



Improving science-society communication: insights from the IDRC Climate Change and Water programme

The Climate System Analysis Group & Kulima Integrated Development Solutions, June 2016

Context & Purpose

The briefing paper outlines insights into possible mechanisms for improving science-society communication. It is based on findings coming out of an IDRC funded project that aims to bridge the knowledge gap between scientists and decision-makers¹. The findings highlighted here are largely based on experiences of the implementation of IDRC-funded Climate Change and Water (CCW) projects; including workshops held in Cape Town (2014) and Panama City (2015) in which project teams, each comprising project leads, scientists and decision-makers, came together to talk about how to strengthen science-society communication.

Why improve science-society communication?

Science has a role to play in informing societal decisions, but this is currently not optimised. Finding ways to optimise the communication between science and society are necessary to support evidence-based policies and practices.

Minimal interaction between scientists and decision-makers, and typically only at the end of a project, has impeded use of science in society. At the end of a science project, results may be made available to decision-makers through the production of dissemination materials. Lack of integration and communication with decision-makers throughout the project can mean that these materials may not answer the right questions of decision-makers.

¹ Decision-makers refers to anyone who uses science information to inform decisions. In this project it included those involved in the technical development of policy documents, politicians at local and national level, resource managers in public utilities, and individuals such as farmers.

What does successful science-society communication look like?



We all understand each other's **language** and scientists are able to **translate** data into information and messages that are relevant to decision-makers.

Successful science-policy communication in an agriculture project in India was based on providing evidence and putting it in economic terms since “policymakers are not interested in listening to anyone who is not involved with lots of end users – and they speak the language of economics”. After one year the project had reached over 10,000 farmers and quantified the economic impact. This generated significant interest from policy-makers, who were then able to see the opportunities for their electorate.

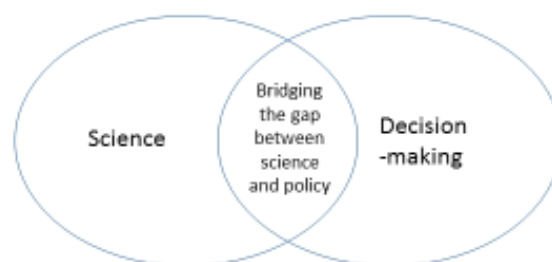
There is **equitable, timely and/or continuous communication** between scientists and decision-makers, as well as between the scientists themselves and between the decision-makers themselves. There is also a **match between the time horizons** of the scientists and the time horizons of the decision-makers.

The importance of regular and on-going communication between scientists and decision-makers was highlighted by a number of projects. In Cambodia and Argentina researchers noted that it was important to respect the time schedules of decision-makers. This means that it is often necessary to build additional time into the workplan to enable ample time for feedback and inputs, and to be willing to be flexible. In both Cambodia and Argentina and India, the importance of regular face-to-face meetings was also highlighted as a means to ensure that project issues are kept at the top of the agenda.

Achieving successful science-society communication

Successful science-society communication requires increased empathy on the part of both scientists and decision-makers to each other's processes. **Scientists need to consider *what* and *how* to communicate, framing information through solutions and the context of the user.** Successful science-society communication requires improved communication and a more receptive decision-maker environment. **Decision-makers need to have awareness of the realities of a robust scientific process and embrace resulting uncertainties.**

Exposure of scientists and decision-makers to each other's worlds would improve the generation of research findings that are informed by decision-making needs, thereby enabling better uptake. Bridging the gap in this manner requires willingness on both sides to think outside their usual "box". It does, however, have potential for significant rewards.



Collaborative engagement processes are interactive approaches whereby scientists and decision-makers jointly define issues of concern, and may result in scientists and decision-makers collectively generating appropriate information. This approach increases the understanding of both the decision-making and scientific contexts, which has the potential to optimise evidence based decision-making.

