

## CHAPTER 5

### SUMMARY OF ISSUES

5.1 The degradation of water quality resulting in toxic algae blooms has brought into focus the environmental and social values of the water resource. Water is a finite resource and considerable effort has been put into developing sufficient infrastructure and knowledge to enable an integrated approach to be implemented to replace the rhetoric which has previously been widely used as a substitute for action. Problems are being prioritised to enable work on them to go forward systematically in what is hopefully a realistic timeframe.

5.2 Strategic approaches require long and short term measures as well as research and monitoring, and should involve all relevant agencies and the community for the entire catchment. Short term strategies may be only bandaiding the situation but can go part of the way to resolving long term problems. Targets must be set so that strategies can be developed and communities have goals to work towards.

5.3 Decisions must be made as to the acceptable levels of nutrients and the intensity and frequency of algal blooms that can be tolerated and managed. There must be an assessment of risks, and there is a need to consider for what percentage of the time water bodies need to be potable, and acceptable limits for water quality. To put the toxic algae problem into perspective, the question needs to be considered: to what extent should there be improvement in water quality irrespective of the blue-green algae?

5.4 Progress has been made towards long term solutions to this problem through a cooperative effort between the community, industrial consumers, landholders, government and local authorities within the catchment in consultation at the policy formulation stage. Long term strategies can be developed and refined as a much better understanding of the causes, extent and implications of the situation is gained.

5.5 No one set of measures will solve a problem of the complexity of the sustainability of Australia's water resources. Economic instruments such as pollution taxes, water entitlements, increased costs of water, strategies to reduce pollution sources and the possible reallocation of water licences will only partly address the problem and may only be

appropriate in certain circumstances. Levies collected from irrigators, farmers and other water users should be spent on water resources.

5.6 There is a challenge to researchers to provide the urgently needed information on causes and cost effective treatment of algal blooms, toxicology, the role of nutrients, riverine ecology and the effects of flow rates, the environmental value of water and the realistic appraisal of the impact of algal blooms. There is also a challenge to the community, industry and governments to provide adequate funding and to use this information.

5.7 Accessible data bases for information are being developed which will assist researchers as well as inform the communities. There should not be research for its own sake. There may be a tendency to keep researching in order to obtain the desired answers, rather than accepting obvious, though unpalatable results. The emphasis must be on finding solutions, not apportioning blame, and communities may need to take hard decisions in the light of research findings.

5.8 These decisions need to be made by the local stakeholders negotiating the most acceptable tradeoffs to ensure their rapid implementation. The Committee was told that official inquiries resulted in reports, rhetoric, the appointment of more bureaucrats and recommendations that were only implemented if they cost little money.<sup>635</sup> There needs to be firm targets and timetables against which performance indicators can be developed.

5.9 Although not all of the answers are known and there are still a number of areas which need to be addressed, basically the problems and the solutions are known; most States/Territories now have the mechanisms in place, and only the political will is needed to provide the funding to carry them out. The only reason for hesitation should be the importance of directing funding priorities to give the most impact to the problem. Plans and strategies are only the first step and their effective implementation will depend on the extent of government and community support.<sup>636</sup>

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635 Williams, Evidence, 12 August 1993, p.800-1.

636 Australian Conservation Foundation, Supplementary Submission No.75(a), p.4.

5.10 Implementation of strategies should not be strangled by bureaucratic red tape. The implementation of community education should focus on involvement and the provision of information, as the community can supply the political will. Communities will need clear policy directions which are logical, coordinated, well resourced and have realistic expectations.<sup>637</sup>

5.11 There needs to be coordination and clarification of roles between the many natural resource management and economic development programs currently in place. Confusion stems from the conflicting objectives, different administration channels and timeframes of these programs.<sup>638</sup> The Committee is concerned that the proliferation of small programs may result in insufficient funds being available for each to be effective.

