

DISCUSSION OF SESSION 2

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The three panel presentations were each followed by a short discussion, following which the Chairperson, Rob Lewis, opened the meeting for more general discussion.

The first speaker, Karen Edyvane of the South Australian Department of Fisheries, spoke of fisheries management as a subset of ecosystem management. She emphasised the need to look at critical ecological processes and their temporal and spatial scales, as well as to assess impacts on these processes by the various user groups of the marine environment. Monitoring criteria and indicators were seen as fundamental considerations. Greater use of information technology, Geographical Information Systems (GIS), and predictive tools was encouraged.

John Glaister commented on *Karen Edyvane's* overhead transparency on management of the marine environment, which advocated another level of bureaucracy e.g. the Australian Fisheries Management Authority (AFMA), as the single responsible agency. Wasn't that flying against the principle of collective wisdom?

Karen Edyvane justified her viewpoint by suggesting a model for debating the issues may be through the formation of a single ecosystem committee. This committee could be formed by community representatives of the various user groups who would then discuss the issues related to fisheries and potential conflicts.

John Glaister maintained that habitat is an integral part of fisheries management and rather than move into a new area we need to focus on current real issues.

Karen Edyvane however, pointed to the example provided by the Great Barrier Reef Marine Park Authority, which deals with a multiple use environment, requiring other user groups to take part in the decision-making process. We need to broaden our view!

The second panelist, *Ross Winstanley*, spoke about the need for a better understanding of fish stocks dependent on estuaries. Barbara Richardson commented that currently the onus of *proof* of habitat issues rests with fisheries scientists and managers. The topic is of such importance that there needs to be a change of onus, with involvement by other disciplines in decision-making about saving habitat, with consequent better management.

Ross Winstanley agreed that a wider forum is needed. For example, decision-making in Port Phillip Bay covers deepening of shipping channels and dumping of sediment. Land disposal is controlled by the Environmental Protection Agency, but attention needs to be given to effects underwater e.g. in dips and hollows.

Rob Lewis commented that part of the answer lies in mobilising all sectors of the community so that they collectively own the initiative.

Following *Peter Jackson's* panel presentation, which focussed on the data requirements of managers of freshwater habitats, Campbell Davies suggested that because of the lack of data relevant to survival of Mary River cod, the onus should rest with the developers rather than the scientists, to show that their activities will not threaten the species. Peter Jackson responded that there is now little water remaining in the Mary River, and the onus is on water resource authorities to facilitate the relevant research by fisheries scientists.

The Chairperson, Rob Lewis, led the *general discussion*, which concentrated on issues of research and assessment, on education and communication, and on mobilisation of the community, by referring back to John Glaister's earlier question about another level of authority. Formal management committees e.g. boards of directors for South Australian fisheries, have specific responsibility and accountability, but there is a greater need for holistic, integrated, ecosystem approaches, a need for new rather than traditional mechanisms. We need to identify the advice required by fisheries managers—onus of proof, ownership, avoiding habitat change etc—but we do not have the bio-economic models needed to place economic values on fish stocks and habitats. The importance of integrative catchment management overrides the State perspective.

Peter Young commented that over the last five or so years greater significance has attached to other stakeholders—agriculturalists (including aquaculturalists), mining, forestry, conservation, tourism etc as well as fisheries interests. Historically, decision-making has been by fisheries managers rather than environmental/conservation departments, but with the current focus on ecosystems, fisheries managers need to reassess their role—and quickly! It is essential in the aquatic environment that fisheries managers remain in control of the agenda.

Karen Edyvane cautioned the need to put the issues in perspective when considering other

stakeholders. She also highlighted the fact that about 80% of decisions are influenced by local governments and therefore may be out of our hands.

Stan Moberly questioned where fisheries sit in the hierarchy. They should be involved in the strategic planning with influence equal to irrigation, mining, forestry etc, not just responding to Environmental Impact Statements on, for example, endangered species issues.

