



**Government of South Australia**  
Primary Industries and Resources SA

## **Stakeholder Information Paper**

**to accompany  
draft Aquaculture Policies  
made under the *Aquaculture Act 2001*  
that have been released for public consultation.**

**version 3 – current as at 13/12/2006**

## 1 BACKGROUND

The Minister for Agriculture, Food and Fisheries (“the Minister”) may, in accordance with the *Aquaculture Act 2001* (“the Act”), make aquaculture policies for any purpose directed towards securing the objects of the Act. The Minister must prepare a Policy Report in relation to a draft Policy, containing:

- An explanation of the purpose and effect of the draft Policy;
- A summary of any background and issues relevant to the draft Policy and of the analysis and reasoning applied in formulating the Policy; and
- An assessment of the consistency of the draft Policy with the Planning Strategy and any relevant Development Plan under the *Development Act 1993*, any relevant environment protection Policy under the *Environment Protection Act 1993*, and any other relevant plans or policies.

This Stakeholder Information paper accompanies draft aquaculture policies and Policy Reports that have been released for public consultation under Section 12 of the *Aquaculture Act 2001*. The Stakeholder Information paper provides broader information on aquaculture and aquaculture management and may assist members of the community in preparing submissions during the public consultation period.

Public comments are not sought on the Stakeholder Information paper.

## 2 CONSULTATION

The Aquaculture Policy and accompanying Policy Report have been developed with input from other government agencies, regional stakeholders, local governments and industry. The Report and the Policy will be further referred to prescribed bodies and relevant public authorities as well as regional stakeholders, local indigenous communities, Native Title claimants, local governments and industry for comment. Comments will be invited once the Aquaculture Advisory Committee (AAC) and the Minister have given approval for release.

Interested persons are invited to make written submissions in relation to the draft Policy within a 2 month period from the date of advertisement.

Following consultation, the Minister must consult with and consider the advice of the AAC on all matters raised as a result of public consultation.

Following approval of the draft Policy by the Minister, the draft Policy must be referred to the Environment, Resources and Development Committee of the Parliament (ERDC), as prescribed by the *Aquaculture Act 2001*. The ERDC may approve the Policy; seek amendments to the Policy or object to the Policy. In the event the ERDC objects to the draft Policy, the Policy must be laid before both Houses of Parliament where either House may disallow it.

### 3 BENEFITS OF AQUACULTURE

The aquaculture industry plays an important role in creating wealth and prosperity for the State, particularly in regional communities<sup>1</sup>. The aquaculture industry in South Australia has recorded strong growth in volume and product range during the past decade, and this trend is set to continue. Aquaculture is also evolving, with more environmentally sustainable development, and increased investigation of inland ventures using recycled water.

The South Australian Seafood Food Plan estimates the seafood industry (including wild fisheries) will produce \$2 billion by 2015<sup>2</sup>. The contribution of fisheries is likely to remain static, and much of the growth will be met by aquaculture. Aquaculture Policies may assist the National Aquaculture Industry Action Agenda in meeting targets of \$2.5 billion production from the aquaculture sector by 2010.

South Australia produces 38% of Australia's aquaculture production and 14% of the national seafood production<sup>3</sup>. Of the state's seafood production, 49.8% is from aquaculture product<sup>4</sup>. This trend is reflected worldwide with expectations that, by 2030, aquaculture will produce 50% of the global seafood demand<sup>5</sup>. The State aquaculture industry body, the SA Aquaculture Council has published industry targets, estimating that by 2013, aquaculture production in South Australia will generate a farm gate value of \$650 million.

The value of the South Australian aquaculture industry output (direct and flow-on) was estimated at over \$518 million in 2004/2005, a total direct output of over \$242 million (farm-gate and associated direct business turnover impacts in the processing, transport, retail and food sectors) and further business turnover (output) of \$276 million in other South Australian industries.

### 4 SOCIAL IMPACTS OF AQUACULTURE

In terms of employment, 1,541 jobs were generated directly in aquaculture, 346 jobs in "downstream" activities and approximately 1,478 flow on jobs generated in other sectors of the State's economy in 2004/2005<sup>6</sup>.

The aquaculture sector can be seen to provide social benefits through jobs and additional income, which leads to improved social cohesion,

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<sup>1</sup> Herrería, E., Woodhead, A, Tottenham, R, Magpantay, C. (2004). Social profile of people employed in the Agriculture, Forestry and Fishing industries. Rural Industries Research and Development Corporation Publication No 04/122.

<sup>2</sup> SIDSC. (2005). *SA Seafood Food Plan 2005-2015*. Seafood Industry Development Steering Committee

<sup>3</sup> ABARE (2005). *Australian Fisheries Statistics 2004*, Canberra

<sup>4</sup> EconSearch. (2006). *The Economic Impact of Aquaculture on the South Australian State and Regional Economies, 2004/05*. A report prepared for PIRSA Aquaculture.

<sup>5</sup> FAO (2000) *State of World Fisheries and Aquaculture*, FAO Fisheries Department, Rome.