5.12 There was little support for the formation of a new national agency to coordinate a national program, and it was suggested that it would be preferable to extend the role of existing or proposed bodies such as the National Environment Protection Authority (NEPA), the Murray-Darling Basin Commission or ARMCANZ. Resources may be better spent strengthening the existing system than in creating a new body. The tendency to create a new agency every time there is a new problem has contributed to the existing lack of coordination in some areas.

5.13 The Committee is concerned at the lack of coordination of the current monitoring programs. As a matter of priority, monitoring programs should be implemented which are adequate to provide an early warning of the development of algal blooms and to provide information on the factors favouring their development.

5.14 There should be a balance between the need for consistent State/Territory-wide and national policies and the social, economic and environmental factors in each catchment. This may vary depending on the social structure and financial constraints of each community. For example, if an algal bloom develops in a community that relies heavily on tourism there may be a tendency not to report it to the authorities to avoid the adverse publicity. There will not be evidence of the problem if it is not looked for. This is particularly important in

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637 Barratt, Evidence, 12 August 1993, p.822.

638 Barratt, Evidence, 12 August 1993, p.825.

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recreation areas, as water supplies undergo regular routine testing. These situations can be particularly important in areas where algal blooms produce hepatotoxins which have cumulative effects.

5.15 The Committee was told that there was already a plethora of legislation and regulations, but there was still some confusion as to who was responsible for various activities and even for some of the water bodies. It is also important that the rules do not keep changing. Water users make commercial decisions on the basis of their water allocations and the rules at the time. Additional allocations should not be made until more is known about the water available to meet existing allocations plus sufficient for environmental flows.

5.16 The Commonwealth Government has provided funding for healthy rivers, but there is a need to know if it is to be ongoing funding to continue projects already started under these initiatives.<sup>639</sup> Commitment is needed to longer term funding to enable longer term projects. The Murray-Darling Freshwater Research Centre was cited as an example of the lack of a stable funding base.

5.17 There is a need for an environmentally safe method of treating algal blooms until long term strategies for prevention can be implemented and become effective. Treatment of algae requires further research into the safer alternatives to copper sulfate, the early detection of blooms, use of increased flow and the use of booms to prevent the seeding of the main water channels from wetlands and small tributaries, the possible use of harvesters and biological controls. There is a need to determine safe levels to ensure that the available information is provided to the water managers.

5.18 The areas needing attention are the identification of sources of nutrients/pollutants, the critical levels for algal bloom development, what factors influence the potential to form toxins, and the priorities for reduction of levels of fertilisers, intensive animal production, detergents, sewage effluent, riparian strip maintenance, stormwater, and septic tanks. The community must be convinced that there is a problem in order to develop a sense of collective ownership, particularly in small to medium sized communities.

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639 McCutcheon, Evidence, 4 August 1993, p.692.

5.19 In many areas there may be a need to balance the needs of economic farming and blue-green algae treatment. Information on costs will enable priorities to be determined and can also determine the balance for the levels of the treatment. There is also the issue of getting people upstream to spend money for the benefit of the people downstream.

5.20 There is a need for information on the cost of algal blooms in order to develop priorities. The economic impact of blue-green algae is an order of magnitude less significant than the problem of rising watertables, which is currently the primary focus of the Murray-Darling Basin Commission's activities.<sup>640</sup> The Western Australian Waterways Commission is currently looking at dinoflagellates, which have potentially devastating effects on estuaries. The factors which favour the bloom of these species are similar to those where algal blooms occur. Much of the research done on algal blooms will assist in addressing these other situations.

5.21 The integrated catchment management concept serves as a focus and must be adequately resourced and supported by government agencies to maximise the potential benefit to be derived from enthusiastic communities. The ICM movement cannot be expected to solve problems of this dimension without adequate resources, and support in the form of acknowledgment of their effort and technical advice when needed.

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640 Blackmore, Evidence, 27 August 1993, p.914.