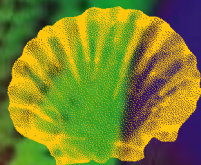


# aquaplan



Australia's National Strategic Plan for  
Aquatic Animal Health 1998-2003

AQUAPLAN outlines Australia's national strategic plan for aquatic animal health. It was jointly developed by State, Territory and Commonwealth Governments, and private industry sectors. The production of this AQUAPLAN brochure was coordinated by the National Office of Animal and Plant Health within the Commonwealth Department of Agriculture, Fisheries and Forestry on behalf of the Fish Health Management Committee.

Ministerial Council on Forestry, Fisheries and Aquaculture endorsed AQUAPLAN, April 1999.

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**NATIONAL OFFICE OF ANIMAL AND PLANT HEALTH**  
**NATIONAL OFFICE OF FOOD SAFETY**

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# Foreword

Australia's fisheries and aquaculture industries are a rapidly growing sector of our primary industries. Their capacity to contribute through export earnings and job creation especially in regional Australia is a vital part of our future prosperity. Australia is fortunate to have our aquatic animal sector free from many diseases that occur elsewhere in the world and this provides us with a comparative advantage in both production and trade. Australia's capacity to produce "clean green" seafood of superior quality allows ready access to overseas markets, enhances competitiveness and also provides value adding through the capacity to attract premium prices.

It is vital for Australia to maintain this disease free status and I am pleased therefore to release AQUAPLAN, Australia's five year National Strategic Plan for Aquatic Animal Health. AQUAPLAN is a comprehensive document describing initiatives ranging from border controls and import certification through to enhanced veterinary education and improved capacity to manage incursions of exotic diseases. The eight programs described in this plan represent a world first in proactive management of aquatic animal health.

I am pleased to see that industry and government, in working together on the development of AQUAPLAN, have recognised the importance of an integrated and planned approach on aquatic animal health.

Implementation of the strategic directions in AQUAPLAN will build on the efforts of industry and government to date and ensure profitable and sustainable development of Australia's fisheries and aquaculture industries.



Warren Truss

Minister for Agriculture, Fisheries and Forestry

September 1999



# Executive Summary

AQUAPLAN is a broad, comprehensive strategy that outlines objectives and projects to develop a national approach to emergency preparedness and response and to the overall management of aquatic animal health in Australia.

AQUAPLAN was developed in response to the *Report of the National Task Force on Imported Fish and Fish Products* (1996) and *Australian Quarantine: A Shared Responsibility* (1996). Funding was allocated to the Commonwealth Department of Agriculture, Fisheries and Forestry – Australia, AFFA (previously the Commonwealth Department of Primary Industries and Energy) to coordinate the development of a strategic plan for aquatic animal health management.

AQUAPLAN has been jointly developed by Government and private industry sectors and seeks to build and enhance capacity for the management of aquatic animal health. It has been developed in a manner consistent with existing arrangements in the terrestrial animal sector and, wherever possible, links into existing State/Territory Government and industry health management arrangements.

The Ministerially appointed Fish Health Management Committee (FHMC) is the body which oversees the development of AQUAPLAN. The FHMC is chaired by Gardner Murray, the Managing Director of the National Offices of Animal and Plant Health and Food Safety and comprises representatives from the Standing Committee on Agriculture and Resource Management (SCARM), the Standing Committee on Fisheries and Aquaculture (SCFA), the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Animal Health, the Australian Seafood Industry Council (ASIC), recreational fisheries (RecFish Australia) and representatives from the peak aquaculture industry bodies of Australia.

AQUAPLAN comprises eight key programs under which government and private sectors have identified priority projects to achieve the program objectives. Together these objectives will assist in maximising Australia's ability to control aquatic animal disease outbreaks, maintain market access, support quality assurance and improve the productivity and sustainability of Australia's aquatic animal production industries. Wherever possible, AQUAPLAN projects link into existing terrestrial animal health arrangements in order to avoid duplication and to maximise sensible use of resources.

The eight key AQUAPLAN programs are:

1. International Linkages
2. Quarantine<sup>1</sup>
3. Surveillance, Monitoring and Reporting
4. Preparedness and Response
5. Awareness
6. Research and Development
7. Legislation, Policies and Jurisdiction
8. Resources and Funding.

Program four of AQUAPLAN, Preparedness and Response includes the development of AQUAVETPLAN, an aquatic animal disease veterinary emergency plan. AQUAVETPLAN is based on the existing terrestrial animal emergency disease management plan, AUSVETPLAN which was conceptualised in the late 1970s and became operational in 1991. AQUAVETPLAN will comprise a series of manuals outlining emergency preparedness and response and control strategies for aquatic animal disease emergencies in Australia.

This document represents an outline of the strategic approach, agreed upon by private industry sectors and government and endorsed by the FHMC, to manage aquatic animal health in Australia for the next five years. Adjustments to AQUAPLAN may become necessary as progress is reviewed. Updates and progress reports will be provided to stakeholders through the FHMC.

For further information regarding AQUAPLAN please contact:

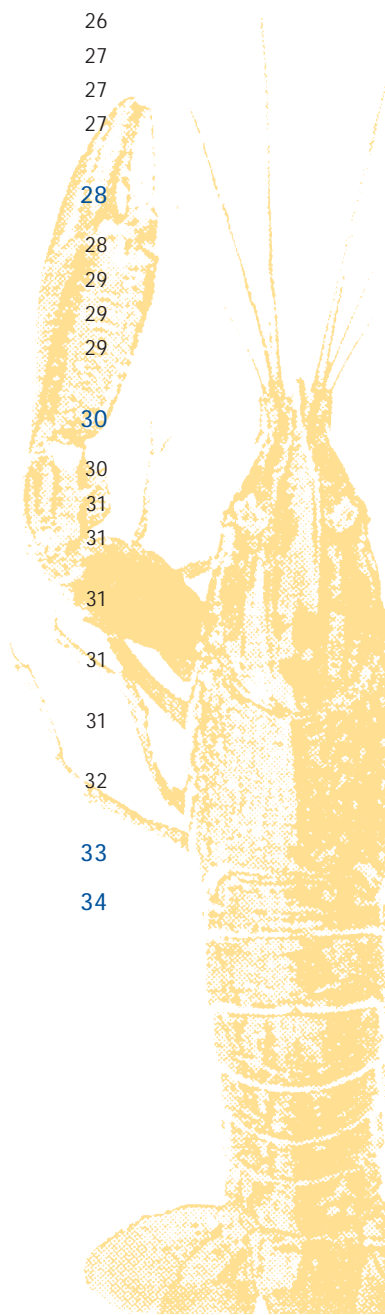
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<sup>1</sup> Given the statutory nature of international quarantine under the *Quarantine Act 1908*, the Australian Quarantine and Inspection Service has primary carriage for this AQUAPLAN Program

