People Development in the Australian Seafood Industry

Board Discussion Paper

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Prepared for
The Fisheries Research and Development Corporation

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Appendices

Executive Summary

This report was commissioned by the Fisheries Research and Development Corporation. It presents options for people development of the Australian seafood industry, including research, management and commercial fishing. The study was conducted by Miriam O'Brien Consulting and based on interviews and information collected from people involved in the seafood industry and from rural research and development corporations.

Purpose

Options are designed to address the following needs identified by the Fisheries Research and Development Corporation Board and industry[1]:

- encourage the development of potential leaders in the industry,
- develop the skills of industry participants to maintain world best practice,
- encourage, maintain and enhance the capacity of researchers,
- attract new high quality entrants into fisheries research, development and fisheries management,
- encourage people to adopt best practices in catching, processing, marketing etc.

Issues and Influences

The situation of the seafood industry differs in some respects from that of other rural industries (Chapter 2). In particular, it has fewer advisory and education services, and industry structures and organisations appear to be less well developed than in agricultural industries. Opportunities must be created to help industry

[1] Based on the needs identified in the brief by the Fisheries Research and Development Board and modifications suggested by industry at a meeting at the FRDC on 19 June 1996.

become better informed about how to access and make use of resources to aid industry development.

Microeconomic reform policies, the reductions in government services, deregulation and competitive policies generally are forcing the industry towards self-reliance across a progressively broadening front. The seafood industry needs to acquire expertise in areas previously the domain of government so it can better determine its own destiny.

Knowledge is the key to industry development and long-term sustainable productivity. The Fisheries Research and Development Corporation is a primary custodian and generator of the knowledge base. The Fisheries Research and Development Corporation is the only national research funding body for the industry, having funds provided by industry levies. It has an important role in developing the overall capability of the industry so that industry can make better use of and decisions about the fishing resources.

Research Corporation Activities

Other rural research corporations fund a variety of programs and projects to foster the development of people (Chapter 3). These include:

- a multiplicity of scholarships and awards for researchers, advisers and those in the industry itself,
- specific projects and broad-based programs for industry improvement, including components aimed at developing the capabilities of people,
- activities designed to develop the industry as a whole.

People Development Framework

Chapter 4 describes a framework for people development, encompassing:

- education and training
- developing industry leaders
- developing the knowledge base
- sharing information.

The first component, education and training, is largely the domain of the education sector. ASIEN will play a dominant role in respect of industry education and training.

The remaining three components form the basis of the program options proposed in this report. Options are discussed in detail in the next chapter.

Options

The following options (Chapter 5) are presented to address the needs identified by the Fisheries Research and Development Corporation Board:

1. Developing Industry Leaders
1.1 Foundation Leadership Program
1.2 Introduction to Committees
1.2.1 One-day introduction to committees
1.2.2 Repackage the MAC Course
1.3 Advanced Leadership Program
1.4 Business / Management Education Grants
1.5 Industry Development Network

2. Developing the Knowledge Base
2.1 Industry Training and Development Grants
2.2 Industry Study Tours
2.3 Achievement Awards
2.4 Maintaining Research Capacity

3. Sharing Information
3.1 Staff Development
3.2 National Industry Conference

Need to Involve Industry

In submitting these options it must be noted that they have not been canvassed with industry, researchers or managers. This is suggested as the next phase in refining the people development priorities (Chapter 6).

It is essential to the success of any option that it is developed in association with those affected.

Industry initiatives will only succeed if they are embraced and driven by industry. Industry will only support activities for which benefits can be clearly demonstrated. In some cases, the initiative will need to be put in place for the benefits to become apparent. It is absolutely essential to involve industry from the outset to ensure initiatives are appropriate and relevant, and to ensure initiatives and outcomes have industry ownership, to demonstrate benefits and thereby generate commitment. This is particularly important with options involving concepts or activities unfamiliar to many in the seafood industry. Experience elsewhere suggests that industry will ultimately adopt and drive programs seen as important.

1 Introduction

Miriam O'Brien Consulting is pleased to submit this report to the Fisheries Research and Development Corporation. The document reports options for the Fisheries Research and Development Corporation in developing the human resources in the Australian seafood industry.

Purpose and Scope

As indicated in the consultant's brief, the Board of the Fisheries Research and Development Corporation identified a lack of appropriately skilled people as a potential impediment to the pursuit of goals of the Corporation and the seafood industry. The brief indicated "a need to:

- encourage the development of potential leaders in the industry,
- encourage, maintain and enhance the capacity of researchers,
- attract new high quality entrants into fisheries research, development and fisheries management,
- improve the personal abilities of fishers and processors to adopt best practices in catching, processing, marketing etc."

The Fisheries Research and Development Corporation Board approved the following recommendations:

> "That the Fisheries Research and Development Corporation develop a comprehensive human resource program for progressive implementation from 1996/97 onwards:
>
> 1. This program should focus on development of capacity across the entire industry (including research),

2. That the Fisheries Research and Development Corporation should develop a comprehensive, well-researched options paper for the Board - which should draw on the collective experience of the other R&DCs, but also involved ASIC and other key stakeholders."

The purpose of this study was to develop the options paper for the Fisheries Research and Development Corporation.

A meeting was held with Dr Alison Turner and Peter Dundas-Smith to agree on the purpose and scope of the assignment, and an interview program was subsequently agreed with the Executive Director.

The approach required by the Fisheries Research and Development Corporation was to place primary emphasis on considering what is being done by Rural Research and Development Corporations. In addition, it was agreed that it was appropriate to have discussions with a small number of those working in and supporting the industry to help inform the consultant of the industry situation and context.

A list of interviewees is provided as Appendix 1.

The Seafood Industry

> The term **fishing industry** includes any industry or activity carried on in or from Australia concerned with: taking, culturing, processing, preserving, storing, transporting, marketing, or selling fish or fish products. (Source: Fisheries Research and Development Corporation Regulations, Amendment 1992.) The fishing industry comprises the recreational, commercial, and Aboriginal and Torres Strait Islander sectors. The **commercial sector** - which for practical reasons includes the pearling sector - is also referred to as the **seafood industry**.[2]

The term **seafood industry** is used in this report to refer to the commercial sector of the Australian fishing industry, together with those working for or in support of the industry.

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[2] Investing for Tomorrow's Catch: The Fisheries Research and Development Corporation's Research and Development Plan, 1996 to 2001.

