towards real management needs.

Suggestions for strengthening the SPI for the Ecosystem Approach

A number of proposals for improving the SPI in the context of IMAP were developed during the workshops moderated by Plan Bleu:

1. Develop new and relevant research projects that would specifically include an SPI component in their planning and which would guide research towards measures or parameters that are important for policymaking.
2. Involve public policymakers in projects from the outset. This approach was implemented by various research projects associated with the MSFD (Perseus, Devotes, etc.).
3. Include social scientists in research projects to facilitate communication between scientists and policymakers. Scientific language should be translated into the language of public policymakers, taking into account social aspects.
4. Strengthen technical expertise in SPIs by including doctoral students and young professionals specialised in politics and policymaking.
5. Carry out pilot SPI projects including both scientists and policymakers at different scales on different topics. Best practices could be listed by drawing on these kinds of projects.

There are a number of possibilities for strengthening SPIs in the region.

Better organisation of existing practices:

As mentioned above, the UN-Environment/MAP has a unique institutional network and can rely on the various research projects for its areas of activity in the region. Although it is important to strengthen the science-policy interface on MAP topics, this will probably not require the creation of a new institution for SPI. Doing this would raise numerous problems as it would be very expensive to create a new institution. The mandate of an institution like this would be too broad, since it would need to deal with an extremely wide range of issues, from chemical pollution to biodiversity protection and coastal erosion.

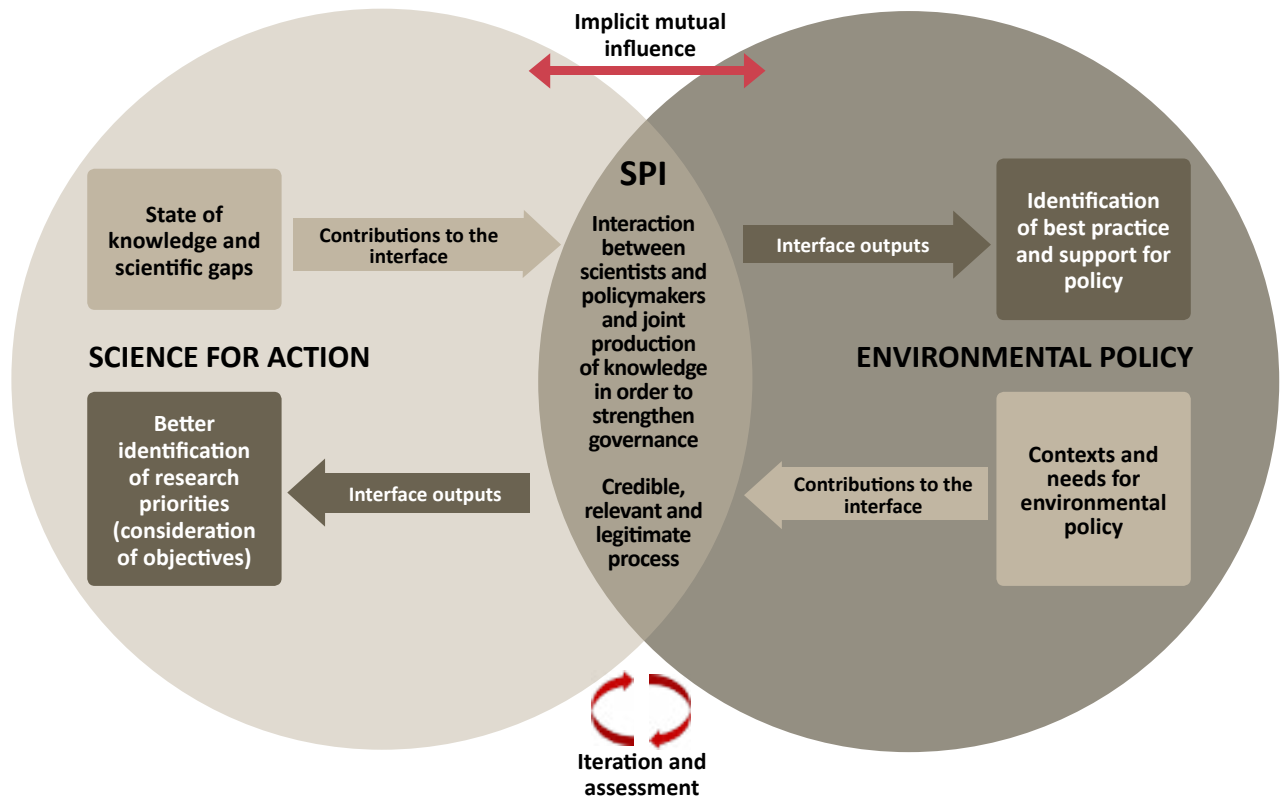
There is room for manoeuvre for strengthening SPIs by relying on better recognition and increased coordination of the region’s many potential strengths in this field. This could be achieved through increased governance, by developing guidelines on the way science-policy interfaces should work, or a catalogue of best practices to guide the actions of the UN-Environment/MAP or research projects in the Mediterranean region.

