

Action item 6

Effecting critical linkages between C-GOOS and end users.

At the second C-GOOS meeting we were asked to draft a document outlining approaches for promoting functional linkages between C-GOOS and end users for use in the design and implementation plans. For C-GOOS to be successful there must be strong links with the end users of C-GOOS products and end users must be involved in the design and implementation of C-GOOS.

A number of the design principles of GOOS highlight the need for effective two-way communication of ideas and information between C-GOOS and end users.

D1 The GOOS is based on a plan designed to meet defined objectives on the basis of user needs. To achieve this design principle C-GOOS must have effective linkages with the end users be they industry, resource mangers or public interest so that end user needs can be clearly identified and GOOS products made as useful and relevant as possible.

D2 The design assumes that the contributions to GOOS are long term an systematic. This highlights not only the need for effective linkages but also the need for some of these linkages to be maintained in the long-term.

D3 The design will be reviewed regularly.

This identifies the need for long-term ongoing interactions with the end users of C-GOOS again reinforcing the need to ensure products are tailored to the end users.

D8 The design takes into account the existence of systems outside the GOOS that can contribute to an/or benefit from the GOOS.

To be able to take into account existing systems C-GOOS must be aware of existing systems that are currently used by the potential end users of C-GOOS.

The above design goals highlight the need for effective two way flow of information of ideas and information between C-GOOS and it's end users in both the short and long term. This is not always simple to achieve, as there are a number of barriers to effective communication between scientists (who are the primary planners of C-GOOS) and end users. This document will outline some general approaches that could be used to develop effective linkages between C-GOOS and end users and some of the issues that will need to be considered. These include defining the aim of the interaction, the participants in the interaction, the type of interaction that might be used, funding of the interaction, and barriers to effective interaction and ways of removing these barriers.

Defining the aim of the interaction.

To initiate effective interaction between C-GOOS and end users there must first be a clear definition of the aims of any particular interaction. This aim must be clear, well defined and worded in such a way that it is comprehensible to all of the potential participants. For example;

- Identify appropriate C-GOOS products for the aquaculture industry in a region
- Identify and prioritise appropriate C-GOOS products for the shipping industry in a region

All participating groups must also agree upon the aim.

Participants

The aim of the interaction will determine the groups that should be represented. For example there would be very different groups represented to address the aims outlined above.

The potential participants are likely to come from a number of groups these include;

- Representatives of government agencies at all levels
- Major economic interest groups e.g. industry, agriculture, tourism
- Environmental non government agencies (NGO's)
- Public interest groups
- Indigenous and/or subsistence user groups
- Scientific community

The aim will also determine the type of skills the participants will require. It is important the individual participants have the skills (including communication skills) to participate effectively. This will enable them to be effective representatives and participants.

Type of interaction

There are numerous ways for people to interact effectively. The aim of the interaction and also the number and backgrounds of participants in the interaction will need to be considered before a type of interaction can be decided upon. There are numerous ways to achieve an aim and in many cases a range of different types of interaction may be required. For example;

- an initial workshop with speakers from each of the key groups may be needed to present information from the different groups before any discussion of the issues can be initiated
- a group might be used as a “sounding board” for a proposal by a technical group and this might be achieved using email

When developing linkages with a particular sector group it is important to identify networks of individuals or companies that could be utilised. This maybe particularly effective for ongoing long term interactions.

The period of the interaction is also an important factor in considering the type of interactions that might be required. In some cases this may be as short as a one-day workshop in others there maybe a requirement for a long-term interaction over a number of years. For longer term ongoing interactions electronic methods of communication maybe a useful approach.

Funding of the interaction

The requirement for funding of an interaction will also vary with the aim and the participants. It is often relatively simple for private sector groups to provide funding for representatives to participate. For example industry, consulting firms, industry groups can generally finance participation of their representatives and in some cases environmental and other NGO groups with full time staff can allocate resources to ensure ongoing participation. It is considerably more difficult for public interest groups to sustain participation particularly over an extended period of time. In some cases to achieve effective interactions C-GOOS will need to consider how these interaction can be funded.

Differences in approach and knowledge

Differences in approaches and knowledge can be a critical barrier that needs to be overcome to achieve effective interactions between C-GOOS and the end users or between end users. These differences can lead to misunderstandings, misuse of products and result in conflict and competition rather than co operation. For example the following table highlights some of the differences in approach between scientists and some potential end users.

Behaviors and Points of View Typically Associated with the Cultures of Science and Users

Factor	Science	Users
Valued action	Research, scholarship	Decisions, results
Time frame	Whatever needed to gather evidence	Immediate, short-term
Goal	Increase understanding	Manage immediate problems
Basis for decisions	Scientific evidence	Science, values, public opinion, economics
Expectations	Understanding is never complete	Expect clear answers from science
Grain	Focus on details, contradictions	Focus on broad outline

Worldview	Primacy of biological, physical, chemical mechanisms	Primacy of political, social, interpersonal, economic mechanisms
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Source: 1995, National Research Council, Science, Policy, and the Coast: Improving Decisionmaking, 85 p.

To overcome differences between groups it is important to;

- Develop an understanding between groups and individuals that is based on mutual respect and understanding of the different perspectives the groups represent. This does not mean admiration or agreement but a simple acceptance that another party has a legitimate status and role in the process.
- Communicate at a level that enables all participants to understand the issues and other groups point of view. To achieve this there may need to be capacity building that brings all the participants to a similar level of knowledge before an effective interaction can take place.