Australian Coral Reef Society Inc.

A society promoting scientific study of Australian Coral Reefs

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Comments on the Reef Water Quality Protection Plan: For catchments adjacent to the Great Barrier Reef World Heritage Area

Summary: The Australian Coral Society (ACRS) strongly supports the Commonwealth and Queensland Government's Reef Water Quality Protection Plan (the Plan) and believes that the Plan, together with the new Representatives Areas Programme, will be major steps towards ensuring that the biodiversity of the Great Barrier Reef World Heritage Area (GBRWHA) is protected and managed for posterity as well as provide some insurance against global threats such as global warming and local effects such as cyclones. We are pleased to support the implementation of the MOU recently signed by the Great Barrier Reef Marine Park Authority and the Queensland Government. We are strongly supportive of the Premier's Department for taking on board the substantial amount of scientific evidence in preparing this Plan.

The Society's only real concerns with the Plan concern, firstly, whether it will be sufficiently strongly implemented and resourced to be fully effective, and, secondly, that the clear need for further information, both environmental and socio-economic etc, must not be used as justification for any further delays in implementation of improved land management practices. Not only is there an urgent need for implementation to protect the GBRWHA, but the process of implementation will itself provide invaluable opportunity for research to address the effectiveness.

Society Background: The Australian Coral Reef Society (ACRS) is the oldest coral reef society in the world and was founded as the Great Barrier Reef Committee in 1922. The Society has over 250 Australian and overseas members and represents the coral reef research community in Australia. The Society's members are primarily professional coral reef researchers and are employed by a wide range of Universities, State and Commonwealth agencies, as well as private organisations. We hold annual scientific meetings and support postgraduate research on Australia's coral reefs. The Society provides an independent voice for coral reef researchers on issues affecting Australia's coral reefs.

The Society has been a key advisor to the GBRMPA since the declaration of the Great Barrier Reef Marine Park Act in 1975. Under its previous name, the Great Barrier Reef Committee, the Society was a key source of scientific advice and comment as the Great Barrier Reef Marine Park was formed. The Society was heavily involved in commenting on all the previous zoning plans and was contracted by the Authority to compile the database for the initial zoning plan of the Capricorn Bunker Group in the late 1970's. Many of our members have contributed extensively to the science behind this plan and have undertaken much of the research that highlighted the need for the implementation of such a Plan to remediate water quality especially in inshore waters.

There is now considerable scientific evidence, as recognized in both the Plan, and the Baker report on the Study of Land Sourced Pollutants and their Impacts on Water Quality in and adjacent to the

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Great Barrier Reef, which clearly identifies deteriorating water quality in the catchments flowing into the GBR as a major concern. Not only has the amount of sediment increased dramatically since European settlement (McCulloch *et al*. 2003) but the rate has been accelerating over the past 50 years and it brings with it the attached toxic chemicals and excess nutrients used in present agricultural activities. Further, application rates of chemical fertilizers, which generate nutrient overloads, and pesticides and herbicides, has resulted in dramatic increases of these chemicals in nearshore marine ecosystems.

In addition, there has been considerable loss of wetlands, through clearing and draining activities or reduced quality of wetlands through removal of riparian vegetation and the addition of excess pollutants. This loss has removed or reduced the natural filtering function of these habitats, in turn reducing the ability of these areas to act as buffers to increased flows during periods of heavy rain. The result is often increased erosion of river banks. Clearing, draining and filling of wetlands also destroys their important function as breeding and nursery areas for coastal and estuarine species, including important commercial fish stocks, and increases the likelihood of disturbance of acid sulphate soils leading to the potential for massive fish kills.

The outcome is reduced water quality in inshore areas of the GBRWHA, impacting on the health of coastal reef communities and making them more susceptible to significant and potentially permanent damage from events such as cyclones and Crown of Thorns attacks. Importantly, all these impacts are cumulative, often generating synergistic impacts on marine organisms and habitats. Given the alarming global proliferation of cases of reef collapse resulting from similar runoff problems, and the evidence that such changes are already occurring on the nearshore Great Barrier Reef, there is clearly a need to reverse these trends.