Active participation of decision-making partners is essential. In a CCW project in Central America and the Caribbean the project team noted that having active participation of the environmental authority facilitated access to data, but also increased the environmental authority's sense of ownership and active interest in the project process and its outputs. In Cambodia decision-makers and communities were appreciative to the CCW project team's efforts to understand their perceptions of issues facing catchment management. Through incorporation of the perspectives of the decision-makers and communities the recommendations provided by the scientists were thus more effectively targeted and more implementation relevant.

Partnership from the beginning builds trust and relationships. The traditional distance between scientists and policy-makers, and lack of understanding of each other's worlds, is not conducive to confidence in, and use of, scientific findings. By encouraging active partnership from the beginning, collaborative approaches enable the building of such relationships and encourage dialogue that benefits society.

Personal relationships were observed by many project representatives to be of paramount importance in improving science-society communication. Since personal relationships take time to develop, some projects were designed based on pre-existing contacts.

In a project in Argentina, for example, the decision-maker in a water basin authority knew the scientists at the research institution from having previously studied with them. His personal interest in the project and this connection was instrumental in its success, as he also had to convince his colleagues of the value of participating in a research project.

In India, a researcher on a project had already garnered the trust of a high level policy-maker through involvement in a previous policy-based project. During this previous project they had travelled together to a multi-day conference overseas as part of a three person country delegation, and thus had significant time in between official proceedings to build a relationship and identify areas of shared interest – on which the CCW project drew.

Improved science-society communication facilitates better alignment of scientific outputs with decision-making timeframes and priorities. The collaborative engagement process creates a channel for ongoing communication between scientists and decision-makers. This enables identification of information needs for decision-making - what that information is, when it is required, and in what format. It also enables constructive dialogue between scientists and decision-makers on the status of knowledge and bounds of the scientific process. This is essential to ensure appreciation of what information can and cannot be generated, and the circumstances in which such information can be confidently applied.

Sustained dialogue is necessary throughout the duration of the project. In a CCW project in Chile an initial workshop brought together scientists and decision-makers. The intention was to provide an overview of the uses and limitations of climate and hydrological models. In particular this was useful for decision-makers to understand that it is currently not possible to make projections on the timescales that they ideally wish to have, for example the water availability over the coming year, or next five years. Through dialogue and exploration of the variables that decision-makers need, scientists were able to ensure that these priority variables were at least included in the models. From that, they were able to commence a process of scenario development that was also relevant to inform shorter-term decisions.



Mechanisms for improved communication is also essential between all players and stakeholders, at a variety of different levels (national down to local). As well as scientists and policy-makers improving their communication, similar processes are required among decision-makers at different levels of governance, and in different sectors. This includes bureaucrats, parliamentarians, ministries, local governments, and end-users at the grassroots level. Building effective communication channels depends on the preferred mechanisms of the target groups. In some cases, if the target groups are local communities, it is also important to provide information in appropriate local languages.

Evidence for targeted communication exists in a variety of CCW projects. In the Caribbean, for example, scientists uncovered different perspectives between the water management authority and users at the grassroots level. By taking both into account, they are generating outputs that are more valid and appropriate to the context. In Chile a participatory newsletter, to which all stakeholders actively contribute, has been key in enabling effective communications. A CCW project working at the grassroots level in Bolivia found that indigenous people requested further information after they had been provided with project outputs in their own language. In Nepal, however, translating highlighted the limitations of languages in explaining concepts. In local Nepalese languages the words for season and climate are the same, making it difficult to explain the nature of climate change.

Moving forward: achieving effective science-society communication in practice

Communities of Practice (COP) can be effective fora for sharing experiences and learning, when they are driven from within the community. COPs are groups of people who share a common interest or passion, and who want to learn to do it better through regular interaction. COPs enable discussion of best practice which may facilitate more effective science-society communication. The CCW programme identified the importance of bringing together relevant communities for networking and sharing of knowledge. Such meetings have the potential to develop into formal COPs if the communities agree on the need and identify (a) champion(s) to drive it.

This work was carried out with the aid of a grant from the International Development Research Centre (IDRC), Ottawa, Canada (Grant No: 107682-001).