# Contents

FOREWORD	3
EXECUTIVE SUMMARY	5
TABLE OF CONTENTS	7
AQUAPLAN - THE BACKGROUND	9
AQUAPLAN - THE DIRECTION FOR THE FUTURE	11
THE EIGHT PROGRAMS OF AQUAPLAN	11
REVIEW AND EVALUATION OF PROGRESS	12
<b>PROGRAM 1 - INTERNATIONAL LINKAGES</b>	<b>13</b>
CURRENT STATUS	13
KEY ISSUES	14
Project 1.1. Regional Cooperation on Technical Standards	14
Project 1.2. OIE Disease Categorisation	14
Project 1.3. International Disease Reporting	14
<b>PROGRAM 2 - QUARANTINE</b>	<b>15</b>
CURRENT STATUS	15
KEY ISSUES	16
Project 2.1. Import Risk Analysis for Imported Aquatic Animals and Aquatic Animal Products and Quarantine	16
Project 2.2. Quarantine	16
Project 2.3. Quarantine Import Reporting	17
<b>PROGRAM 3 - SURVEILLANCE, MONITORING AND REPORTING</b>	<b>18</b>
CURRENT STATUS	18
KEY ISSUES	19
Project 3.1. Surveillance and Monitoring for Aquatic Animal Diseases	19
Project 3.2. Reporting Arrangements	19
Project 3.3. Zoning for Aquatic Animal Diseases	20
<b>PROGRAM 4 - PREPAREDNESS AND RESPONSE</b>	<b>21</b>
CURRENT STATUS	21
KEY ISSUES	22
Project 4.1. Consultative Committee on Emergency Animal Diseases (CCEAD)	22
Project 4.2. AQUAVETPLAN	22

<b>PROGRAM 5 - AWARENESS</b>	<b>23</b>
CURRENT STATUS	23
KEY ISSUES	25
Project 5.1. Public Awareness and Communication	25
Project 5.2. Education and Training	25
Project 5.3. Extension Services	25
Project 5.4. Quality Assurance and Food Safety	25
<b>PROGRAM 6 - RESEARCH AND DEVELOPMENT</b>	<b>26</b>
CURRENT STATUS	26
KEY ISSUES	27
Project 6.1. Strategic Plan for Focussed and Prioritised Research	27
Project 6.2. Specific Research Needs	27
<b>PROGRAM 7 - LEGISLATION, POLICIES AND JURISDICTION</b>	<b>28</b>
CURRENT STATUS	28
KEY ISSUES	29
Project 7.1. Legislation, Policies and Jurisdiction	29
Project 7.2. Translocation	29
<b>PROGRAM 8 - RESOURCES AND FUNDING</b>	<b>30</b>
CURRENT STATUS	30
KEY ISSUES	31
Project 8.1. On-Going Funding Arrangements for AQUAPLAN	31
Project 8.2. Funding to Underpin Aquatic Animal Disease Emergency Response Arrangements (AQUAVETPLAN)	31
Project 8.3. Continuing Funding to Support Disease Monitoring and Surveillance and Reporting Activities	31
Project 8.4. Continuing Funding to Support Development of Awareness and Promotion for Aquatic Animal Diseases	31
Project 8.5. Evaluate the Potential for Insurance Companies and Underwriters to provide Compensation Coverage	32
<b>LIST OF ACRONYMS</b>	<b>33</b>
<b>CONTACTS</b>	<b>34</b>





# AQUAPLAN

## The Background

In November 1995, the Standing Committee on Fisheries and Aquaculture (SCFA) reported to the Ministerial Council on Forestry, Fisheries and Aquaculture (MCFFA) that priority should be given to developing a national response mechanism for fisheries and aquaculture emergencies. Several comprehensive reviews have since been formally tabled within Australia; they critically assess, and make recommendations for, Australia's national response to fisheries and aquaculture emergencies<sup>2</sup>, Australia's quarantine including aquatic animal quarantine<sup>3,4</sup>, imported fish and fish products<sup>5</sup>, and management of incursions of pests, weeds and diseases<sup>6</sup>.

The Australian Government has a strong commitment towards aquatic animal health issues to ensure the effective and sustainable development and profitability of Australia's aquatic animal industries. In this context, the prevention and management of diseases are of paramount importance. In 1997, following a Cabinet decision relating to the various reports (see footnotes), the Federal Government allotted \$6.7 million dollars over four years to the then Commonwealth Department of Primary Industries and Energy, now Department of Agriculture, Fisheries and Forestry – Australia (AFFA) to implement the recommendations of both reports and develop a comprehensive aquatic animal health plan for Australia. Within AFFA, the Fisheries and Aquaculture Branch (FAB) and the Aquatic Animal Health Unit of the Office of the Australian Chief Veterinary Officer, now National Office of Animal and Plant Health (NOAPH) coordinated the drafting of such a plan (AQUAPLAN) and, together with the Australian Quarantine and Inspection Service (AQIS) and the former Animal and Plant Health Branch of the Bureau of Resource Sciences commenced work on the specific tasks identified in the Nairn<sup>3</sup> and Higgins<sup>5</sup> reports.

2 Jones 1995: *Managing the National Response to Fisheries and Aquaculture Emergencies*

3 Nairn, M. E., Allen, P. G., Inglis, A. R. and Tanner C. 1996: *Australian Quarantine: a shared responsibility*. Department of Primary Industries and Energy, Canberra. 284pp – website: <http://www.dpie.gov.au/dpie/committee/quarantine/report/quarrev.html>

4 Nunn, M. J. 1995: *Aquatic Animal Quarantine in Australia: Report of the Scientific Working Party on Aquatic Animal Quarantine*. Bureau of Resource Sciences, Canberra. 45pp.