It is therefore imperative that action is taken immediately to redress these problems. For these reasons the ACRS strongly supports the principles of the Plan but encourages as full as possible support and implementation. The Society also has some specific comments about the implementation of the Plan:

Specific comments

Page 3. Jardine River catchment mis-placed and appears to be incorrectly included within GBR catchments.

Page 6- While we support most of the excellent Strategies in the draft Plan, it is critical that there are real incentives to ensure the full implementation of these, at all levels of government, industry and the community, in order to ensure the two objectives of the Plan are achieved. It is critical that good farming be financially sustainable and rewarding; otherwise, the desired outcomes are not feasible.

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At present there appears to be no dedicated funding for the implementation, auditing and monitoring of the Plan. This lack will severely curtail the Plan's effectiveness. There also needs to be a strict timetable to implement these objectives including open and transparent reporting of the outcomes. For this reporting to occur, a properly resourced and scientifically credible monitoring and auditing program will also be necessary. Funding for this monitoring does not seem to be guaranteed in the Plan. Such dedicated funding is essential for the Plan.

Page 7 While we accept the need for a whole of systems approach, it is imperative for the governments to ensure that all the components of the Plan are being implemented and co-ordinated and, thus, ultimately some body must be responsible for carriage of the RWQPP. It is very unclear in the Plan who has long-term carriage and implementation responsibility for the Plan. Superficially this seems to be spread among many agencies and organisations and this is unlikely to be particularly effective. In Strategy I, No. 2 who is to actually report through the Ministerial Council?

Page 8- While developing the Linkages, there has to be sufficient funds to provide the expertise at the local and regional level to ensure that they can actually deliver these objectives. In NSW some of the catchment management authorities have worked well but others have failed to recognise the value of better environmental river flows.

Again funds have to be provided to Regional Groups and Local Councils to ensure that they have the staff and expertise to support community actions relevant to water quality improvement and ecosystem protection.

Page 11- In strategy A- in Action 3- it is not clear as to how success in high risk catchments will be assessed and measured. While best management practises are to be promoted, there should also be actual water quality goals for (i). reducing sediment run off and associated nutrients to catchment rivers and streams; and (ii). for the revitalisation and or restoration of coastal wetlands; as part of the milestones in the Plan. Specific water quality objectives for farm runoff to be incorporated in Codes of Best Practice and Farm Management Plans could be a solution to this lack of actual goals. This should include effective protection of wetlands and riparian vegetation from further destruction, which only seems to be a matter for review under Strategy D (see later comment). This issue of protection of wetland and riparian areas must be clarified along with an individual farmers environmental 'duty of care'. In order for this part of the Plan to succeed it is vital that the farmers are heavily involved in the early stages of implementation and are made to feel valued and responsible players, as their co-operation is essential.

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Action 6. Peak industry bodies and landholders are not in a position to 'Evaluate and report publicly … on Reef water quality'. They will need access to scientific expertise to help and this could come from existing scientific institutions that work with farm industries.

Page 12- While we would encourage Strategy A of self management, we have some reservations as to the effectiveness of such strategies, across the broad cross section of primary producers, given that some of these strategies have been in place for some time already and do not seem to have effectively addressed the issue of water quality degradation. The implementation of these strategies will need to be able to be assessed and effectively reported on early in the reporting process to ensure they are being efficiently and broadly taken up. Again, there is a need to ensure that measures for individual farmers are feasible, and cost-effective. While it is indicated that there may be direct Commonwealth assistance to the sugar industry, what about the other primary producers?