This approach has the advantage of having a positive impact at a low cost. If adopted within the framework of the Conference of the Parties, this type of initiative would not create any new obligations for the Parties to the Barcelona Convention but could help them implement their obligations in the medium term.

These tools could be developed through a collaborative approach that already exists within the UN-Environment/MAP, as demonstrated by the workshop held in December 2015¹⁸. The strategies needed to strengthen the science-policy interface in the Mediterranean could be determined by engaging policymakers and scientists from both sides of the Mediterranean and drawing on their experience and expectations. This process would itself be a science-policy interface as it would involve both scientists and policymakers in a process of taking joint ownership of issues.

¹⁸ Inception workshop, “Implementation of the Ecosystem Approach in the Mediterranean: strengthening the science-policy interface”: <http://planbleu.org>

Figure 2: Designing optimal Science-Policy Interfaces



As shown in the figure 2, cooperation is not between two fully distinct spheres of activity. Firstly, the scientific and political spheres have a continuous mutual influence on one another¹⁹. The concept of SPI also calls for an overlap between these two spheres in order to promote interactions and collaborations between scientists and policymakers. To this end, both provide SPI with their own knowledge and needs in order to “jointly produce” knowledge that could make governance more effective. Finally, the SPI process must be iterative in order to be effective²⁰. A stable SPI provides a greater opportunity for engaging in sustainable relationships between scientists and policymakers.

Conclusion

Strengthening the science-policy interface is now one of the main objectives of environmental governance, with a number of efforts for achieving it within a global context (IPCC, IPBES, SDGs, etc.). In the Mediterranean, the MSSD highlights SPIs, particularly through a flagship initiative under Objective 4 which seeks to “Address climate change as a priority issue for the Mediterranean”. Furthermore, although UN-Environment/MAP bodies already use scientific knowledge for policymaking and designing future strategies for implementing the Barcelona Convention and its protocols, there are ways of supporting and strengthening the coordination, guidance and structuring of SPIs in the Mediterranean.

Current work on SPIs in the Mediterranean carried out under the EcAp and MedECC have helped set up the following courses of action for:

1. Coordinating existing SPIs within MAP activities:

- Map SPIs associated with UN-Environment/MAP activities, differentiating between one-off activities (projects) and long-term activities.
- Analyse possibilities for closer cooperation or synergies between interfaces, limiting their number and ensuring their sustainability. However, developing closer cooperation between them comes at a cost. Systematic consultation of the same experts and scientists can limit the number of voluntary contributions. The costs and benefits of pooling interfaces need to be considered on a case-by-case basis.

2. Guiding SPIs according to simple principles:

- Develop guidelines and credible, legitimate and relevant principles. These principles could be developed jointly with all UN-Environment/MAP stakeholders under a process similar to the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast (IMAP - Decision IG.22/7). Such principles, among others, could lay the foundations for procedures that promote effective dialogue between scientists and policymakers in the Mediterranean.
- Analyse the relevance of adopting procedural rules for preventing conflicts of interest. Such rules do not currently exist in the UN-Environment/MAP but have been developed within some global conventions on biodiversity.

¹⁹ Van Den Hove (S.), “A rationale for science policy interface”, *Futures*, vol. 39, n°7, pp. 806-827

²⁰ Sarkki (S.), Tinch (R.), Niemelä (J.) et al., “Adding ‘iterativity’ to the credibility, relevance, legitimacy: A novel scheme to highlight dynamic aspects of science-policy interfaces”, *Environmental Science and Policy*, vol. 54, 2015, pp. 505-512.

- Compile a set of best practices, especially by capitalising on feedback from current initiatives (IPCC, IPBES) which assess the operation of their expert body and consider restructuring. IPBES has recently produced its first reports in this area²¹.

3. Structuring a framework for science-policy interface in the UN-Environment/MAP:

This general framework on SPIs could benefit from the creation of a body responsible for coordinating scientific issues within the UN-Environment/MAP. This body would be similar to expert bodies under international conventions on the environment and could be created *ad hoc* or integrated into the Mediterranean Commission on Sustainable Development (MCSDD), which would interact with a Scientific Committee to strengthen and extend the Commission's consultative mandate.

However, the aspects above are only potential avenues for exploration, presenting a number of options which would require more detailed analysis and wider consultation. The report entitled, "Strengthening SPIs for implementing IMAP and EcAp in the Mediterranean", planned for 2018 and coordinated by the UN-Environment/MAP Coordination Unit, should contribute to this.

²¹ Reports are available at: <http://www.ipbes.net/resources/publications/all>

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