5 Higgins, R. A. (chair) 1996: *Report of the National Task Force on Imported Fish and Fish Products*. Department of Primary Industries and Energy, Canberra. 269 pp – website: <http://www.affa.gov.au/fisheries/imports/taskforce/index.html>

6 *Report of the Standing Committee on Agriculture and Resource Management's Task Force into Managing Incursions of Aquatic Pests, Weeds and Diseases: 1997.*

The Ministerially appointed Australian Fish Health Management Committee (FHMC) convened a meeting of Commonwealth and State/Territory delegates and key private industry sector representatives from April 28th to 29th, 1998, to gain the views of a broader spectrum of stakeholders on the draft plan, especially to seek agreement on the main objectives, and to critically assess whether those objectives would be met by the outlined draft strategy. FHMC is chaired by the Managing Director of the National Offices of Animal and Plant Health and Food Safety and comprises representatives from the Standing Committee on Agriculture and Resource Management (SCARM), SCFA, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Animal Health, the Australian Seafood Industry Council (ASIC), recreational fisheries (RecFish Australia) and representatives from the peak aquaculture industry bodies of Australia. The meeting was held as a strategic planning workshop, with four working groups presenting their findings to the plenum and FHMC. Directly afterwards, FHMC members met, endorsed AQUAPLAN and set the steps for future progress.

This document represents an outline of the approach, agreed upon by industries and Governments and endorsed by FHMC, on a five-year strategy to manage aquatic animal health in Australia.



# AQUAPLAN

## The Direction for the Future

This summary document represents an outline of the strategic approach, agreed upon by industries and Governments and endorsed by the Fish Health Management Committee, to manage aquatic animal health in Australia for the next five years. Adjustments to AQUAPLAN may become necessary as progress is reviewed. Updates and progress reports will be provided to stakeholders through the FHMC.

### The eight programs of AQUAPLAN

There are numerous issues for a national aquatic animal health plan, and there are various ways to group them. Inherently, these issues do not stand alone; rather do they interrelate closely and widely. Thus, AQUAPLAN may be thought of as a net consisting of many different issues connected by a web-like structure of lines. For practicality, these issues have been grouped into larger programs, with a manageable number of projects for each.

AQUAPLAN consists of eight programs covering:

- 1. International Linkages**
- 2. Quarantine**
- 3. Surveillance, Monitoring and Reporting**
- 4. Preparedness and Response Arrangements**
- 5. Awareness**
- 6. Research and Development**
- 7. Legislation, Policies and Jurisdiction**
- 8. Resources and Funding**

AQUAPLAN is a strategic plan. The eight programs provide the necessary framework to develop and implement comprehensive operational plans for aquatic animal health issues. Each program consists of specific projects and project components, which have been identified as the most effective means of meeting the program objectives. 'Drivers' for the individual projects and components must be identified, and detailed business plans and operational plans need to be developed. Most projects have commenced and are well underway.

### **Review and evaluation of progress**

The success of AQUAPLAN is dependent on a sustained sense of ownership and collaborative approach at all levels of Government and industry. The realisation of many projects primarily relies on the leadership and input of the private sectors.

A formal review and evaluation process has been developed by FHMC. This process will be implemented to ensure the timely delivery of project outputs, and a continuous fine-tuning of objectives as well as the means to meet them.

Meeting the objectives of AQUAPLAN will result in improved aquatic animal health management in Australia. Wild capture fisheries and aquaculture will benefit, as well as the ornamental fish sector and recreational fisheries, through increased productivity, improved sustainability of aquaculture, improved market access and better protection for our aquatic ecosystems.



# Program 1 International Linkages

## Objectives

- To promote and defend Australia's international trade interests in aquatic animals and their products, by
  - improving Australia's international trade status as a responsible importer and exporter of aquatic animals and products;
  - increasing Australia's international influence in establishing international and regional standards and guidelines through providing technical and scientific leadership.

## Current Status

Australia will increasingly seek overseas market access for its aquatic animal produce. To achieve this goal, we must be able to supply our trading partners with information on the health status of our aquatic animal populations. Equally, we will require equivalent information on potential imports.

Responsible reporting is a prerequisite to gain a trustworthy trade reputation. Some of the reporting falls under Australia's legal reporting obligations to OIE (World Organisation for Animal Health). Australia wishes to remain an OIE member meeting those requirements in a timely and professional manner. For other reporting arrangements, such as regional reporting to the Network of Aquaculture Centres in Asia-Pacific (NACA), there is no legal arrangement overriding our sovereignty. However, a strongly supportive approach will be taken to promote and defend our trade interests.

Since January 1998, Australia is participating in a five year FAO/NACA/OIE *'Regional Programme for the Development of Technical Guidelines on Quarantine and Health Certification, and Establishment of Information Systems for the Responsible Movement of Live Aquatic Animals in Asia'*. There are over twenty Asia-Pacific countries participating in this program. Establishment of regional technical quarantine and health certification guidelines, initiation of regional aquatic animal disease reporting on an agreed-upon list of aquatic animal diseases, and commencement of an aquatic animal pathogen and quarantine information system (via a database) are priorities for 1999. For 2000, the development of national strategies to implement the regional technical guidelines into national regulations

Australia continues to deliberate with OIE on re-considering aquatic animal disease categorisation and notification schemes, *inter alia* to better represent the Southern hemisphere and Asia-Pacific situation in particular, in the *OIE International Aquatic Animal Health Code*.

## Key Issues

### Project 1.1. Regional Cooperation on Technical Standards

#### Components

- 1.1.1. Development of regional technical guidelines for aquatic animal quarantine and health certification.
- 1.1.2. Agreement on important diseases for the Asia-Pacific region (for a list of reportable diseases under NACA/OIE) and OIE endorsement.
- 1.1.3. Development of a data collection strategy for information on aquatic animal pathogens (in Australia) and commencement of entering such data into the FAO/NACA database 'AAPQIS' (Aquatic Animal Pathogen and Quarantine Information System).

### Project 1.2. OIE Disease Categorisation

#### Components

- 1.2.1. Establishment of a working group to further discussions with OIE on designing a model to categorise aquatic animal diseases.
- 1.2.2. Re-assess the current aquatic animal disease lists of OIE, and communicate findings to OIE.

### Project 1.3. International Disease Reporting

#### Components

- 1.3.1. Fulfilling international obligations to OIE on notifiable diseases of aquatic animals.
- 1.3.2. Fulfilling international obligations to OIE on providing annual reports on our aquatic animal health status.
- 1.3.3. Initiation of regional aquatic animal disease reporting to OIE/NACA on diseases identified as 'reportable' on a regionally agreed-upon list of aquatic animal diseases.

