

# DISCUSSION OF SESSION 6

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**Recorded by J. Robertson**

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Each panel presentation was followed by a time for questions, after which the session was opened for more general discussion.

Following *David Pollard's* panel presentation, John Koehn expressed some doubt as to whether conservation areas were practical in freshwater systems as it would require placing a national park around the whole catchment area. He suggested that, apart from small areas such as small catchments or headwaters, a more integrated approach is required in which the key factors causing detrimental effects are identified. In addition, limits or tolerances should be established in order for amelioration to occur. David Pollard agreed that freshwater systems require a different management approach but nevertheless the reservation approach was still worth considering in some cases.

Bryan Pierce supported the comments of John Koehn in that protected areas may be applicable where a fish species may have a limited distribution or range but not in open river systems such as in South Australia. He suggested that we should be considering, as another alternative, multiple uses, which are really multiple *abuses* of the system, and developing ways in which these uses are not so destructive. David Pollard pointed out that the fish stocks in the area surrounding the refugia need to be managed on the traditional fisheries basis. The insurance policy is the large refuge that allows fisheries managers a 'second go' if initial management plans in the surrounding areas are ineffective.

Peter Young asked how the concept of multiple use systems would fit into the Western Australian Water Board's proposed sewage outfall and the accompanying research programme being developed to evaluate the assimilative capacity of that ecosystem. David Pollard replied that sewage input should be considered as one component of multiple use. Sewage outfalls should be located where they have minimal impact on the refugia.

Jim Puckridge pointed out that multiple use is not a panacea. It can be very expensive and require more substantial expertise than single use refugia. He agreed with John Koehn that an integrated management approach is required in freshwater systems but there is still a case for reserving important or sensitive areas such as highly developed flood plain areas or internal deltas within a multiple use catchment system. David Pollard emphasised the need to be aware of the increasing economic value of non-consumptive uses eg. tourism on the Great Barrier Reef, and start catering for them now.

Following *Andrew Staniford's* panel presentation, Peter Young enquired whether a situation may arise under a value-added approach, where no fishing at all would occur but rather areas being solely reserved for tourist usage. Andrew Staniford agreed that was a possible outcome but suspected it was improbable until there is an alternative source of food fish eg. from aquaculture.

Murray MacDonald endorsed the value-added approach and quoted figures placed on coastal wetlands by the National Marine Fisheries Service in the USA. He queried, however, to what extent trying to put some kind of economic value on these resources is going to compromise the ability to equitably allocate the uses. Andrew Staniford replied that allocation is difficult but requires an understanding of the values of a particular asset in its various uses; and how that resource is shared between the alternative options that are available for that resource.

John Glaister commented that basic values are part of a framework upon which people react to different management alternatives, and values should be expressed in more than just dollars and cents. It was recognised at the Athens conference that for better fisheries management we need institutions that are more diverse, creative and responsive to ecological and social complexity and uncertainty. This requires co-management institutions that incorporate interest, knowledge and wisdom of all resource users not just fishermen. Andrew Staniford responded that at present, as fisheries economists, we haven't enough expertise to place a dollar value to resources with any accuracy but it certainly helps to think in these terms or to identify some other semi-quantitative measure of the benefits or cost of a resource. He considered the key issue for effective fisheries management is to develop, rather than look at problems now, likely 10-20 year *scenarios* for a particular fishery and begin working with various users in that fishery to think through those scenarios so that strategies can be developed before problems arise.

Russell Reichelt opened the *general discussion* of Session 6 by commenting that multiple use leads to multiple owners, and, in the habitat management scene, multiple regulators eg health, environmental and fisheries agencies, which would indicate that institutional arrangements are a key to effective management. Ross Winstanley was concerned that this approach to the management of aquatic

resources, which encompasses a number of users besides just fisheries managers, requires an institutional framework where either single bodies or networks of agencies are organised and able to work cooperatively. This would seem to indicate that the Australia's current system is heading in the wrong direction. Andrew Staniford pointed out that this is only one approach of three he presented and which may not necessarily be recommended, but we need to look at what options are available to make our current institutions more effective.

Jeremy Prince felt that in contrast to the protected area approach in which nobody owns or cares for the resource, the value-added approach is superior as it is in the owner's long term interest to care for and monitor the resource.

John Glaister said that in industries where user group interaction was well developed, such as the US Forestry, user group participation generated more conflict with the industry managers than before user groups became involved. He repeated earlier comments that fishery management is getting away from the role of fisheries biologists but not fisheries scientists.

Jim Puckridge believed that multiple use has the potential for education and resource ownership but he expressed some caution that long term ownership in agricultural industries has not necessarily resulted in the conservation of the resource. Russell Reichelt commented that, in his understanding, the multiple use system on the Great Barrier Reef was introduced to minimise conflict rather than underpinning any fundamental set of strategic principles other than to manage the reef wisely.