Page 13- while we welcome the need for education, will there be financial support to allow the landowners to actually implement the improved water quality outcomes identified in an education programme. Support and expertise must be made available to ensure that farmers can get practical "hands on" assistance to addressing the water quality issues, such as information on how to best remediate their wetlands or recreate them? It is also essential that the benefits of such actions to the productivity and profitability of their lands be stressed.

Action 3. If community water quality monitoring (Waterwatch) is to be a priority in the short-term the program must be resourced and run so as to produce scientifically credible results and not be considered just an 'education' program (as was the case with the previous Waterwatch program in Queensland).

Certainly we welcome the education program aimed at minimising the use of toxic chemicals, especially compounds such Diuron, which have such an impact on our coastal seagrasses and their associated communities.

Page 17- action 1- should happen before 2005 and similarly action 2- needs to be implemented before 2010.

It is essential that the two stage review be strongly supported and funded; in 2005 the review must recognise the players who are contributing and identify those who are not and action must then be taken to ensure that these latter players do come on board. If we wait until 2010 to identify the non players it will be too late.

These review processes must also emphasise implementation in the early stages and not rely on improvements on lagoon water quality (which will take several years to be apparent, ie there will be a long lag period before water quality improves).

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Page 21 - Another action which should be included within this strategy is the reduction in the rate of clearing of all vegetation types within the catchment- this is not captured effectively in any of

Stategy D. Some of the highest rates of land erosion have been recorded from some of the catchments where, according to the Baker report, extensive grazing is the major land use (and occupies around 83% of the reef catchment area between Cape York and the Mary river, 94% of land use in the dry tropics and 52% of land use in the Wet tropics). Some of this may be occurring on marginal land and this needs to be addressed, to reduce erosion and ensure river banks are protected from degradation caused by cattle movement and grazing. Some areas will require revegetation to reduce soil run off.

Further, most of the rivers and streams in the GBR Catchment have already lost a significant proportion of their wetlands to clearing, filling and draining activities. Those that remain must be effectively protected from further loss and degradation (see earlier comment about the values of wetlands for protecting and ameliorating GBR water quality).

While the Society accepts that there is no single action which alone will ensure improved water quality entering the GBR coastal waters, it is imperative that the suite of actions proposed are acted upon urgently. While voluntary guidelines may be sufficient we suspect that the use and enforcement of existing legislation will be essential to see a rapid recovery of water quality. The Baker report highlights excessive over-fertilising of much of the intensively used land in the GBR Catchment. This will mean that, even with complete cessation of fertiliser, excess phosphates would continue to be washed into the catchment rivers and streams for many decades to come. As such we particularly support the identification of 'Nutrient Sensitive Zones' and any measures taken to reduce nutrient losses in these areas.

For the successful implementation of the Plan, and especially its monitoring and auditing, a strong scientific involvement is required. This does not come out clearly in the Responsibility Table for the various Strategies. To include more fully the scientific expertise needed to make the Plan work, we suggest that the term 'Scientific organisations' be used and included in all places where such scientific expertise will be required. This term should include CSIRO, Universities, AIMS and CRCs. We suggest that these organisations be specifically mentioned, using this term, in responsibilities in Strategy A, No. 6; Strategy E, Nos. 2 and 4; Strategy G, Nos. 1, 3 and 4; Strategy H, Nos. 1, 3, 4, 5; Strategy I, Nos. 3, 4, 5.

Again, for all aspects of the Plan monitoring and auditing must be properly funded to ensure these processes are sufficiently rigorous to achieve that the objectives of the Plan within the next decade or so.

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I would be happy to discuss any of these points in more detail and can by contacted by phone 02 9320 6243, fax 02 9320 6042 or by email path@austmus.gov.au.

Dr Pat Hutchings
President

Friday, 11 July 2003

Baker J. **2003**. A report on the study of land sourced pollutants and their impacts on water quality in and adjacent to the Great Barrier Reef. A report prepared by an Intergovernmental Steering Committee to Premiers Department, Queensland Government www.premiers.qld.gov.au/about/reefwater.pdf

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