# Program 2 Quarantine

## Objectives

- To review all quarantine policies for aquatic animals and aquatic animal products using a science based, consultative and transparent risk analysis process.
- To review and improve post-arrival quarantine procedures and operations.
- To meet documented international requirements relating to the export of aquatic animals and aquatic animal products.

## Current Status

The Australian Quarantine and Inspection Service (AQIS) will manage this Quarantine program for which it has statutory and policy responsibilities. Internal quarantine issues such as monitoring and surveillance, and inter-State movement of aquatic animals, are dealt with primarily in other AQUAPLAN Programs (for example, Program 3 and Program 7).

AQIS has completed an *Import Risk Analysis Handbook*, available at the website address <http://www.aqis.gov.au/docs/anpolicy/risk.pdf> which explains Australia's international obligations and the relevant standards, and lays out in detail the import risk analysis (IRA) process.

Several individual IRAs have commenced (prawns and prawn products; ornamental fish; freshwater crayfish products; non-viable marine finfish products; non-viable bivalve molluscs; non-viable salmonid products). For these non-routine IRAs, scientific expertise is sought by AQIS outside of Agriculture, Fisheries and Forestry – Australia, to ensure that technical issues are fully addressed.

A training program for AQIS quarantine inspectors, which covers imported ornamental fish inspections, identification and disease recognition is nearing completion. This training program will provide inspectors with techniques and software to improve the effectiveness of both their AQIS inspection duties and those carried out on behalf of Environment Australia. AQIS is continuing to forge closer links with Environment Australia, with AQIS officers to be appointed as inspectors under the *Wildlife Protection (Regulation of Exports and Imports) Act 1982*.

The criteria for quarantine approved premises for live fresh water fish have been completed and comments received from industry. The implementation of these criteria will occur when all comments have been incorporated into the final draft. Once introduced, these arrangements will provide a greater degree of quarantine control over the design and operation of these premises.

The Animal Health Science and Emergency Management Branch of the National Office of Animal & Plant Health has been asked to complete an investigation of random sampling methods for fish products, to ensure that pathogen-inactivating treatments have been performed effectively. The report is to be finalised in 1999. AQIS officers will then receive training in random sampling techniques.

Export certification requirements are met in accordance with importing country requirements. Domestic animal health surveillance and monitoring critically underpin our export certification.

AQIS is presently developing commodity and non-commodity codes, which will enable more efficient identification of aquatic animals, and other imports. These codes will be used as the base for a reporting and query facility in the redeveloped electronic import system. The codes will be developed using the Harmonised Tariff System.

## Key Issues

### **Project 2.1. Import Risk Analysis for Imported Aquatic Animals and Aquatic Animal Products and Quarantine**

#### Components

- 2.1.1. Individual risk analyses for the major imported aquatic animal products of risk.
- 2.1.2. Publication of *Import Risk Analysis Handbook*<sup>7</sup>

### **Project 2.2. Quarantine**

#### Components

- 2.2.1. Review and regulation of post-arrival quarantine procedures for live fish.
- 2.2.2. Training of Quarantine Officers in aquatic animal quarantine.
- 2.2.3. Random sampling of imported fish products.<sup>8</sup>
- 2.2.4. Dissemination of quarantine information on fish and fish products.



### Project 2.3. Quarantine Import Reporting

#### Components

2.3.1. Gather requirements from client areas such as Plant and Animal Programs, the International Policy Division and the Import Operations Section.

2.3.2. In-house classification of commodity/reporting codes.

2.3.3. Perform high level review of tariff profiles in COMPILE<sup>9</sup>

2.3.4. Liase with industry/ Australian Customs Service (ACS) in regard to a tariff expert further reviewing the work done so far, and supplying additional input.

2.3.5. Implementation of additional classifications and code infrastructure.

7 available on the internet, WebSite address: <http://www.aqis.gov.au/docs/anpolicy/risk.pdf>

8 protocols for fish and fish products are available on the internet, WebSite address: <http://www.aqis.gov.au/animal/index.htm>

9 Customs Online Method of Producing from Invoice Lodgeable Entries

## Program 3

# Surveillance, Monitoring and Reporting

### Objectives

- To consolidate information on and protect Australia's aquatic animal health status, by
- facilitating the detection and reporting of, and response to, aquatic animal disease outbreaks;
- facilitating the enhancement of existing, and development of additional, national and interstate disease control programs and zoning policies;
- supporting Australia's international disease reporting obligations to OIE (World Organisation for Animal Health);
- supporting regional disease reporting to the Network of Aquaculture Centres in Asia and the Pacific (NACA).

### Current Status

Several formally tabled reports<sup>10,11</sup> have highlighted the need for an improved response to monitoring and surveillance for aquatic animal health. A review of existing surveillance and monitoring schemes, including those administered by the private sector or research programs, is a high priority issue; only after such an inventory has been consolidated, should recommendations be made for a future concerted effort, especially in the light of limited resources.

Increasingly, Australia will be called upon (eg. by trading partners through the World Trade Organisation – WTO processes) to substantiate its claims of freedom from major diseases in order to support export certification and quarantine import policy. As part of such assurances, we must be able to demonstrate that an adequate level of services exist to detect, diagnose and control aquatic animal diseases. The endorsement of a national list of reportable diseases of aquatic animals – as opposed to existing, State/Territory lists which are inconsistent with each other – is a high priority issue. Such a list in conjunction with a streamlined economic

10 Higgins, R. A. (chair) 1996: *Report of the National Task Force on Imported Fish and Fish Products*. Department of Primary Industries and Energy, Canberra. 269 pp – website: <http://www.affa.gov.au/fisheries/imports/taskforce/index.html>

11 *Report of the Standing Committee on Agriculture and Resource Management's Task Force into Managing Incursions of Aquatic Pests, Weeds and Diseases: 1997.*



reporting strategy also serves to fulfil reporting obligations to OIE and supports regional reporting strategies.

At the domestic level, national surveillance and monitoring infrastructure will serve to consolidate information on the distribution of pathogens, to facilitate the development of zoning policies based on pathogen distribution, and to develop disease management strategies to protect industry and the environment. It is recognised that there would be some disadvantages to private industry sectors, particularly where delineation of zones and barrier controls at zone borders may compromise the freedom of movement between zones. However, such restrictions are seen as necessary if we are to maintain disease-free areas and farms.