Barbara Richardson suggested there is scope in both the multiple use protected areas and the value-added approach. What is required is to come together in a planning process as has been done in terrestrial systems, to consider multiple use zoning that takes into account the different sensitivities, the appropriate uses of those areas, and the conservation and sustainable use of

those areas. The planning framework on an institutional basis should have an integrated approach with fisheries management being the major focus. The plan should incorporate other factors including value-added principles in order to make more integrated decisions in all of our waterways. Murray MacDonald stated that the multiple use concept has been discussed at a number of national forums over the last 10 years. These forums have emphasised the need for a strategic planning process to accommodate, besides fisheries, a large range of legitimate and possibly conflicting uses of resources. This planning process should involve participation by both government and community stakeholders. He felt that this process should be emphasised in a number of current initiatives at a national level such as Ocean Rescue 2000 and the National Conservation Strategy.

Bryan Pierce asked Andrew Staniford to cite examples from other natural resources where the value-added approach has worked to enhance the sustainability of that resource. Andrew Staniford replied that the developments in the tuna fishery since quotas were introduced has given it a greater chance of being sustainable. The emphasis is now placed on cultured fish and how they complement the wild stocks. He also agreed with the comments by Murray MacDonald on the advantages of the strategic planning process and stated that unless all stakeholders are involved, the plans will be developed by politicians with the interest of political lobby groups tending to dominate.

Jeremy Prince commented that if we are able to put value to resources, the strategic planning process would become bogged down in community and government committees. Rather a group of individuals should actually own the resources thereby attaching their own value and ensuring the sustainability of the resource. Murray MacDonald said that Jeremy Prince's comments were fine if you make the assumption that fisheries is the only use of those resources and the community who own the common property resource are quite happy to relinquish their owner-

ship to hand it over to a particular user group. This is not always the case. He went on to say that the value-added approach can be successfully integrated into the strategic planning process if it is defined, rather than in economic terms, as what the various stakeholder's interests are and the perceived benefits they receive from the various uses of the resource.

Russell Reichelt asked Peter Young how much strategies such as Ocean 2000, Coastal Zone Strategy influence CSIRO's research planning on environmental issues. Peter Young stated that he wished CSIRO was more involved in these initiatives. He also emphasised some caution over property rights as it may be economically viable to fish a stock down, then get out as was practised on whales along the east coast of Australia.

David Pollard supported previous comments that a much broader value-added approach, rather than a straight economic approach, needs to be taken as you may preclude other alternative uses for a short term economic gain, eg. fishing vs fish-watching. Andrew Staniford distinguished between commercially driven values and what he referred to in his talk as a value-added approach that includes non-commercial values. He agreed with Jeremy Prince that property rights can be effective in some situations but in others there is a need to develop a common property approach where the users of the resource have shared ownership of the problems and solutions and are committed to implementing these.

Russell Reichelt asked Rob Lewis to what extent would the development of the National Coastal Strategy or Ecologically Sustainable Development principles assist his department with the development or loss of sea grass areas in South Australia. Rob Lewis thought these strategies have been very valuable to him as a planner, particularly Ocean 2000 in that it deals with issues and involves the participation of commonwealth, state and local user groups. This has been the approach of the marine scale fishery in South Australia and the industry has been fully supportive of this method.

Jeremy Prince explained that fishing down a resource for short term economic gain is valid if you have a lot of virgin biomass but such situations are rare in the current day. It is of long term benefit to buy up undervalued resources and rehabilitate these, whereas the common situation discourages people receiving the benefit of their own rehabilitation efforts. David Pollard refuted Jeremy Prince's comments by suggesting that a broader approach than resource ownership is required and no one should own a resource because it precludes all other possible alternative uses in perpetuity. Andrew Staniford agreed with these comments.

Russell Reichelt stated that at present the fishery scientist is held back because of the lack of long term data sets on which to base decisions. He asked Andrew Staniford who are the people best suited to adopt the long term view on issues such as data collection and resource management. Andrew Staniford replied by saying that because of the common property value of fish resources there aren't any incentives to keep long term data sets so there's a strong basis for government intervention in the collection and distribution of these data. Diane Hughes said there is a strong case for education of the users of a resource and the public on how to recognise and improve the value of an asset.

Murray MacDonald asked David Pollard to comment on how effective had a strategic management framework been in achieving equity in the allocation of users in the Solitary Islands marine protected area and to what extent had the value of various habitats and resources in that area been recognised. David Pollard considered that the Solitary Islands marine protected area, through public participation in the multiple use zoning scheme, is quite good in its general aims at sustainability and multiple use equity. He was concerned however that the area may not sustain long term sustainability in biodiversity as it did not contain large protected areas.

Barbara Richardson supported David Pollard's comments in saying that the Solitary Islands marine protected area has been a valuable

process not just in terms of the interaction between user groups, identifying management objectives and ownership but also for fisheries managers in receiving a cross fertilisation of ideas and feedback in ways to best manage or improve management in the future.