

FROM THE MOUNTAINS TO THE SEA : ALGAL BLOOMS AND THE HAWKESBURY RIVER SYSTEM

Algal blooms are a not new phenomenon and have plagued humans for centuries. However, the increasing scale and frequency of the blooms and the variety of species and habitats in which they are occurring, not to mention the economic impacts, is cause for alarm.

In Australia problem blooms can be found in all aquatic environments including freshwater, estuarine and to a lesser degree, marine-dominated environments. Up until recently, algal blooms rated only a passing mention in the media despite scientific studies and warnings from concerned scientists going back many years. This situation is exacerbated by the nature of government decision-making which seems to dictate that a response only occurs when sufficient media and public reaction demands action.

Although the Darling River blue-green algal bloom in the summer of 91/92 was undoubtedly of major significance, the government response at both State and Federal levels was too narrowly focussed to enable other algal problems to be addressed. The central coast lakes in New South Wales, for example, have been showing signs of stress from nutrient enrichment for many years. The Hawkesbury River system has also had a considerable problem with algal blooms, but addressing point sources of nutrients is only part of the solution.

The Hawkesbury River serves the purpose of illustrating the need to address rivers and their catchments in a holistic manner. Algal blooms have been recorded from water storage areas in the upper catchment, in the brackish/freshwater areas below Warragamba Dam and in the estuarine areas downstream of Brooklyn.

Controlling unacceptable blooms involves some expensive choices by the community at large. Upgrades of effluent quality from point sources are achievable, but there are associated costs. Control of diffuse source pollution is more difficult, but will become increasingly important in the future.

Cost is not the only factor. The state of the Hawkesbury River has prompted an increasing debate over the eventual size of Sydney (both in terms of area and population) and water pricing policies. It is disturbing that while the problems of the Hawkesbury remain intractable, proposals to expand the size of Sydney, including its water supply sources, continue to receive government support.

The solution to the Hawkesbury's problems will only be found in a holistic and integrated planning approach and there have been tentative steps in this direction. This seminar was aimed to provide an overview of the system with respect to algal problems and draw on lessons from outside the Hawkesbury-Nepean Basin. It will undoubtedly be of value to those charged with implementing planning decisions aimed at ensuring the future of the river.

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