## Key Issues

### **Project 3.1. Surveillance and Monitoring for Aquatic Animal Diseases**

#### Components

3.1.1. Assessment of the current status of surveillance and monitoring in Australia.

3.1.2. Development and review of surveillance and monitoring strategies for specific aquatic animal diseases in Australia.

3.1.3. Development of a system for surveillance and monitoring data administration.

3.1.4. Development of standardised diagnostic and sampling techniques, and standard operating procedures.

### **Project 3.2. Reporting Arrangements**

#### Components

3.2.1. Agreement on the national list of reportable diseases of aquatic animals, and development of a review process for alterations to the list.

3.2.2. Development of a generic strategy for national aquatic animal disease reporting and data administration system.

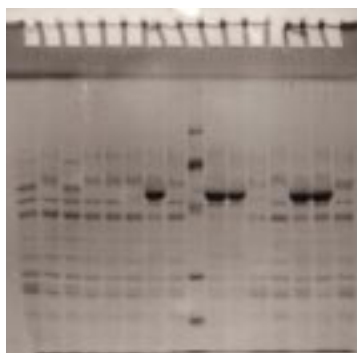
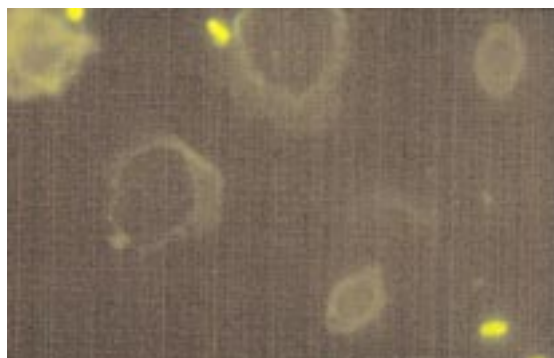
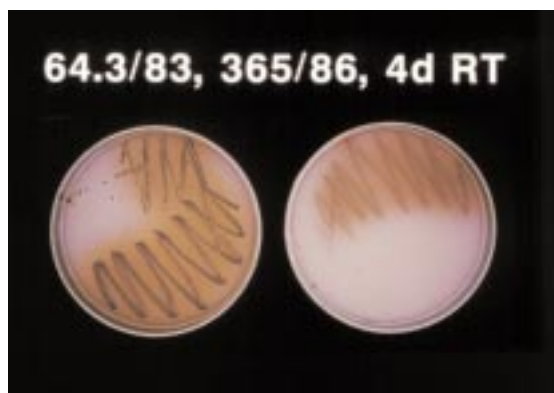
3.2.3. Adherence to international reporting objectives.

3.2.4. Implementation of emergency disease reporting strategy as required.

### Project 3.3. Zoning for Aquatic Animal Diseases

#### Component

3.3.1. Development of a policy paper on zoning, explaining the generic principles of zoning based on pathogen distribution, the movement principles between zones, and international relevance of national zoning.



## Program 4

# Preparedness and Response

### Objectives

- To develop effective institutional arrangements to manage emergency aquatic animal diseases in Australia.
- To develop a series of manuals and operational instruments which outline methods and protocols to manage emergency aquatic disease outbreaks in Australia (AQUAVETPLAN), based on the existing AUSVETPLAN arrangements.

### Current Status

The development of effective institutional arrangements to manage disease emergencies in the aquatic sector is of high priority. One of the major differences to the well-developed arrangements in the terrestrial animal sector is the involvement of two Ministerial portfolios (fisheries and agriculture); jurisdictional rather than legislative issues need to be resolved as a matter of priority (see also Program 7). States and Territories will have to develop their own arrangements to a nationally agreed outcome.

The inclusion of aquatic animal disease emergency management within the operating guidelines of the Consultative Committee on Emergency Animal Diseases (CCEAD) has been accepted by CCEAD and is awaiting final endorsement by the Standing Committee on Agriculture and Resource Management (SCARM). Whereas on the terrestrial animal side responsibilities lie within the agricultural and veterinary portfolios, the aquatic animal sectors require the additional inclusion of fisheries and aquaculture portfolios. Therefore, in the case of aquatic animal disease emergencies, the CCEAD will comprise the State/Territory Fisheries Managers next to the State/Territory Chief Veterinary Officers. The Commonwealth Chief Veterinary Officer will chair the CCEAD, and the Director of Aquaculture, Fisheries and Aquaculture Branch (FAB), AFFA, will provide secretariat support.

Work on several components of the Aquatic Animal Diseases Veterinary Emergency Plan (AQUAVETPLAN) is under way. Funding provided by the Fisheries Research and Development Corporation (FRDC)<sup>12</sup> assisted the development of a Control Centre Manual and Enterprise Manual. Both these manuals are nearing completion. Whereas some components such as Standard Operating Procedures will be largely adopted from AUSVETPLAN, others will need to be developed specifically for

aquatic animals. Given the limited resources available, prioritisation needs to be performed in a strongly consultative manner, with private industry sectors leading the process.

## Key Issues

### **Project 4.1. Consultative Committee on Emergency Animal Diseases (CCEAD)**

#### Components

4.1.1. Formal inclusion of aquatic animal disease emergency management into the CCEAD operating guidelines.

4.1.2. Ensuring State/Territory arrangements to comply with, and operate within, the CCEAD structure.

4.1.3. Simulation exercise especially to test the communication flow.

### **Project 4.2. AQUAVETPLAN**

#### Components (adapted to the terrestrial animal AUSVETPLAN).

4.2.1. AQUAVETPLAN Summary Document.

4.2.2. Operational Procedures Manual.

4.2.3. Valuation and compensation.

4.2.4. Enterprise Manuals.

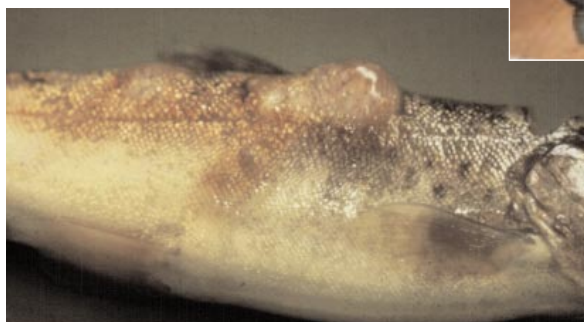
4.2.5. Disease Strategy Manuals for crustaceans, molluscs and fish.