<sup>6</sup> EconSearch. (2006). *The Economic Impact of Aquaculture on the South Australian State and Regional Economies, 2004/05*. A report prepared for PIRSA Aquaculture.

increased training opportunities, additional business opportunities and improved social stability, particularly in rural and regional South Australia.

## **5 REGIONAL IMPACTS OF AQUACULTURE**

The aquaculture industry in South Australia has developed rapidly in recent years. Through its relatively large requirement for labour and material inputs, the industry has shown the potential to increase the diversity of local economies. The demand for local labour, goods and services can help offset the contraction of other local industry and may assist in alleviating the range of economic and social pressures associated with declining regional economies.

## **6 AQUACULTURE LEASES AND LICENCES**

The Act is the main piece of legislation governing the management, control and development of the aquaculture sector. The Act includes provisions giving the Minister for Agriculture, Food and Fisheries the powers to grant aquaculture licences and the power to make decisions on licence conditions, as well as conditions and terms of leases.

The *Aquaculture Regulations 2005* establishes an environmental assessment, monitoring and management framework for all sectors of aquaculture.

The Act provides for an integrated licensing and tenure system and provides a flexible approach to the granting of rights to occupy State waters. Under the Act, a licence may not be granted for aquaculture in State waters unless the area is subject to a lease granted by the Minister. The Act allows for four types of lease, namely pilot, development, production and emergency leases.

Applications for leases within an aquaculture zone must be allocated through a process approved by the Aquaculture Tenure Allocation Board (ATAB). A public call is made inviting applicants to submit their proposal on the required application form. These applications are assessed by the ATAB who then make a recommendation to the Minister on which applications should proceed. Once the tenure has been provisionally granted, a licence assessment will be undertaken.

The competitive allocation process ensures a fair and efficient means of allocating the State's marine aquaculture resources.

Applications for pilot leases outside an aquaculture zone are not subject to a competitive allocation process, however ATAB are notified of all pilot lease applications.

## **7 MANAGEMENT OBLIGATIONS**

Management obligations are those requirements an aquaculture operator must undertake according to the *Aquaculture Act 2001* and other relevant legislation. Penalties for failures of compliance include expiation fees, fines and suspension or cancellation of licence.

## 8 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

The Policy has been designed to guide the development of an ecologically sustainable aquaculture industry within available marine resources and their existing use. The Policy is not designed as a comprehensive management framework for the protection of the whole marine environment. The Policy cannot consider all issues for individual aquaculture applications to the detail required for a complete assessment of the environmental risks of an application.

An application for an aquaculture licence is assessed by the Primary Industries and Resources South Australia (PIRSA) to determine the likely environmental, social and economic interactions it may have. The aim of the assessment is to assist in the management of risks to the sustainable development of South Australia's land-based and marine resources and to protect biological diversity and ecological processes and systems. Environmental impacts associated with a proposed development are to be managed appropriately under the conditions of an aquaculture licence. It should be noted that, in accordance with Section 52 of the Act, the Minister may vary licence conditions at any time to prevent or mitigate significant environmental harm or the risk of significant environmental harm.

## 9 ENVIRONMENTAL MONITORING AND MANAGEMENT

Environmental regulation is supported through the *Aquaculture Regulations 2005*, which stipulates details for waste management, chemical use and environmental monitoring and reporting.

Environmental interactions are managed both at the application stage and through ongoing environmental monitoring. Applications are subject to a risk assessment that considers a number of environmental, social and economic issues that may arise should the operation be licensed. This process is consistent with PIRSA Aquaculture's Environmental Management policy and the nationally agreed Ecologically Sustainable Development reporting framework<sup>7</sup>. The environmental risk assessment component considers the nature of the specific activity relative to the environment in which it will be undertaken at different spatial scales, namely; at the level of the individual site, at the bay or catchment level and at the regional or whole-of-industry level. Risks are ranked and managed according to their priority and complexity. Once licensed, each farm is required to provide an annual Environmental Monitoring Program (EMP) report. The Policy Report contains site-specific information necessary to assist sustainable development and manage significant interactions with the environment.

## 10 MARINE AND OTHER ANIMAL INTERACTIONS

The requirement to report interactions (such as entrapments or entanglements of seabirds and large marine vertebrates) form part of

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<sup>7</sup> Fletcher, W. J. Chesson, J., Fisher M., Sainsbury, K. J., and Hundloe, T. (2004) *National ESD Reporting Framework: The 'How To' Guide for Aquaculture*. FRDC Project 2000/145.1, Canberra, Australia 75 pp.

licence conditions and Regulations under the *Aquaculture Act 2001*. If interactions occur then modifications to farming practices may be required.

All licensees are required to submit a Seabird and Large Marine Vertebrate Interaction Avoidance Strategy, which satisfies the Minister, at the commencement of operations. The strategy details what procedures the licensee will implement to minimise the risk and manage incidences of entanglement or entrapment of seabirds, dolphins, seals, sharks and whales. Operators will be audited against the operating practices detailed in their strategy at any time. Failure to comply with the strategy may result in an expiation fee or fine.

