



**PRIMARY INDUSTRIES
AND RESOURCES SA**

AQUACULTURE RESOURCE MANAGEMENT AND ECOLOGICALLY SUSTAINABLE DEVELOPMENT POLICY

Prepared by

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AQUACULTURE RESOURCE MANAGEMENT AND ECOLOGICALLY SUSTAINABLE DEVELOPMENT

POLICY

PROPOSAL AND EFFECT

To establish a policy framework which promotes the ecologically sustainable development and allocation of South Australia's aquaculture resources.

The *Aquaculture Act 2001* includes the promotion of ecologically sustainable development of marine and inland aquaculture as an objective of the legislation and requires that the Minister have regard to and seek to further the objectives of the Act.

The Minister may make aquaculture policies for any purpose directed towards securing the objectives of the Aquaculture Act and must, in the preparation of a draft policy, obtain and consider the advice of the Aquaculture Advisory Committee.

The Aquaculture Act defines aquaculture development as ecologically sustainable if it is managed to ensure that communities provide for their economic, social and physical well-being while:

- Natural and physical resources are maintained to meet the reasonably foreseeable needs of future generations;
- Biological diversity and ecological processes and systems are protected; and
- Adverse effects on the environment are avoided, remedied or mitigated.

Decisions as to whether development is ecologically sustainable or to ensure that development is ecologically sustainable under the Aquaculture Act are guided by the following principles:

- Long-term and short-term economic, environmental, social and equity considerations should be effectively integrated; and
- If there are threats of serious or irreversible environmental impact, lack of full scientific certainty should not be taken to justify the postponement of decisions or measures to prevent the environmental impact.

BACKGROUND AND ISSUES

Ecologically sustainable development was broadly defined as "*economic growth which does not jeopardise the future productive base*" in the document *Our Country, Our Future – A Statement on the Environment* released by the Commonwealth Government in 1989. This definition was refined in the *National Strategy for Ecologically Sustainable Development*ⁱ as "[development] using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased." The principles underlying this definition were based on a number of principles established at the Stockholm Conference of 1972 and the Rio Conference of 1992 culminating in the non-binding agreements Agenda 21 and the Rio Declaration. The term 'development', relates to the total quality of life and not simply to economic growthⁱⁱ; whilst 'sustainability' relates to the "persistence of certain necessary and desired characteristics of people, their communities and organisations and the surrounding ecosystem over time"ⁱⁱⁱ.

In addition to the *National Strategy*, Commonwealth, State and Territory Governments and the Australian Local Government Association signed the *Inter-governmental Agreement on the Environment* in May 1992. This Agreement includes provisions requiring the parties to use the four specified principles of ecologically sustainable development to “*inform policy making and program implementation*” and to “*promote the integration of environmental considerations into Government decision making*”. These principles provide for application of the precautionary principle, inter-generational equity, conservation of biological diversity and ecological integrity and improved valuation, pricing and incentive mechanisms.

Broadly, the principles of ecologically sustainable development relate to the equitable sharing of the benefits associated with economic development and the responsibility of current generations to ensure that a healthy, diverse and productive environment is available for future generations^{iv}.

These principles are embodied in the South Australian Aquaculture Act which defines development as ecologically sustainable if it is managed to ensure that communities provide for their economic, social and physical well-being while:

- Natural and physical resources are maintained to meet the reasonably foreseeable needs of future generations;
- Biological diversity and ecological processes and systems are protected; and
- Adverse effects on the environment are avoided, remedied or mitigated.

Decisions as to whether development is ecologically sustainable or to ensure that development is ecologically sustainable under the *Aquaculture Act* are guided by the following principles:

- Long-term and short-term economic, environmental, social and equity considerations should be effectively integrated; and
- If there are threats of serious or irreversible environmental impact, lack of full scientific certainty should not be taken to justify the postponement of decisions or measures to prevent the environmental impact.

The Aquaculture Act includes the promotion of ecologically sustainable development of marine and inland aquaculture as an objective of the legislation and requires that the Minister to have regard to and seek to further the objectives of the Act, which are:

- To promote ecologically sustainable development of marine and inland aquaculture; and
- To maximise benefits to the community from the State’s aquaculture resources; and
- Otherwise to ensure the efficient and effective regulation of the aquaculture industry.