4.2.6. Management Manuals.

4.2.7. Agency Support Plans.

4.2.8. Review and development of training resources.

4.2.9. Diagnostic resources.



# Program 5 Awareness

## Objectives


- To increase awareness of aquatic animal health issues, by
  - providing education and training resources for all industry stakeholders and the general public;
  - encouraging the development of training and extension services in State and Territory Fisheries Departments and within industry peak body associations;
  - encouraging the development of aquatic animal health management practices which decrease the reliance on drugs and chemicals ensuring their appropriate and minimal use.

## Current Status


Improved awareness about aquatic animal health and sources of assistance can be achieved through raising the profile of these issues nationally. Awareness raising must be a responsibility shared among Governments, educational institutions, research providers and the private sector. Specific issues are, for example, the disease risks associated with the use of prawns imported for human consumption, as bait, or the disposal of diseased or dead aquarium fish into waterways.

Various groups in the public have to be targeted, by different campaigns and technical means. As a matter of priority, simple and well-illustrated field guides should be produced for recreational anglers, fishermen and aquaculturists. Aquarium shop retailers should be targeted as a significant group for disseminating information. Different material may be produced for the processing industry, for example posters that are clearly visible from processing tables.


Aquaculture in Australia is expanding rapidly. There is a need for educational institutions to place increased emphasis on training in aquatic animal health in order to service the growing demand from this sector. Veterinary undergraduate as well as specialist training in aquatic animal health should be provided as a matter of priority. Supporting self-education may be a reasonable approach. Practising veterinarians could be encouraged to diversify into aquatic animal health as an 'add-on' to their clinical spectrum.



Extension services are usually provided by State and Territory Government agencies and could be developed using existing fish health field officers, educational officers and other liaison staff within fisheries departments. These services would provide additional support and information on aquatic animal health to industry groups to the mutual benefit of all involved.




Awareness about aquatic animal health issues in general and about AQUAPLAN as a national strategy, needs to be raised. The involvement of primary producers, technical experts, industry organisations and other stakeholders is essential to ensure the effectiveness of AQUAPLAN initiatives.



Quality assurance relates directly to aquatic animal health management and is an integral component of AQUAPLAN. The increasing consumer and market demand for safe and wholesome food, and the changing regulations in food safety world wide have lead to an increase in the importance of quality assurance, residue monitoring and the safe, effective and minimal use of drugs and chemicals in Australia's seafood industries.

These issues are incorporated into AQUAPLAN through the development of linkages into the following existing programs:

- the National Residue Survey chemical residue monitoring program;
- the Australian Shellfish Quality Assurance Advisory Committee;
- the Australian Shellfish Sanitation Control Program;
- Food Safety Emergency Management Mechanisms;
- the Australia-New Zealand Food Authority;
- gaining registration and minor use permit approval from the National Registration Authority for the use of drugs and chemicals in Aquaculture<sup>10</sup>.



The issue of drug and chemical use in the seafood industry has been identified in AQUAPLAN as a priority as it specifically links the management of aquatic animal health with Quality Assurance. In addition to gaining approval for the use of drugs and chemicals in aquaculture<sup>13</sup>, AQUAPLAN has identified the need for the development of awareness programs and management practices which facilitate and ensure the safe, effective and minimal use of drugs and chemicals in Australia's aquaculture and seafood industries.

<sup>13</sup> FRDC Project (96/314) on the Registration of Drugs and Chemicals for Use in Aquaculture, coordinated by Dr. Steve Percival.





## Key Issues

### **Project 5.1. Public Awareness and Communication**

#### Components

- 5.1.1. A Field Identification Guide for aquatic diseases.
- 5.1.2. Summary document providing information on the AQUAVETPLAN emergency response and preparedness program.
- 5.1.3. Posters, pamphlets and videos for industry, veterinarians and the public.
- 5.1.4. Training for aquaculturists in aquatic animal health management and improving farm practices to promote disease prevention.
- 5.1.5. Publication of regular columns in industry or trade journals.
- 5.1.6. A Disease Hotline for use by industry and the general public.

### **Project 5.2. Education and Training**

#### Components

- 5.2.1. Inclusion of aquatic animal health in veterinary curricula and other tertiary education.
- 5.2.2. Supporting self-education.
- 5.2.3. Post graduate training of veterinarians, aquatic animal health specialists and industry groups in recognition of disease syndromes.

### **Project 5.3. Extension Services**

#### Component

- 5.3.1. Support linkages of Governmental services with Fisheries Departments liaison sections with industry.

### **Project 5.4. Quality Assurance and Food Safety**

#### Components

- 5.4.1. Registration and minor use permit approval for the use of drugs and chemicals aquaculture.
- 5.4.2. Encourage the development of programs to promote the safe, effective and minimal use of drugs and chemicals.

## Program 6

# Research and Development

### Objectives

- To identify research priorities in the field of aquatic animal health and aquatic animal disease management.
- To promote research and development in these areas by industry and Government.

### Current Status

Funding of \$50,000 p.a. for four years has been allocated by the Government in their response to several formally tabled reviews<sup>14,15</sup>, specifically for research into replacement of imported aquatic animals and aquatic animal products as a means of reducing the risk of importing exotic aquatic animal diseases.

Other priorities for research are the development of diagnostic techniques and disease prevention methods including improved husbandry and management practices. The Aquatic Animal Health Unit in the National Office of Animal and Plant Health (NOAPH) in Agriculture, Fisheries and Forestry – Australia will consult with States and Territories and the private sector to prioritise diagnostic needs.

Besides these specific areas, the highest priority is given to producing an inventory of current research in Australia. This inventory will be developed with the assistance of key organisations such as the Fisheries Research and Development Corporation (FRDC) and the Cooperative Research Centre for Aquaculture (Aquaculture CRC Ltd.).

The Standing Committee on Fisheries and Aquaculture (SCFA) recently released a publication titled *Research Priorities for Australian Fisheries and Aquaculture*. The publication was prepared by the Research Committee of the SCFA and released in 1998. It identifies those priority research areas required to underpin the ecologically sustainable development of fisheries and aquaculture in Australia.