## 11 HEALTH CONTROLS

A range of health controls is included in the management of licensed aquaculture activities. All applications for new aquaculture licences are assessed for health risks as part of the ESD assessment. Regulations under the *Aquaculture Act 2001* require that operators report to the Department of Primary Industries and Resources South Australia (PIRSA) any increases in background mortality and must not move any animals showing signs of clinical disease without Ministerial approval. Requirements designed to manage other on-farm activities are included in a variety of legislation and policy.

Diseases of particular concern and those that are regarded as posing particular threats to environmental, economic or social processes are listed as notifiable under the *Livestock Act 1997*. It is an offence under that Act to fail to report the occurrence, or suspected occurrence, of a notifiable condition. Translocation of organisms is managed through a process of Import Risk Analysis. The outcomes of these analyses, which include factors to reduce risk of disease or pest introduction and consideration of genetic integrity, are included in Orders under the *Livestock Act*, including the *Livestock (Restrictions on Entry of Aquaculture Organisms) Notice 2005*. Use of any therapeutants or treatments can be conducted only under a Ministerial approval (for off-label use as defined by the *Veterinary Practice Act 2003*), or under conditions specified by the Australian Pesticides and Veterinary Medicines Authority, either on the label of registered products or included in Minor Use Permits.

Disease issues are considered during the licence application stage by conducting a risk assessment that takes into consideration the culture technique, technology and specific environment of the application.

Activities that may pose a risk have risk mitigation procedures imposed and are carefully monitored, including the reporting of mortalities and translocation activities.

## 12 EXOTIC SPECIES

There are potential risks associated with the introduction of organisms not from the local environment. For the protection of the aquaculture industry, and of the natural environment, controls must be maintained on the introduction and movement of aquatic organisms, bearing in mind the

potential risks involved with aspects of disease and genetic manipulation. Potential genetic issues are addressed as part of the ESD risk assessment and licence application process.

The primary concerns associated with the introduction of non-native organisms are that they may form feral populations, which may compete for habitat and reduce the availability of nutrients to local organisms.

## **13 STOCK ESCAPES**

The potential for escape of aquaculture stock from a site is considered during the ESD risk assessment of the application. This assessment considers the level of risk presented by the species under consideration and the technology used. Consideration will be given to the source of the cultured stock and whether it is present in the area of the farm. Regulations under the *Aquaculture Act 2001* require operators be proactive by undertaking the development of escape prevention strategies and immediately reporting escaped stock.

## **14 DOING IT BETTER – RESEARCH AND ADAPTIVE MANAGEMENT**

Evidence based policies require robust research to inform the decision making process. As such PIRSA Aquaculture has initiated several projects with the Fisheries Research and Development Corporation (FRDC) to improve our knowledge and inform our policies, in particular, the PIRSA /FRDC Innovative Solutions for Aquaculture Planning and Management Program. This suite of projects aims to develop tools to ensure a sustainable and competitive aquaculture industry for South Australia. These tools will:

- Identify more effective ways to manage aquaculture;
- Minimise the regulatory burden on industry; and
- Ensure that environmental considerations for South Australian aquaculture remain a clear priority.

Research is currently underway in the areas of:

- a) Environmental audits of marine aquaculture – this project aims to quantify the real and perceived environmental risks surrounding aquaculture and further develop and refine environmental monitoring;
- b) Addressing seal interactions – this project is designed to provide a better understanding of how seals behave in the marine environment and has already produced results of significant conservation value. The data gathered will allow zones to be located taking into consideration knowledge of seal habitat use around Port Lincoln and the West Coast. This project represents a considerable increase in pinniped research nationally;
- c) Spatial impacts and carrying capacity of aquaculture stock – this project aims to further refine the mathematical modelling of carbon and nutrient deposition from aquaculture farms;
- d) Parasite interactions between wild and farmed yellowtail kingfish – this project aims to proactively assess the risks to both wild and farmed stocks from parasite transmission; and

- e) Further projects are planned to develop environmental indicators (allowing the development of more efficient environmental monitoring programs) and also incentive instruments (to encourage participation in proactive environmental management programs).

In addition, PIRSA Aquaculture supports studies commissioned by the Aquafin Cooperative Research Centre (CRC) involving six research programs for the Port Lincoln-based southern Bluefin tuna (*Thunnus maccoyii*) aquaculture industry including; production, value-adding, environment, technology transfer and commercialisation, and education and training. Similar Aquafin CRC projects are operating for the Atlantic salmon (*Salmo salar*) aquaculture industry in Tasmania along with research of striped trumpeter (*Latris lineata*) and Australian snapper (*Chrysophrys auratus*) production in Tasmania and New South Wales respectively.

## 15 SITE DECOMMISSIONING

There will be times when an aquaculture site in the zone is no longer being used. In this case the lease contract requires that the site be rehabilitated by the lessee at the expiry of the lease. The lease also requires the operator to be party to an approved indemnity scheme or bank guarantee.