Ecologically sustainable development has been clearly defined and accepted as a guiding framework. However, in practice its application is problematical since its principles can be contradictory, weighted inconsistently and interpreted in widely different ways. Consequently, application of the principles of ecologically sustainable development requires clearly defined conceptual framework that maps out the application of general ecologically sustainable development objectives in the aquaculture context, the scope of the issues that need to be addressed and how progress will be assessed and reported.

This policy represents the first step in the development of a framework for the ecologically sustainable development of the aquaculture industry in South Australia.

ANALYSIS AND REASONING

SUSTAINABILITY REPORTING

The Standing Committee on Fisheries and Aquaculture¹ agreed in 1999 to develop a national framework for the ecologically sustainable development of fisheries and aquaculture. A key outcome of this process has been the development of the “How To Guide” for sustainability reporting in wild fisheries. A similar guide is currently being prepared for the aquaculture sector. Nonetheless, the principles developed in the wild fisheries guide have broad application to aquaculture.

The reporting framework consists of three parts:

- Component trees to identify the issues specific to each sector by sub-dividing each component until it reaches a level where operational objectives, indicators and performance measures can be specified;
- A risk assessment and prioritisation process to objectively determine which of these issues are sufficiently significant to warrant management actions and hence a report on performance with justification for assigning low priority or low risk; and
- An assessment of performance for each of the lowest level components using a standard set of report headings.

Policy 1. Sustainability Reporting

1. Assessment of the sustainability of South Australia’s aquaculture industry will be consistent with national standards and will be incorporated in the annual report on the operation of the Aquaculture Act required in accordance with the provisions of that Act within twelve months of authorisation of this policy.
2. Independent auditing of sustainability reports for South Australia’s aquaculture industry and the Aquaculture Act will be introduced within five years of authorisation of this policy.

RESOURCE MANAGEMENT PLANNING

The appropriate location and spatial distribution of aquaculture at the sector level through the development of zoning and regional policies is essential to the development of a comprehensive strategy for the ecologically sustainable development of the industry. Identification of social, environmental, technical and economic issues requires an understanding of the development context (biological, physical and socioeconomic characteristics) and the nature of actual and potential activities or developments (technical, economic, social and environmental characteristics). The establishment of this context requires an iterative and adaptive approach involving assimilation of existing information, identification of key issues, identification of further information and research needs and collection of information.

¹ Now incorporated in the Marine and Coastal Committee of the Natural Resources Management Standing Committee.

The Aquaculture Act provides for the development of aquaculture policies that may introduce zoning provisions for aquaculture and establish a policy framework in which aquaculture development occurs.

Policy 2. Resource Management Planning

1. Aquaculture resource management policies will be consistent with the information contained in the accompanying policy report.
2. Resource management policy reports will include details of:
 - a. The character of the surrounding environment including ecological, socioeconomic, biogeographical and oceanographical context.
 - b. Potential environmental impacts of aquaculture including:
 - i. Nature of those impacts;
 - ii. Degree to which impacts are predictable;
 - iii. Potential impacts on environmentally sensitive areas;
 - iv. Ability of the environment to cope with change;
 - v. Degree to which potential impacts may be reversible;
 - vi. Degree to which impacts can be managed or mitigated; and
 - vii. Extent to which impacts, and requirements for monitoring and assessing impacts, will be ongoing.
 - c. Results of investigations undertaken to address the social, economic and environmental issues associated with aquaculture and a statement as to how these issues can be managed.
 - d. Consultation undertaken in preparing the draft aquaculture policy.
 - e. Any public or interest group consultation to be undertaken during exhibition of the draft aquaculture policy.

TENURE ALLOCATION

The Aquaculture Act establishes the Aquaculture Tenure Allocation Board. This Board has a number of core advisory roles in relation to aquaculture tenure including:

- Development of criteria for tenure allocation decision-making processes;
- Appropriate tenure allocation processes;
- Selection of preferred operators in accordance with Government policy; and
- Appropriate forms of tenure and tenure conditions.

The key objective of tenure allocation process under the Aquaculture Act is to allocate tenure to operators who will use the marine resource at an optimum level (in terms of quality and quantity of output relative to the capacity of the environment). While the Aquaculture Act includes constraints on the way in which certain forms of aquaculture tenure is allocated, specific allocation processes

There are three alternatives for allocation of public resources although within each alternative there are a number of variations:

- Non-competitive allocation;
- Allocation by ballot; and
- Competitive allocation.