14 Nairn, M. E., Allen, P. G., Inglis, A. R. and Tanner C. 1996: *Australian Quarantine: a shared responsibility*. Department of Primary Industries and Energy, Canberra. 284pp – website: <http://www.dpie.gov.au/dpie/committee/quarantine/report/quarrev.html>

15 Higgins, R. A. (chair) 1996: *Report of the National Task Force on Imported Fish and Fish Products*. Department of Primary Industries and Energy, Canberra. 269 pp – website: <http://www.dpie.gov.au/resources.energy/fisheries/taskforce/index.html>

A second priority is to develop a strategic plan to prioritise genuine research needs in the area of health management. A number of industry sectors have already developed such plans, but a collaborative approach between research providers and the beneficiaries at a national level is important to ensure research priorities are addressed with a minimum of duplication. Priorities will include industry-focussed issues as well as public good priorities. The above Government funds may assist in developing a comprehensive database of research activities and diagnostic capabilities in Australia.

## Key Issues

### **Project 6.1. Strategic Plan for Focussed and Prioritised Research**

#### Components

- 6.1.1. Inventory of aquatic animal health research in Australia.
- 6.1.2. Prioritisation of research needs by industries and Governments.
- 6.1.3. Development of a strategic research plan.

### **Project 6.2. Specific Research Needs**

#### Components

- 6.2.1. Prioritisation of research into import replacements.
- 6.2.2. Aquatic disease management (to prevent disease).
- 6.2.3. Development of new diagnostic tests.



Courtesy of Dr A Hyatt, CSIRO Australian Animal Health Laboratory



## Program 7

# Legislation, Policies and Jurisdiction

### Objectives

- To facilitate the implementation of surveillance and control strategies, and preparedness and response arrangements for aquatic animal diseases at the State and Territory level.
- To ensure that legislative and jurisdictional mechanisms are in place to effectively manage aquatic animal health in Australia.
- To establish *National Policy Guidelines on the Translocation of Aquatic Organisms* within Australia which provide means to better manage the risks associated with the introduction of aquatic pests and translocation of aquatic animals.

### Current Status

Existing State and Territory legislation dealing with aquatic animals has recently been reviewed<sup>16</sup>. The review concluded that legislation already exists in all States and Territories to enable the implementation of aquatic animal health management plans and emergency response arrangements. Specific gaps exist and will need to be addressed by States and Territories individually; these largely relate to jurisdictional issues.

AQUAPLAN will not attempt to 'harmonise' legislation; rather it will assist the adoption of agreed legislative outcomes and operate under agreed principles of health management. One of the principles will be to allow sufficient incorporation of private sector needs into individual planning in each State and Territory.

The *National Policy Guidelines on the Translocation of Live Aquatic Organisms* (Translocation Guidelines) were recently endorsed by the Ministerial Council on Forestry, Fisheries and Aquaculture. The major purpose of the Translocation Guidelines is to outline standard procedures for the responsible movement of live aquatic organisms within Australia. They will also support the development of a national zoning policy for aquatic disease management and control (see Program 3). The principles outlined in the Translocation Guidelines should be incorporated into industry codes of practice.

## Key Issues

### **Project 7.1. Legislation, Policies and Jurisdiction**

#### Component

- 7.1.1. Identify and work towards necessary legislative and jurisdictional outcomes.
- 7.1.2. Encourage the States and Territories to critically assess their existing systems regarding gaps, legal challenges, and extent of enforcement.
- 7.1.3. Encourage States and Territories to adopt the generic principles and adjust their systems accordingly, to ensure agreed-upon outcomes.
- 7.1.4. Legislation for normal activity (surveillance) as opposed to disease outbreaks.
- 7.1.5. Provide SCARM/SCFA with recommendations to improve reporting and management of aquatic animal disease outbreaks.

### **Project 7.2. Translocation**

#### Component

- 7.2.1. Agree on a national approach to translocation of aquatic animals through SCFA and its subcommittees AC and FEHC.
- 7.2.2. Agree on a national approach to policy for the post quarantine management of imported fish and aquatic products.
- 7.2.3. Implement the necessary changes to legislative arrangements, policies and regulations at the State / Territory government level.

## Program 8

# Resources and Funding

### Objectives

- To develop a cost-sharing arrangement between industry and Government which underpins the funding of emergency response mechanisms;
- To assess the resources required to support the implementation of projects necessary to maintain high standards of aquatic animal health management in Australia.

### Current Status

Initial funding for AQUAPLAN has been provided by the Commonwealth for a period of five years and is subject to continued review and delivery of agreed milestones. Terrestrial farming industries are currently looking at levy arrangements to meet their ongoing contributions to the Australian Animal Health Council (AAHC) and their *Strategic Priorities Plan for Animal Health in Australia 1998–2003*. However, there are no levy arrangements in place that could be activated to support payments from the aquatic industries. Capture fisheries and recreational fisheries as well as aquaculture industries would have to be involved in a funding strategy.

Discussions on resources and funding for aquatic animal health management are currently underway. Both government and private sectors are involved in discussions addressing a wide range of issues, including the roles and responsibilities of government and private sectors, the role of insurance providers compensating for loss and institutional arrangements for raising revenue to pay for emergency preparedness and response mechanisms.

For terrestrial animals, the costs of eradication and compensation for the destruction of stock to control any one of twelve listed exotic animal diseases is currently met through the *Cost Sharing Agreement* between the States/Territories and Commonwealth. In the case of an outbreak of any other disease of some significance in a particular State/Territory, that State/Territory would meet those costs. Terrestrial animal disease compensation arrangements are under revision, principally to consider the 'beneficiary pays' principle. The area of cost sharing for aquatic animal health management is more difficult to address, given the species –

and thus disease – diversity of the industry and the distinctly regionalised distribution pattern reflecting specific temperature zones.

Not all States and Territories include aquatic animals in their definition of animals as livestock. This is an extremely important point in terms of funding arrangements, since the inclusion of aquatic animals in the definition of animals as livestock would allow existing (terrestrial) animal disease control arrangements to apply to aquatic animals.

The Fisheries and Aquaculture Branch (FAB) in cooperation with the private industry sector is currently preparing a detailed options paper on resources and funding for AQUAPLAN.

## Key Issues

### **Project 8.1. On-Going Funding Arrangements for AQUAPLAN**

#### Component

8.1.1. Examine the Australian Animal Health Council funding structures for the terrestrial animal industries as a potential model to be applied to the aquatic animal industries.