People Development

For the purpose of the study, people development in the Australian seafood industry covers the following:

- **Personal skills** eg communication skills, interpersonal skills (eg active listening, conversing), liaison, negotiating, networking, ability to learn, self-confidence, teamwork etc.
- **Leadership** eg basic personal skills, familiarity with meeting procedures, group dynamics, committee structures, functions and processes, public speaking, public relations, lobbying, government and industry etc.
- **Industry knowledge** eg local industry structures, systems and processes; global industry issues; industry organisations; industry - government relationship etc.
- **Business and Government** eg economics, marketing, business management, domestic and international trade, policy development, government structures, systems and processes, legislative systems etc.

In this study it has not always been possible to separate developing technological skills and knowledge and developing people. In many instances they go hand in hand (for example, postgraduate scholarships).

Reason for people development initiatives

The underlying premise is that people development initiatives will help increase the capacity of the Australian seafood industry to:

- improve long term profitability and stability in the industry;
- improve prospects for marine resources in the long term;
- have effective communication between industry and those supporting the industry (researchers, fisheries managers etc.);
- influence government and others making decisions affecting the industry;
- work with a wide variety of interested parties in determining how best to manage the marine environment and its resources;
- determine its own future;
- manage the industry.

Which people

The brief was to look at people development of those engaged in:

- fisheries research;
- fisheries management;
- seafood operations (including catching, farming, processing, retailing).

Approach to the assignment

The assignment was based on information collected through interviews and analysis of information collected. As agreed in the initial briefing meeting with the Fisheries Research and Development Corporation, the main emphasis during the assignment was on exploring what people development activities are being conducted and considered by rural research and development corporations. Views of selected people operating in the Australian seafood industry were sought, including those from seafood operations, research, management and education and training.

Following analysis of this information, options were developed and, prior to finalising this draft report, a meeting was held in June 1996 with the Fisheries Research and Development Corporation and industry representatives from ASIC, ASIEN, AUSEAS, and SEAQUAL to discuss these options.

Acknowledgements

I gratefully acknowledge the many people who gave freely of their time, information and ideas. Without their assistance this report could not have been prepared.

Disclaimer

Please note that, in accordance with the policy of the business operating as Miriam O'Brien Consulting (the Firm), we are obliged to advise that neither the Firm, nor any member, employee or associate of the Firm undertakes responsibility in any way whatsoever to any person or organisation (other than the Fisheries Research and Development Corporation) in respect of the information set out in this report, including any errors or omissions therein, arising through negligence or otherwise however caused.

Structure of this report

This report is structured as follows:

- Chapter 2 highlights relevant characteristics of the industry and makes some comparisons with other rural industries;
- Chapter 3 discusses the main findings arising from interviews and data analysis;
- A framework for people development is presented in Chapter 4;
- Options for people development are presented in Chapter 5;
- Chapter 6 suggests steps for refining, prioritising and developing options.

2
Issues and Influences

Commercial fishing compared with agricultural production

Hunting versus cultivation

Commercial fishing, unlike agricultural industries is still largely based on hunting wild creatures. Fish stocks renew themselves but can be made extinct or extremely vulnerable by commercial and other fishing as well as by changes in the marine environment from other causes (eg environmental pollution and other changes caused by human activity).

Environmental control difficult

The marine environment is seen as being much more difficult to control than the land environment, at least with current management regimes and technology.

Commercial fishing is affected by changes in weather and climate, as are agricultural industries, being subject to drought and storms, predators and changing balance in the ecosystem.

Low level of knowledge

Fish populations are difficult to see and monitor and almost impossible to control in the short term. Knowledge of fish and their environment is considered to be poor compared with knowledge of agricultural products, and research is expensive, difficult to undertake and slow to acquire.

Competitive Industry

Commercial fishing is competitive, with seafood operators competing to some extent with each other for a limited resource. The competitive aspect has been somewhat lessened (but not eliminated) in recent years with the introduction of quotas and other systems for managing supply and the marine environment. In most agricultural industries, competition tends to be more at the regional or international level rather than at the individual enterprise level.

Industry Structures Less Developed

The seafood industry has industry structures similar to those in agricultural industries. It has organisations for fishers at the industry level (species specific), state organisations (state fishing industry councils) comprising representatives of industry organisations, and a peak body, the Australian Seafood Industry Council, with representatives of the state councils and key industries.

The agricultural industry structure and organisations are generally considered to be at a more advanced stage of development than those of the seafood industry.

As in the agricultural sector, some seafood industry organisations are more highly developed than others. In general, the industries comprising a greater ratio of small operators to large operators are less developed. Those with a larger proportion of large operators tend to have more developed organisations with greater influence on government and on the seafood industry as a whole.

Education

Low level of education

In Australia, the general level of formal education of agricultural producers is low (comparable to that of labourers)[3]. Most interviewees were of the view that the general level of formal education of commercial fishers is even lower than that of farmers. Certainly there are more education and training programs designed for and available to farmers through the TAFE networks, agricultural colleges and universities.

Based on information obtained in interviews, it is likely that there is considerable resistance to formal education and training within the seafood industry. However this resistance may be less among younger people than in the older generation. It is difficult to assess whether the low level of formal education arises from lack of opportunity or lack of desire. Experience in agriculture suggests that lack of opportunity is the bigger barrier.

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3 O'Brien Miriam V, **"Agricultural and Related Education"** Paper presented at **Building a Smarter Agriculture - Developing Human Resources for the Agricultural Industries**, National Conference of the Australian Institute of Agricultural Science, Canberra 1991.

Industry Training Bodies

As in other industries, there are tripartite fishing / seafood industry training bodies in each state with a peak body (industry training council or ITC) at the national level. The scope of activity of the state bodies varies. Some are primarily planning and advisory bodies whereas others are more actively involved in industry education and training, running or coordinating courses for the industry. In general, the fishing and seafood industry state training bodies have made little or no progress in developing education and training for the seafood industries and there has been little progress in the development of competency standards and national curriculum (unlike the agricultural industries).

Proposals are currently being developed which aim to address the education and training needs of the seafood industry through the Australian Seafood Industry Education Network (ASIEN).

The Australian Seafood Industry Education Network

This network derives from initiatives by selected TAFE colleges and the Fisheries Research and Development Corporation to establish a national network of TAFE colleges. The network, formerly known as the National Fishing Industry Education Network has been restructured under the Australian Seafood Industry Council and retitled the Australian Seafood Industry Education Network. This network is committed to maximising effort in developing programs for the seafood industry.

ASIEN will be the peak body of the seafood industry for vocational education and training. The objectives of ASIEN are:

- to extend R&D results to the Australian seafood industry through a structured national approach to curriculum development and training,
- to develop and implement appropriate strategies to influence the directions and funding of Australian seafood industry training, and
- to establish a funding mechanism for the ongoing operation of ASIEN.