Policy 3. Non-competitive Allocation

1. Allocation of aquaculture tenure is subject to consistency with relevant policies under the Aquaculture Act.
2. Allocation of aquaculture tenure is subject to the grant of an aquaculture licence for the proposal.
3. Allocation of aquaculture tenure outside aquaculture zones and prospective aquaculture zones is non-competitive.
4. Allocation of aquaculture tenure outside aquaculture zones and prospective aquaculture zones is subject to the ability of the applicant to meet business viability and environmental management criteria to the satisfaction of the Minister on advice from the Aquaculture Tenure Allocation Board.
5. Business viability criteria will be assessed by the Aquaculture Tenure Allocation Board on the basis of a business plan submitted with the application, which will include:
 - a. Nature of the proposal;
 - b. Economic benefit to the State;
 - c. Technical capacity;
 - d. Business capacity;
 - e. Environmental management capacity; and
 - f. Other relevant criteria published by the Minister.
6. Conditions determined for tenure of pilot leases will have regard to and be consistent with relevant policies established by the Minister.

Policy 4. Allocation by ballot

1. Allocation of aquaculture tenure is subject to consistency with relevant policies under the Aquaculture Act.
2. Allocation of aquaculture tenure is subject to the grant of an aquaculture licence for the proposal.
3. Allocation of aquaculture tenure in prospective aquaculture zones is subject to the ability of the applicant to meet business viability and environmental management criteria to the satisfaction of the Minister on advice from the Aquaculture Tenure Allocation Board.
4. Business viability criteria will be assessed by the Aquaculture Tenure Allocation Board on the basis of a business plan submitted with the application, which will include:
 - a. Nature of the proposal;
 - b. Economic benefit to the State;
 - c. Technical capacity;
 - d. Business capacity;
 - e. Environmental management capacity; and
 - f. Other relevant criteria published by the Minister.

5. Allocation of aquaculture tenure in prospective aquaculture zones will be based on a ballot or other similar process when the number of applications exceeds the number of available sites.
6. Conditions determined for tenure of pilot leases, development leases and production leases will have regard to and be consistent with relevant policies established by the Minister.

Policy 5. Competitive Allocation

1. Allocation of aquaculture tenure is subject to consistency with relevant policies under the Aquaculture Act.
2. Allocation of aquaculture tenure is subject to the grant of an aquaculture licence for the proposal.
3. Applications for aquaculture tenure in aquaculture zones will only be accepted in response to a call for expressions of interest by the Minister.
4. Allocation of aquaculture tenure in aquaculture zones is subject to the selection of a preferred applicant by the Minister based on published selection criteria and advice from the Aquaculture Tenure Allocation Board.
5. Criteria for allocation of aquaculture tenure in aquaculture zones will be published by the Minister and include:
 - a. Nature of the proposal;
 - b. Economic benefit to the State;
 - c. Technical capacity;
 - d. Business capacity;
 - e. Environmental management capacity; and
 - f. Other relevant criteria published by the Minister.
6. Merit will be assessed by the Aquaculture Tenure Allocation Board on the basis of a business plan and environmental management strategy submitted with the application.
7. Conditions determined for tenure of pilot leases, development leases and production leases will have regard to and be consistent with relevant policies established by the Minister.
8. In the event Aquaculture Tenure Allocation Board is unable to determine between applications of equal merit a ballot may be used.

ⁱ Anon. 1992. *National Strategy for Ecologically Sustainable Development*. Commonwealth of Australia, Canberra, ACT.

ⁱⁱ Staples, D. (1997) 'Indicators of Sustainable Development.' in: *Developing and Sustaining World Fisheries Resources*. Second World Fisheries Congress. pp 719-725

ⁱⁱⁱ Anon. 1997. *Assessing sustainable Development: Principles in Practice*. Hardi, P. and Zdan, T. (editors). International Institute for Sustainable Development, Canada.

^{iv} Diesendorf, M. & Hamilton, C. 1997. *Human Ecology, Human Economy: Ideas for an Ecologically Sustainable Future*. Allen and Unwin, Sydney, NSW.