John Koehn saw the management of threats to habitat—direct or indirect—as requiring links with other agencies. The Flora and Fauna Guarantee Act of Victoria (1988) provides for listing of threatened species, and communities, and for threatening processes.

Ross Winstanley stressed that the process is dependent on the availability and quality of scientific information, on being able to distinguish clear viable links between fish, habitats and processes. In marine coastal waters, threats are still being responded to on a reactive basis without the equipment to utilise legislation. In Victoria, the Fisheries Act precludes direct exploitation, there is a mechanism for marine parks, the EPA controls water quality, but the legislation does not provide for broader aquatic conservation.

Peter Jackson was concerned as to whether, although the Act recognises threats, it is effective in practice. Does the action plan become implemented or change anything? In the absence of existing data, the onus must be on the people affecting the habitat to prove it will not be altered or destroyed.

Karen Edyvane pointed out that a recommendation of the Ecologically Sustainable Development (ESD) working group was that potential impacts be identified so that breaches of the management plan can be legislated against. John Koehn urged that priority should be given to identifiable threats. For example, dams pose many threats, but are allocated few resources, and consequently little management.

Hugh Cross referred to the stakeholder, often at the top of the organisation, who allocates the funds, and who needs to be convinced of the value to the community, as well as to ecological and catchment processes.

Rob Lewis wanted to know how we can improve valuation of habitat in economic terms, which is always a dilemma for fisheries managers. Without a quantifiable value/figure, there is a danger of lost credibility in the face of figures supplied by developers and engineers, as their figures may be shaky but are seen as solid.

Jenny Burchmore's experience was that the bio-economic models can be a trap. For example the value of a fishery is expressed as an *annual* loss in an ESD document, but a sustainable fishery has an infinite value.

Duncan Leadbitter reminded the meeting that the tools are available for implementing habitat management in the form of the EIS (Environmental Impact Statement), but the EIS doesn't contain much science. What is needed from scientists are appropriate guidelines, especially on pre-impact studies, focussing more on environmental needs than developers' wants.

Rob Lewis agreed, but the time-line on EIS's is a constraint. Karen Edyvane was concerned that because drawing up of an EIS is the responsibility of one agency, fisheries managers get little input. An integrated approach is needed towards looking after the environment, and we shouldn't be too negative about strategic planning, with recommendations and guidelines at a higher level. Predictive modelling and simulation modelling can be important tools.

Terry Walker had difficulty with the concept of marine parks, where the complex issues cause public confusion, often because they are set up with inadequate information. When managers try to accommodate everybody, the outcome becomes irrational.

Karen Edyvane stressed that it wasn't an easy process. The value of large regional mul-

tipale use areas is the buffer they give to highly protected areas, for example a fish sanctuary.

Ross Winstanley supported Duncan Leadbitter on the need for a more assertive approach by fisheries managers in the marine and coastal planning processes.

Kruno Kukolic's experience from the ACT planning authority was of two sets of guidelines which have been created for the conservation of wetlands. These are supplied to consultants who can incorporate the principles in EIS.

Jenny Burchmore claimed that 80% of decisions are made by planners, with fisheries interests having little input. But fisheries managers tend to overlook fish habitat protection in their educational programmes. Other Government departments are often more of a problem than developers, because they lack an understanding of the issues. One remedy would be workshops for public works engineers and planners, and education packages directed at bureaucracy. However, the downside of all this could be that other departments may then want to take the initiative from fisheries managers. Karen Edyvane believed that the best way to educate planners is to work alongside them in the planning process, and to get the fish habitat workers of fisheries departments fully involved.

John Glaister wasn't opposed to the various stakeholders being involved in the management process. However, the fact that fisheries researchers are the source of information on fish habitat seems to have become devalued currency. Rather than creating larger bureaucracies to deal with issues germane to fisheries research, we need to re-establish our importance as the data source.

Rob Lewis's summary of the discussion of Session 2 was that the information supplied to fisheries managers should be improved, there should be a more integrated perspective, there is a need for resources, a need to identify all relevant groups, including other government instrumentalities, and a need to coordinate like interests.