Examples of Seafood Industry Education and Training

Some examples of initiatives in the seafood industry education and training include:

- the MAC course of the Australian Maritime College at Beauty Point, Tasmania
- Trainee Master Fisherman's Course, Queensland
- South Australian Fishing and Seafood Industry Skills Centre (established 1991).

The MAC course at the Australian Maritime College

The Australian Maritime College was established under federal legislation in 1978 with the first undergraduate courses beginning in 1980. It is funded as an independent college through DEETYA. The Australian Maritime College has developed short courses for:

- Fisheries administrators (five courses of 10 days duration involving 70 people since 1990),
- members of fisheries management advisory committees, and
- professional fisheries managers.

The Faculty of Fisheries and Marine Environment offers a range of other courses from post-secondary through to postgraduate levels. Most of the courses are designed for careers in commercial fishing and seafood enterprises, fisheries management or seafood and fishing research.

Trainee Master Fisherman's Course

The Trainee Master Fisherman's Course, introduced by the Queensland Fishing Industry Training Council, is of interest because:

- it was initiated by and developed with industry;
- it is viewed as mandatory in Queensland for obtaining the Commercial Fishers Licence;
- it encompasses technology, environment, marketing, business management and government legislation and therefore has an emphasis on the development of personal skills and industry knowledge as well as technical skills training;
- it is being developed as a full competency-based course with accredited assessors in each main region.

The course has not yet been adopted in other states but the curriculum is currently being accredited at the national level. The link to licencing provides a way to ensure the industry as a whole benefits quickly from the course.

South Australian Fishing and Seafood Industries Skills Centre

This centre was established in 1991. It has been developed by industry and is used to provide short courses to the seafood industry. The centre is non-profit, industry owned and managed, is registered as a training provider and is funded from a range of sources in industry and government. It is notable for the fact that it does not receive nor rely on recurrent funds from government or industry to support its administration or management.

Influences and Trends

Micro-economic reform

In recent years there has been a significant shift in the policies and practices of government that have a marked impact on the seafood industry. These changes have been part of a major national drive for microeconomic reform. They include labour market reforms, limiting anti-competitive trade practices, removing (or lowering) trade barriers, corporatisation and privatisation of government business enterprises, commercialisation and corporatisation of government agencies, and fostering competitive neutrality of government businesses.

Removing protection

As part of competition policy, Australian governments have shifted from a stance of protection for industries to free market policies at the national and international levels. In international trade negotiations, the government presents itself as having unprotected industries as a strong argument for free entry to overseas markets. The

government changes are in response to perceived changes in the global economy and an attempt to make Australian industries more competitive internationally.

Industry self-regulation

At the Federal level, the approach to managing Commonwealth fisheries has been to shift from government-led management towards a high degree of self-management by industry and other stakeholders through the Australian Fisheries Management Authority. There are similar changes in the states, although some states having moved further down the self-management path than others. Nevertheless, the trend to industry self-management and self-regulation is part of an overall policy of deregulation of Australian governments.

Regional Development

Regional development initiatives have been implemented in recent years through a structure of regional development organisations. The aim has been to improve national competitiveness by developing regional economies throughout Australia.

Smaller government

Governments around Australia are being restructured and considerably reduced in size, at least of the workforce. Services are being reshaped, reduced or eliminated. The main aim is to reduce overall government expenditure and debt. Part of the justification is that the private sector is now providing services in areas historically the domain of government.

Competitive Neutrality

Where services are retained and compete with those of the private sector, governments are attempting to adopt a competitively neutral approach to ensure that government businesses compete fairly with private sector businesses. The concern is that some government businesses have an unfair advantage through their cost structures and pricing policies and that this may impede competition and reduce cost-effectiveness. The competitive neutrality policy is now being applied to government departments as well as to government business enterprises.

Implications for the Industry

The overall implications for the seafood industry include:

Industry Leadership

The industry needs to ensure it has people with the experience, capability and vision required to lead the industry, manage the industry and influence governments in Australia and internationally.

There is an urgent need for the industry to take on the roles previously performed by government. The seafood industry will need to have a clear vision of where it wants to be in the future, and be able to get there. It will need to recognise gaps and barriers to achieving its vision and address them.

Industry Strength and Depth

The industry will need to make sure it has sufficient people at regional and local levels, who have the motivation, experience and skills to shape the industry and provide a pool from which national leaders will emerge.

The industry needs to ensure it encourages and trains people to take on industry roles at all levels in the industry to ensure local issues are addressed effectively and help make sure it develops its own goals and can work towards them as an industry.

Grooming young people for industry roles will help in succession planning for industry roles at the regional and national level, and will help ensure there are sufficient numbers of people capable of taking on the various and complex issues the industry may face.

Funding Industry Initiatives

The Fisheries Research and Development Corporation has an important role in helping to develop the overall capability of the industry.

The technical knowledge generated by research is of no value unless it is understood and made use of by industry. Industry needs to be able to liaise effectively with researchers to ensure research priorities support the long term good of the industry.

The only mechanism for funding initiatives for the industry as a whole is through levies to support research and development. The seafood industry has not had the level of government support and services in extension and education provided to other rural industries. The Fisheries Research and Development Corporation has a clear legislative responsibility to act as necessary to help the industry make more effective use of its resources and skills.

3
Main Findings

This chapter presents the main findings of the study under the following headings:

Research
Fisheries Research and Development Corporation
Other Rural Research Corporations
Resource Management
Fisheries Research and Development Corporation
Other Rural Research Corporations
Extension
Fisheries Research and Development Corporation
Other Rural Research Corporations
Industry
Fisheries Research and Development Corporation
Other Rural Research Corporations

Research

Rural research corporations take a variety of approaches to "people development". Most corporations directly target the development of young researchers through specific grants generally aimed at encouraging young researchers to enter the industry. There is a recent trend among research corporations to directly fund extension activities (information exchange between research and development and those engaged in commercial production, processing and marketing). There is also some evidence of a trend towards direct funding of activities to develop "people skills" of those engaged in commercial activities and/or industry leadership roles.

Appendix 2 shows the scholarships, fellowships and related funding provided by rural research and development corporations.

Fisheries Research and Development Corporation

The Fisheries Research and Development Corporation does not offer scholarships or fellowships. Some postgraduate and postdoctoral studies are funded under general projects.

The Fisheries Research and Development Corporation is a major sponsor of the conference of the Australian Society of Fish Biologists. It also funds education of researchers in population dynamics at the Fisheries Quantitative Analysis Unit at the University of Sydney.

