



# Scientific Advisory Board of the Secretary-General of the United Nations

hosted by the  
United Nations Educational, Scientific and Cultural Organization

## Policy Brief for the UN Climate Summit (23 September 2014)

It is widely accepted that some of the major challenges that we face at the global as well as the local level require decision making based on an increasing level of scientific knowledge. Scientific inputs are critical to our understanding of the drivers of global change and of its multi-faceted, complex impacts. These are also fundamental to the legitimacy of political efforts to control the problem and to the creation of a growing slate of available and affordable solutions. The interface between science and policy, therefore, acquires growing importance not only for protecting the ecosystems of this planet and managing the global commons on a sustainable basis, but also in ensuring that decisions are taken in full knowledge of the scientific nature of problems that we confront and the solutions that should be implemented to deal with them. In areas like dealing with climate change, protecting biodiversity and the conservation of natural resources, science necessarily provides the foundation for rational policies and decision making. Climate change is one part of a larger set of problems that relate to the management of the global commons in general.

### **Challenges and barriers**

There is no doubt that there are some uncertainties associated with knowledge related to planetary problems that the world is confronted with. However, the recent advance of knowledge as brought out, for instance, in the assessments of the Intergovernmental Panel on Climate Change (IPCC), provides a substantial wealth of robust information on the basis of which decisions can be taken with a high level of certainty related to their outcomes and impacts. Some uncertainty in scientific, financial or technological issues is something that human society has dealt with for long, and even today business decisions are often characterized by high levels of uncertainty related to future outcomes. Despite these recent advances, it is well known that scientific knowledge today is not being incorporated effectively in the formulation and implementation of policies and decisions in critical areas of human endeavour. There are several reasons for this situation.

Scientists are often not familiar with the complexities and practical problems associated with policy-making and the outcome of specific decisions. Conversely, decision makers do not always comprehend scientific phenomena, which often do not lend themselves to ease of matching with practical decision-making frameworks.

There are also some differences in priorities between the two groups. Scientists are subject to a different form of accountability, and, hence, are primarily focused on research and publishing in peer-reviewed journals. Besides, even if scientists are deeply motivated to orient their work towards better policy, they lack appropriate avenues through which to influence the political process. Policy makers, on the other

hand, are often motivated by a sense of urgency in decision making which generally acts as a barrier in their accessing scientific knowledge which would help the quality of decision making. This attitude is also fostered by a desire to achieve immediate results, because policy makers are often held accountable on the basis of quick and easily measured results. Yet, solutions arrived at in a hasty manner generally compromise on long term optimality of decisions, their effectiveness and the efficient use of resources. Closer interaction between the two communities would ensure that scientists frame the results of scientific research to match the needs of policy makers in a manner that demystifies science and makes it universally applicable. It can also ensure that scientists recognize the gaps in the political understanding of issues, and can set scientific agendas more closely attuned to ongoing policy processes. When scientists can directly respond to the pressing needs of ongoing political debates, their voices are more likely to be heard and incorporated into decisions. Institutions that help communicate policymakers' needs to the scientific community - who in turn produce science that is comprehensible and relevant to the political process - can exert significantly beneficial influence over the political process. Similarly, policy makers need to appreciate the value of scientific knowledge and decision making as a means to achieving the best possible results and an essential prerequisite for optimal utilization of resources.

When scientists and policymakers are given the chance to repeatedly and iteratively interact, the knowledge that they are able to jointly produce will tend to reach higher political legitimacy and influence.

Much of the current gap can be closed if there was adequate funding for research which is policy relevant. For instance the impacts of climate change are specific to sectors, locations and ecosystems. Yet there is very little research funding for assessing or projecting the impacts of climate change in some of the most vulnerable regions in the world. If there was adequate research in this area, awareness of the consequences of climate change would have been substantially higher, leading to more informed adaptation measures and higher urgency in mitigation.

It is also important to realize the relevance of indigenous and local knowledge for decision making as also the multi-disciplinary nature of research which is designed to be policy relevant. Here again, funding of research which brings about a fusion of modern science, involving different disciplines, with traditional knowledge would have very large benefits.

## **Recommendations**

- Policy and climate change organizations should enable persistent and iterative engagement between scientists and policymakers to ensure the communication of relevant science, and to help build relationships and trust between the scientific and policy communities.
- Models for Science Policy Interface (SPI) also require the encouragement of multiple stakeholders to ensure activity in which exchange takes place between the public, experts and the custodians of local and indigenous knowledge.
- Decision making systems that could benefit from input of scientific knowledge need to be constructed in a manner that require appropriate analysis and scientific inputs as an integral part right from the stage of initial design.
- Transparency in interactive processes would be very helpful because conflict of interest would then be reduced, and scientific or technical expertise would be more objective and devoid of narrow or sectional interests.
- The use of scientific expertise in decision making needs to be incentivized, just as funding for independent research on policy relevant subjects would provide scientists with an incentive to produce outputs that are valuable for the Science Policy Interface.