### **Project 8.2. Funding to Underpin Aquatic Animal Disease Emergency Response Arrangements (AQUAVETPLAN)**

### **Project 8.3. Continuing Funding to Support Disease Monitoring and Surveillance and Reporting Activities**

### **Project 8.4. Continuing Funding to Support Development of Awareness and Promotion for Aquatic Animal Diseases**

#### Components

8.4.1. Encouraging the development of undergraduate and postgraduate veterinary and aquatic animal health training.

8.4.2. Codes of Practice in aquatic animal health management.

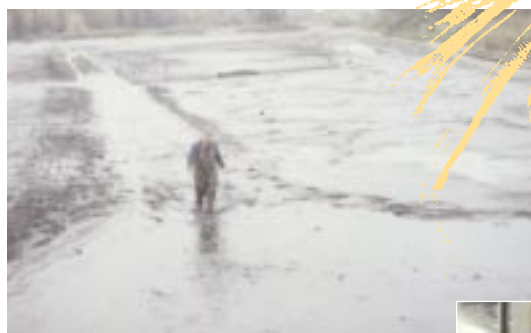
8.4.3. Increased general public awareness of aquatic animal health issues, especially through the aquarium and recreational fishing industries.

**Project 8.5. Evaluate the Potential for Insurance Companies and Underwriters to provide Compensation Coverage**

**Components**

8.5.1. Presentation of information by an aquaculture industry insurance expert.

8.5.2. Separately address the issues of compensation *versus* major loss due to disease.





# List of Acronyms

Acronym	Full Spelling
AAF	Australian Aquaculture Forum
AAHC	Australian Animal Health Council Ltd.
AAPQIS	Aquatic Animal Pathogen and Quarantine Information System
AC	Aquaculture Committee (of SCFA)
ACS	Australian Customs Service
AFFA	(Department of) Agriculture, Fisheries and Forestry – Australia
AQIS	Australian Quarantine and Inspection Service
AQUAVETPLAN	Aquatic Animal Veterinary Emergency Plan
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ASIC	Australian Seafood Industry Council
CCEAD	Consultative Committee on Emergency Animal Diseases
COMPILE	Customs Online Method of Producing from Invoice Lodgeable Entries
CRC	Cooperative Research Centre for Aquaculture (Aquaculture CRC Ltd.)
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CVO	Chief Veterinary Officer
EHC	Environment and Health Committee (of SCFA)
FAB	Fisheries and Aquaculture Branch (AFFA)
FAO	Food and Agricultural Organisation
FHMC	Fish Health Management Committee
FRDC	Fisheries Research and Development Corporation
IRA	Import Risk Analysis
MCFFA	Ministerial Council on Forestry, Fisheries and Aquaculture
NACA	Network of Aquaculture Centres in Asia-Pacific
NOAPH	National Office of Animal and Plant Health
NRA	National Registration Authority
OIE	<i>Office International des Epizooties</i> (World Organisation for Animal Health)
SCARM	Standing Committee on Agriculture and Resource Management
SCFA	Standing Committee on Fisheries and Aquaculture
WTO	World Trade Organization

# Contacts

The production of this document was coordinated by the National Office of Animal & Plant Health within Agriculture, Fisheries and Forestry – Australia.

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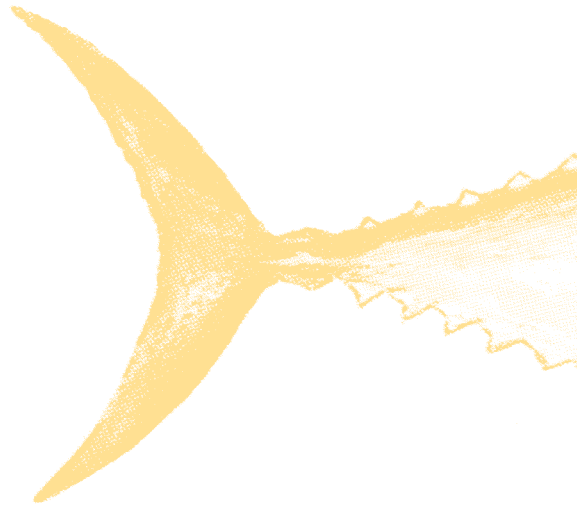
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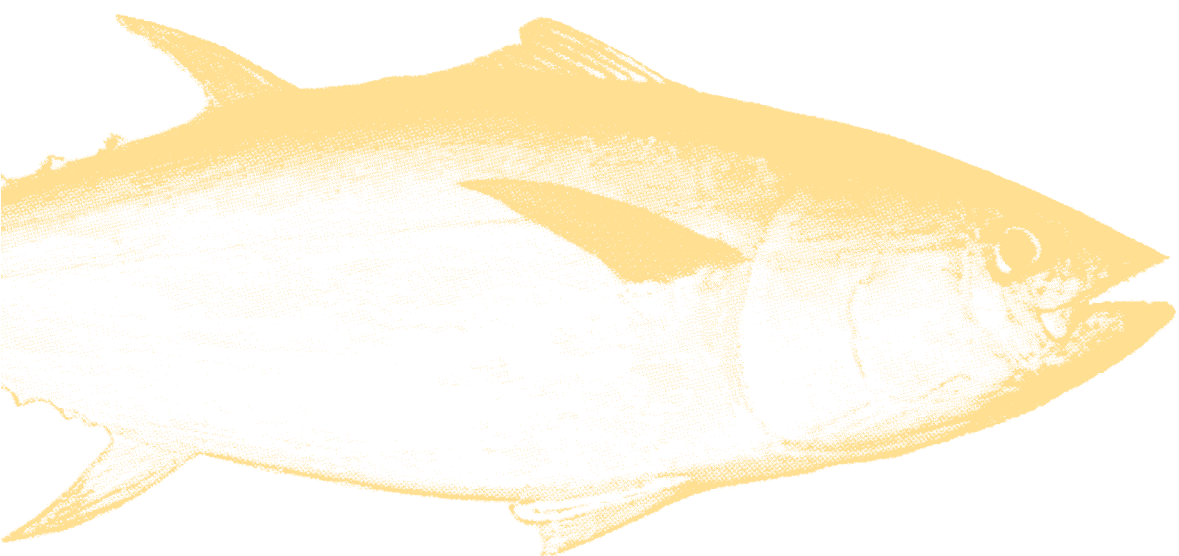
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AQUAPLAN can be downloaded from the web  
[www.affa.gov.au/ocvo/fhu/aquaplan.html](http://www.affa.gov.au/ocvo/fhu/aquaplan.html)