Other Rural Research Corporations

Most research corporations fund programs aimed at encouraging researchers to undertake research in their particular industry. The total amount provided by corporations for the above is generally three to five per cent of the overall budget. The aims are to build the overall research capacity for the industry, to encourage top quality graduates to the industry and to develop the capabilities of individual researchers. The Dairy Research and Development Corporation also sees its programs as a way to encourage research institutions develop research capability in dairying.

Programs include:

- Undergraduate scholarships
- Postgraduate scholarships
- Junior Research Fellowships
- Senior Fellowships
- Visiting Fellowships.

Undergraduate scholarships - to attract students to the industry

Some research corporations provide undergraduate scholarships and awards (grains, horticulture and pig). The main reason given for this support was to attract people to pursue a research career in the industry providing the scholarship.

Postgraduate scholarships - to attract the best postgraduates

Postgraduate scholarships are the most common form of direct funding to individuals (rather than to projects). The reason given by interviewees for funding postgraduate scholarships is to attract the best available graduates to work in the industry providing the scholarship. A secondary reason given by some interviewees was to build or maintain the complement of researchers in the industry.

The primary emphasis is on attracting quality. Most corporations require applicants to have first class degrees, with some corporations accepting a high second class degree (sometimes only in special circumstances). Most corporations offer a slightly higher amount than offered by the commonwealth scholarship program in an attempt to attract the top students.

Postgraduate studies are also sponsored through general project funding. One corporation that offers postgraduate scholarships expressed some concern about this as it was seen to be a backdoor entry to research funding. It was observed that people who had been rejected for scholarship funds had obtained funding through a project submission. The issue appeared to be that of the ability of the corporation to influence the quality of graduates entering the industry.

Restrictions on the nature of the research vary. In order not to attract taxation, some corporations do not require reporting from scholarship holders. Other corporations effectively absorb the taxation, paying the scholarship holder an additional amount to offset the tax due. This latter approach allows the corporation to retain greater control of the research, including requiring research reports. The Dairy Research and Development Corporation is looking at retaining intellectual property rights in areas of commercial significance.

Post-Doctorate Awards

Two research corporations offer post-doctorate awards (grains and pig). Again the purpose is to encourage quality researchers to stay in the industry.

Senior Researcher Awards - building research capacity

Senior researcher and visiting fellowships and awards are generally offered to attract a core complement of researchers in a particular industry or location. By attracting a highly qualified researcher of national or international status, the corporation expects to attract other researchers to work in the area thereby building research capacity for the industry as well as having relevant research conducted by the research fellow. It could be argued that fellowships are a means of encouraging leadership qualities among researchers, although this was not given as a reason for the fellowships by any interviewee.

Technical training and development

The Grains Research and Development Corporation also offers funding to technical staff supporting research, for in-service training.

Industry placements

The Pig and Sugar Research and Development Corporations offer awards for research conducted on-site with an industry employer. This is seen to provide a means of supporting research of direct relevance to industry and to build closer links with industry.

Effectiveness of research scholarships and awards

The Rural Industries Research and Development Corporation commissioned a study in 1992 to review its postgraduate scholarship program. This report developed a number of recommendations mainly concerned with providing researchers with a supportive environment and closer links with the corporation.

The Sugar Research and Development Corporation has recently commissioned a study to examine the effectiveness of its postgraduate program. A report is expected in June 1996.

The Dairy Research and Development Corporation found retention rates of scholarship holders acceptable, in a recent study.

Most interviewees expressed concern at the decline or potential decline of the research capacity of the industry, pointing to a reduction in the number of post-doctorates and difficulties in attracting graduates into research. Research on trends in number and type of research jobs could help determine whether there is a decline or shift in research positions or research capacity of particular industries, and whether specific action is required.

Student development and support

The Pig Research and Development Corporation conducts a workshop for its students aimed at career development, student support, team building and providing students with a better understanding of the industry.

The Land and Water Resources Research and Development Corporation is preparing a policy on career development for its supported scholars.

The Dairy Research and Development Corporation sees student development as an important issue, particularly to develop commitment to the dairy industry. At this stage it has not implemented specific student support programs.

Taxation and scholarships

Currently one of the key issues relating to the funding of scholarships is that of taxation obligations. The Taxation Office has taken different approaches to this, in some cases taxing recipients and in other cases treating scholarship holders as being exempt from taxation. In the context of this study, the main implication appears to be that where there is a likelihood of tax being payable (for example, if the funding body has ownership of or derives a benefit from the research) then the amount required to attract quality applicants may need to be proportionately higher than when tax is not payable so that the scholarship holder receives the same net amount.

Resource Management

Fisheries Research and Development Corporation

Fisheries Management is variously coordinated and led by Federal and State government agencies. At the Federal level and in Queensland, there is a separate, semi-autonomous authority with large industry and community representation supported by a system of advisory committees. In other states, the management role is undertaken through state government departments, some of which have a system of management advisory committees.

The management advisory committees of Australian Fisheries Management Authority and Queensland Fisheries Management Authority and the community advisory committees (Zone Advisory Committees) of the Queensland Fisheries Management Authority comprise individuals from commercial fishing, recreational fishing, Aboriginal and Torres Strait Islander fishing, environmental groups and the general community.

Fisheries management has historically focused on the management of the seafood and marine product resources. It is now taking a broader and more holistic view of the management of the total marine environment. It is therefore increasingly difficult to treat commercial fishing independently of other aspects of the marine environment in respect of fisheries management.

The role of fisheries management officers employed by government and statutory authorities has changed from that of monitoring fish stocks to that of facilitating and supporting committees and liaising with and advising industry, the community and government. There is an increasing reliance on the personal skills, leadership qualities and communication / facilitation skills of fisheries management officers. Although they need to be able to interpret and understand technical aspects of fisheries and the marine environment, there is less of a need to have formal qualifications in these areas. Instead, the technical knowledge is obtained from technical specialists by the fisheries management officers.

The members of the advisory committees need, in addition to the technical and professional knowledge and experience they bring to the committee, a high level of personal skills and leadership qualities (for example, skills in communication, liaison, negotiating, group work and team work, an understanding of committee processes, government structure, function and operations, and industry structure, function and operations).

The Fisheries Research and Development Corporation has supported a MAC course developed and run by the Australian Maritime College at Beauty Point, Tasmania.

Other Rural Research Corporations

Agricultural industries do not have a direct equivalent to the Fisheries Management Sector. On-farm agricultural resources are the responsibility of the landowner, with support and controls of varying kinds provided through Federal, State and Local government agencies responsible for soil conservation, water use and conservation, plant and pest control, planning and environment. Water resources are largely managed by government agencies and regional bodies. Land care groups throughout the country play an increasingly important role in issues relating to agricultural resource use and management. The Land and Water Resources Research and Development Corporation supports projects in the general rural resource management area.

Extension

Research corporations undertake various activities in publicising the results of research projects to industry. Some employ public relations / communications specialists and editors (either on contract or as permanent positions within the corporation or both). The Fisheries Research and Development Corporation provides information about its activities and research findings to industry largely through its publications, including the quarterly R&D News.

Fisheries Research and Development Corporation

There is no direct equivalent to agricultural extension in the seafood industry in Australia. However the industry appears to have good sources of information on technical matters, including quality publications on seafood and marine technology.

AUSEAS (the Australian Seafood Extension and Advisory Service) is a joint initiative of the Fisheries Research and Development Corporation and the Queensland Department of Primary Industries. It is located at the Centre for Food Technology in Hamilton, Queensland. AUSEAS provides a range of services to the seafood industry including:

- on-line specialist advice,
- research advice,
- confidential consultancy services,
- assistance in planning and appraisal,
- assistance in applying research results,
- training and support, and
- liaison with research institutes.

AUSEAS has a small staff and charges fees for services that involve substantial levels of work and significant private benefit.

Other Rural Research Corporations

There is a trend to research councils and corporations funding more extension projects and activities (variously defined as information exchange, technology transfer and similar). It is likely this trend is largely driven by the changes and cutting back of state government activity in agricultural extension. Approaches include direct funding of extension positions, funding of extension activities as whole projects or combined with research and development projects, joint funding with other agencies and sponsorship of specific programs or events.

The skill-base of extension officers is largely personal skills, especially communication and interpersonal skills, generally overlaying a scientific or technical base. There is little direct funding of "people development" of those in extension roles.

The Dairy Research and Development Corporation is a major sponsor of a conference for dairy extension officers. This conference incorporated sessions designed to improve skills in facilitation and group techniques. It also provides funding for extension training and development.

The Horticultural Research and Development Corporation funds 18 Industry Development Officer positions in locations around the nation. These positions are discussed under the Industry heading below.

It should be noted that the agricultural industries have access to other services which include support for and training in discussion groups. Recent developments include the training of farmers as discussion group leaders, development of farmer support groups for improving farm productivity (using benchmarking) and similar initiatives aimed at self-development and improving productivity. Many of these initiatives have been developed and established by farmers themselves, often in association with private consultants, farmer cooperatives or State government extension officers. Some are also supported by funds from research and development corporations.

Industry

Fisheries Research and Development Corporation

The Fisheries Research and Development Corporation supports a network of Fisheries Research Advisory Bodies to advise on research priorities and programs. These bodies differ from similar bodies in other Research and Development Corporations in that they play a primary role in the first round of assessing research submissions and are more deeply integrated with the activities of the corporation.

Leadership

The Fisheries Research and Development Corporation sponsors positions on the Australian Rural Leadership Program. Currently it is sponsoring one person a year.

Industry Development
Support for the establishment of the Management Advisory Committee course at the Australian Maritime College can be viewed as an industry development initiative.

Other Rural Research Corporations
Some research corporations have a long history of funding industry development projects and activities. Generally this has been in the form of awards recognising achievement (to provide incentive), study tours or similar. Again there is some evidence of a trend to increase funding in this area and some change in the purpose and nature of funded activities.

Leadership development
Most research corporations sponsor one or more positions on the Australian Rural Leadership Program.

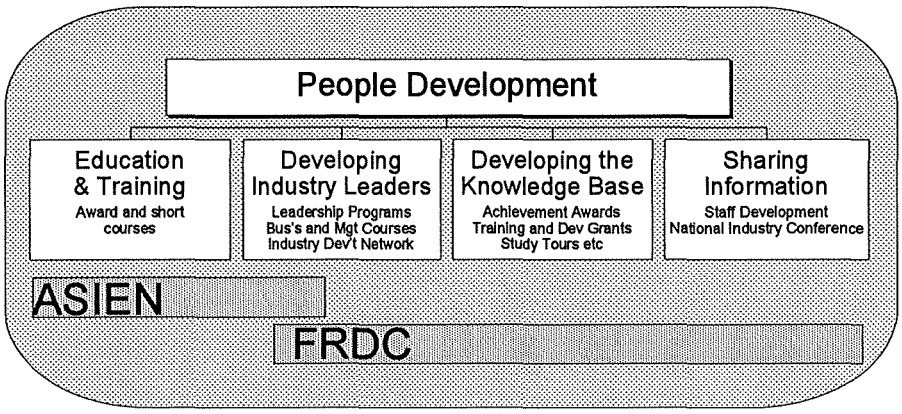
The Dairy Research and Development Corporation also provides funds and support for leadership development and generally improving the personal skills and capabilities of dairy farmers. The initial focus has been on personal skills development to encourage local dairy farmers to play a more active role in industry activities (off-farm). It has funded the development of a foundation-level leadership course including industry knowledge and personal skills development. The Dairy Research and Development Corporation works closely with industry organisations with the aim of handing over to the industry after the development phase.

Industry development
As mentioned previously, the Horticultural Research and Development Corporation funds 18 Industry Development Officer positions in locations around the nation. The role of each officer varies somewhat according to the industry in which she or he works. However, all are seen as having a strong leadership role. Generally there is a dual purpose of developing the capacity of people working in the industry both on-farm and at an industry level, as well as a technology transfer and information exchange role. The development officers are a key link resource helping industry access resources and services from a wide range of areas.

The Dairy Research and Development Corporation supports statewide industry development programs involving industry organisations, state government agencies and education providers in several states. These programs have a primary aim of lifting performance on-farm as well as at an industry level. They include a substantial component of people development activities. The Dairy Research and Development Corporation funds several positions to coordinate, develop and implement these major programs.

4
People Development Framework

The following diagram illustrates the people development framework for the seafood industry:



The framework links education and training with the three essential elements of leadership, knowledge and information. Industry post-secondary education and training is the responsibility of ASIEN. ASIEN will also carry responsibility for developing programs in the Developing Industry Leaders program. Other providers

of Education and Training include higher education institutions, private providers and employers.

The three main arms of the proposed FRDC people development strategy are:
- Developing Industry Leaders,
- Developing the Knowledge Base, and
- Sharing Information.

Developing Industry Leaders

Leadership refers to the capacity of individuals to take leadership roles in developing the industry. As well as the important role of industry representation, the program emphasises the leadership roles of team-building, encouraging, mentoring, facilitating, coaching and managing the people and knowledge assets of the industry. One of the most crucial roles of industry leaders over the coming years will be that of developing other people to take on leadership roles.

Leaders are required in industry operations, research and fisheries management. The main area of concern is leadership and personal development of people involved in industry operations to provide a larger pool of industry people with the skills and experience to take a leadership role in industry organisations and on government and community bodies at the local, regional, national and international levels.

The Australian Rural Leadership Program targets only those operating at the peak of industry operations and offers at the most, two places a year. There are also some programs offered for members of national and State advisory committees. There is an urgent need to develop programs that target potential leaders at the local and regional level.

ASIEN is well-placed to coordinate the development of such programs, particularly at the "grass roots" level. It is important to recognise that such programs need to involve experiential learning across a wide spectrum and the conventional vocational training model is not applicable.

Developing the Knowledge Base

Knowledge is a fundamental asset of the industry. It is vital to the industry to protect its knowledge base and to continue to expand its knowledge of all aspects of industry operations, economics, sociology, environment and politics.

The knowledge base is expanded by research and development activities through funded research conducted by research institutions and research and development activities of people throughout the industry.

The protection of the knowledge base is one of the primary functions of research institutions and the Fisheries Research and Development Corporation.

Continuing Professional Development

The Fisheries Research and Development Corporation has an important role to play in encouraging lifelong learning and continuing professional development. In addition to education and training programs, opportunities for continuing professional development can include study tours, attendance at seminars, conferences, trade shows, field trips and short courses.

To ensure that all those involved in the industry recognise the opportunities available to them, the Fisheries Research and Development Corporation needs to separately target those involved in industry operations, research and management.

Industry Awards and Incentives

Through encouraging and recognising achievements of those in the industry, the Fisheries Research and Development Corporation would not only promote initiatives but would encourage more people to develop products and processes that benefit the seafood industry. This is likely to have a spin-off of lifting general morale and industry credibility.

Sharing Information

Knowledge cannot be sustained without the sharing of information. The Fisheries Research and Development Corporation has a key responsibility to ensure the results of research and development are disseminated to the broader seafood industry. The Fisheries Research and Development Corporation can enhance opportunities for industry to share information by organising forums for industry, researchers and fisheries managers to meet and exchange information, views and ideas.

5
Options

This chapter sets out options for Fisheries Research and Development Corporation for people development activities within an overall industry framework.

People Development Options

The options are described on the following pages under the headings:

1. Developing Industry Leaders
1.1 Foundation Leadership Program
1.2 Introduction to Committees
1.2.1 One-day introduction to committees
1.2.2 Repackage the MAC Course
1.3 Advanced Leadership Program
1.4 Business / Management Education Grants
1.5 Industry Development Network

2. Developing the Knowledge Base
2.1 Industry Training and Development Grants
2.2 Industry Study Tours
2.3 Achievement Awards
2.4 Maintaining Research Capacity

3. Sharing Information
3.1 Staff Development
3.2 National Industry Conference

Reporting and evaluation

The above options are compiled as **program areas**, grouping like objectives and outcomes to aid monitoring, evaluation and reporting of proposed program options.

Program operation

Options are also considered according to **functional area**, grouping like activities, systems and procedures to aid management and operation of proposed program options. Suggested functional areas are:

- leadership development (short courses and programs - ASIEN role)
- continuing professional development (short courses and conferences - including grants for attendance, commissioned projects and in-house development)
- industry awards and incentives (awards and incentives schemes)
- industry development network (support personnel)
- research management (research project administration).

The chart overleaf shows the main approach to the proposed options, their features and benefits, and their relationship to the functional areas.

	Priority Objective	Main approach	Features / Benefits								Functional Area				
			Enrich pool of industry leaders	Enhance personal skills	Strengthen industry infrastructure	Expand networks	Learn about Business & Government	Enrich industry knowledge	Attract top people	Promote Seafood Industry	Leadership Development	Continuing Professional Development	Industry Awards & Incentives	Industry Development Network	Research Management
1.	**Developing Industry Leaders**														
1.1	Foundation Leadership Program	Short course	☆	☆		☆	☆	☆	☆		✪				
1.2	Introduction to Committees	Short course	☆	☆	☆	☆		☆	☆		✪				
1.3	Advanced Leadership Program	Continue to sponsor ARLP	☆	☆		☆	☆	☆	☆	☆	✪				
1.4	Business / Management Education Grants	Grant	☆	☆		☆	☆	☆	☆			✪			
1.5	Industry Development Network	Support personnel	☆	☆	☆	☆	☆	☆	☆	☆				✪	
2.	**Developing the knowledge base**														
2.1	Industry Training and Development Grants	Grant	☆	☆		☆		☆	☆			✪			
2.2	Industry Study Tours	Grant	☆	☆		☆		☆	☆	☆		✪			
2.3	Achievement Awards	Award						☆	☆	☆			✪		
2.4	Maintaining Research Capacity	Monitor research						☆	☆	☆					✪
3.	**Sharing Information**														
3.1	Staff Development	Short course		☆		☆		☆	☆			✪			
3.2	National Industry Conference	Conference	☆	☆		☆		☆	☆	☆		✪			

1. Developing Industry Leaders

1.1 Foundation Leadership Program

Purpose
To enhance the capability of industry to increase the economic, environmental and social benefits to industry and the community as a whole through developing people with demonstrable leadership potential.

Action
Expand the leadership program to include development of people at all levels in the industry through designing and developing a short course for improving the personal skills and industry understanding of people in the seafood industry, to be delivered locally.

Benefits
- Create a culture that better recognises opportunities for and the value of learning.
- Generate interest in taking an active part in industry activities and enhance the skills, experience and self-confidence of people to do this.
- Facilitate and speed up the process of developing the capacity of industry to lead, plan and manage Australia's seafood industry.

Rationale
The seafood industry is not as well resourced nor as well developed as other rural industries. A leadership and personal skills development program will help people at the grass roots gain the skills and confidence to participate in industry activities. The industry would then be able to build a strong base of people with the potential to take on industry roles at the local, regional, state and national level.

Indications are that there are some critical issues the industry must face over the coming few years. The industry will need to ensure it has the capacity and the people to address these issues and lead the industry towards a long term sustainable, profitable and productive future. An industry that is more self-reliant is likely to be more profitable, resulting in more funds from levies and well as benefiting the general economy.

Discussion
This foundation leadership program is part of an overall strategy to develop leadership at all levels in the industry. This program is envisaged as comprising of personal skills development and industry knowledge. It will be designed for people who are interested in taking a more active role in industry activities, and who would not normally have the opportunity to participate in similar programs. A key feature would be the local delivery.

A purpose-built course would include guest speakers to talk about industry issues, as well as a course leader who would provide learning opportunities in personal skills such as negotiating, public speaking, meeting procedure, group dynamics, planning and similar topics.

The program is envisaged as being delivered locally to small groups (say, 20 participants), so careful consideration will need to be given to promotion, delivery and distribution to ensure returns on the investment are maximised.

Issues to be considered in program are:

- market research to design relevant and appealing content
- course development
- accreditation - to accredit or not
- piloting to test the course
- guest speakers
- price to course participants
- distribution - who and how
- delivery - related to distribution
- quality assurance - content, course facilitator, guest speakers
- funding - course design and development, and alternative strategies for financing ongoing delivery.

The cost per participant is likely to be fairly high because of the intensive nature of the course. However benefits will accrue not only to the direct participants, but to the seafood industry as a whole as attendees take on positions of responsibility within the industry. Such a program could be a way to bring about a strong culture of learning and leadership, and quickly strengthen industry capability.

1.2 Introduction to Committees

1.2.1 One-day introduction to committees

Purpose
To improve the effectiveness of advisory committees and thereby improve planning and decision-making for the industry and its fisheries.

Action
Fisheries Research and Development Corporation to provide funds to design and develop a one-day introductory program for advisory committee members.
This program would be developed in consultation with the fisheries management agencies, with the aim of providing it to each advisory committee at the commencement of a new intake of members or at least once every three years.

The aims of the program would include:
- informing members of their role and responsibilities,
- familiarising new members with committee systems and procedures,
- team-building.

The one-day program would be fully documented with facilitator manual, and manuals for participants. It could be designed around a relevant theme, for example, a preparatory planning and priority-setting session.

Benefits
- Low-cost approach with immediate effects.
- Can be delivered by local facilitator and take account of local issues, thereby maintaining relevance.
- Will also benefit committee members in industry and community roles beyond the advisory committee.
- Demonstrate the value of this type of session to influential industry members with likely flow-on effect to the industry as a whole (culture change).

Discussion
The course would be developed so that it could be run by a local facilitator from the fisheries management agency, an existing committee member or an independent facilitator. If run by a fisheries management officer or a committee member, it is suggested that they be provided with training in advance.

The features of this program would include:
- providing committee members with the opportunity to get to know each other,
- enhancing the skills and self-confidence of committee members,
- promoting / reinforcing the objectives and responsibilities of the committee.

It would be expected that the ongoing costs of running the one-day program would be met by the relevant agency or committee. The Fisheries Research and

Development Corporation would provide funds to design and develop the program, including one or two pilot programs, and production of the facilitator manual and relevant sections of the member manuals.

1.2.2 Repackage the MAC Course

Purpose
To enhance the capabilities of members of management and zone advisory committees by increasing attendance at MAC courses.

Action
Fund market research and consequently provide funds to repackage and promote the MAC course provided by the Australian Maritime College and:
- offer it from a variety of locations around Australia,
- offer the program to all advisory committees of fisheries management agencies (ie to Zone Advisory Committees as well as Management Advisory Committees).
- offer one fully-funded attendance a year to each advisory committee.

Benefits
- Increase awareness of benefits of MAC program by members of advisory committees and industry generally.
- Demonstrate continuing relevance to members of advisory committees.
- Improve attendance thereby increasing the capabilities of advisory committee members and the effectiveness of committees.

Rationale
There are two issues that can be addressed in respect of advisory committee members. Firstly, there will be an ongoing benefits from providing adequate preparation and team-building for members of advisory committees. Secondly, there are difficulties in attracting people with suitable experience and skills to the advisory committees.

Discussion
Although the MAC course is currently offered free of charge with only travel and accommodation costs to be met by participants, the cost of attending is perceived to be too high compared with the alternative of providing training locally. In addition to travel and accommodation, prospective participants and their organisations view the cost of income foregone as considerable.

The College has some difficulty in attracting enough participants to each course. This may be because of the cost factors mentioned above, it may also be because there are insufficient "champions" of the course in industry. If, as is surmised, the seafood industry does not value training courses, and the college is seen primarily as a school, then this would add to the difficulty of marketing the course to industry.

Additional tactics may help overcome this resistance, for example:
- Modify the course to be shorter (two or three days instead of the current five, possibly weekend delivery),

- Promote the program as an incentive to being on an advisory committee (promote the benefits to the individual as well as to the industry and the advisory committee, if necessary modifying the course to include components of particular relevance to individuals),
- Ensure key speakers are of top quality, are recognised by and will attract industry and community, and marketed well,
- Offer the course in two, three or more locations around Australia,

Or

- Offer the course at a different location each year at an attractive venue (eg hotel/conference centre in resort location),
- Fully sponsor one for one with industry and/or get corporate/industry sponsorship and/or fully fund one member from each advisory committee each year.

The above are suggestions only. Market research would be needed to determine the packaging, pricing and delivery most attractive to industry and stakeholders. Although some of the above suggestions may increase the cost per participant, they may also increase the attractiveness of the program allowing an increase in price. The aim is to make the program more attractive overall, without reducing its relevance and effectiveness.

1.3 Advanced Leadership Program

Purpose
To enhance the capability of industry to increase the economic, environmental and social benefits to industry and the community as a whole through developing people with demonstrable leadership potential.

Action
Continue to sponsor the Australian Rural Leadership Program, and encourage promising individuals within the industry to apply for inclusion in the program.

Benefits
- Create a culture that better recognises opportunities for and the value of learning.
- Generate interest in taking an active part in industry activities and enhance the skills, experience and self-confidence of people to do this.
- Facilitate and speed up the process of developing the capacity of industry to lead, plan and manage Australia's seafood industry.

Rationale
Indications are that there are some critical issues the industry must face over the coming few years. The industry will need to ensure it has the capacity and the people to address these issues and lead the industry towards a long term sustainable, profitable and productive future.

To date, the investment in the Australian Rural Leadership Program has been rewarding with attendees making major contributions to the seafood industry in various roles. Continuing investment is likely to yield ongoing benefits.

Few people from the seafood industry are applying for inclusion in the ARLP. A more active promotion, including direct encouragement of individuals, may lift the level of interest in the program.

Discussion
The cost-effectiveness of this option is difficult to assess. However, an industry that is more self-reliant is likely to be more profitable, resulting in more funds from levies and well as benefiting the general economy.

There are opportunities for considerable flow-on benefits. In particular, participants having a wider influence in creating positive industry attitudes towards leadership and learning, and various industry development activities of participants.

Promotion of the ARLP to the seafood industry could include articles illustrating the features and benefits of the program. In addition, promising individuals identified through other programs could be encouraged to apply.

1.4 Business / Management Education Grants

Purpose
To enhance the capability of industry to increase the economic, environmental and social benefits to industry and the community through developing the business and management expertise of people.

Action
Expand the leadership program to include development of business and management expertise of industry leaders through a program supporting attendance at courses in business and management (eg Mt Eliza, Monash agribusiness, AGSM).

Benefits
- Raise industry awareness of the variety of ways to develop the industry and its leaders;
- Create a culture that better recognises opportunities for and the value of learning.
- Facilitate and speed up the process of developing the capacity of industry to lead, plan and manage Australia's seafood industry.

Rationale
Leaders and decision-makers in the seafood industry need a solid grounding in business and management to make informed decisions about the industry and its future.

In line with the trend towards smaller governments, there is an increasing requirement for industry to take on roles formerly played by government. These roles go beyond that of seafood-specific technology and production and encompass international trade, economics, finance, marketing, and other business and management fields.

Industry leaders will need to be well-informed in these disciplines to make effective decisions on matters affecting the seafood industry.

Discussion
This option is aimed at people who are currently involved at a high level in the industry, or have demonstrated potential for leadership. It is envisaged the program would be in the form of direct grants to support attendance at high-level business and management courses.

Separate identification of the program will help promote the program as well as indicate to industry the importance of expertise in business and management.

1.5 Industry Development Network

Purpose

To lift the overall productivity of the industry through a broad-based program designed to develop the capabilities and knowledge of people working in the seafood industry.

Action

Work with industry to design and develop a program that incorporates and links with research, education and management activities. Appoint several program managers to develop, coordinate and manage the program, locating them in strategic sites across the nation. The coordination structure would include industry representatives and draw on the skills of researchers, managers and educators as required. Funding would be sought from other sources as well as core funding from the Fisheries Research and Development Corporation for coordination and management. The program would be designed to "work itself out of existence" over an agreed time period (between 7 and 10 years).

The program would be expected to develop a five year plan with clear goals and objectives, performance criteria and targets, and review this plan each year. Monitoring and evaluation reports would be prepared at least annually.

The program would be expected to use a variety of approaches, such as workshops, short courses, distance learning, discussion groups, study tours and field excursions (including to research establishments, processing plants and other places of interest). It would be designed primarily for the average and above seafood enterprises (but not be exclusive nor restrictive).

As part of the program, a core set of resources and processes would be developed such that they are able to be adapted for use at different locations.

Benefits

- Allows development of people at all levels across the seafood industry.
- Relies on working cooperatively with industry, thereby ensuring relevance and industry ownership and commitment.
- Provides a structured approach to improving the personal abilities of fishers and processors to adopt best practice.
- Includes processes for the development of potential leaders in the industry.
- Shares responsibility and funding creating a sense of industry ownership.

Rationale

This is potentially an important way to help the industry emerge successfully from what is likely to be a time of significant industry adjustment over the coming few years. It would help to fast track the self-development of industry organisations and assist them in becoming skilled in dealing with the complex issues they will be facing over the coming years.

Discussion

The key to the success of such an approach lies in its ability to involve various agencies and organisations in a cooperative manner, including industry organisations, research institutions, education and training bodies, education providers, and management agencies. The program would allow cooperative development of initiatives across a range of fronts.

A distinctive name for the program (eg Fishing Future, Successful Seafood) could be used to promote a large number of related activities that are seen as helping to achieve the program goals and objectives. In other words, the program would develop new activities but could also incorporate existing activities where appropriate.

2. Developing the Knowledge Base

2.1 Industry Training and Development Grants

Purpose
To develop the base of knowledge of the seafood industry through training and developing people in the industry.

Action
Provide funds for industry attendance at short courses, conferences, seminars and workshops.

Benefits
- Add value to the seafood industry through generating and disseminating knowledge,
- Encourage a culture that recognises opportunities for and the value of learning.

Rationale
Development of people rests on their knowledge, skills and experience. The success of the seafood industry lies with its capacity to find, develop, manage and protect its resources of knowledge. By encouraging people to take part in training and development, the industry will become empowered to seek out, utilise and expand knowledge for the benefit of the industry.

Discussion
Anecdotal evidence suggests that people in the seafood industry do not place a high value on conventional training and education. Promoting training and development may encourage people to seek out forms of learning appropriate to their circumstances.

It is envisaged that this program will be in the form of grants to individuals. As with similar programs, publicity and promotion through Fisheries Research and Development Corporation and industry publications and other fora will be an important means of encouraging industry participation. Promotion would be expected to include, for example, journalistic articles on the experiences of those awarded training and development grants.

2.2 Industry Study Tours

Purpose
To develop the base of knowledge of the seafood industry through assisting people in the industry to take study tours to observe and learn about industry developments elsewhere.

Action
Provide funds for industry study tours in Australia and internationally.

Benefits
- Add value to the seafood industry through generating and disseminating knowledge,
- Encourage a culture that recognises opportunities for and the value of learning.

Rationale
Direct observation of the experiences and practices is one of the most effective ways industry participants can learn. Study tours provide opportunity for people to learn from others in Australia and internationally. In these times of increasing global competition, it is essential the industry is aware of developments and practices operating throughout the world.

Discussion
This would be in the form of grants to subsidise study tours by people in the industry. While the grants would be targeting industry, they would allow for researchers, fisheries managers and others providing professional services to the industry to join industry people on such study tours.

As with similar programs, publicity and promotion through Fisheries Research and Development Corporation and industry publications and other fora will be an important means of encouraging industry participation. Promotion would be expected to include, for example, journalistic articles on the experiences of those who have been on study tours.

2.3 Achievement Awards

Purpose
To foster innovation through encouraging and acknowledging innovations and achievements of people and organisations in the seafood industry.

Action
Establish awards for recognising and encouraging industry achievements.

Benefits
- Publicity and promotion of innovations and developments in the seafood industry.
- Help build a sense of belonging to the seafood industry as a whole.
- Foster a commitment to industry-wide advancement and development.

Rationale
The seafood industry is competitive, which tends to work against sharing of knowledge and developments for commercial reasons. Nevertheless there are many developments which would benefit the Australian seafood industry as a whole without reducing the profitability and competitiveness of individual enterprises. Industry awards are one means of encouraging innovation and achievement as well as disseminating advances in technical, organisational, management and general business systems and processes. They would also encourage general contribution to the advancement of the seafood industry by individuals and organisations.

Discussion
It is envisaged there would be a range of awards and incentives schemes, some with a monetary value and others with no monetary payment. They would be of two main types, awards for excellence in achievements and incentive payments for development of technology, systems or processes with industry potential.

Awards would include recognition of excellence of contribution to industry development and technical innovation (including inventions, systems, processes). They would be offered to people and organisations involved directly in industry operations (production, selling and distribution), as well as those working in related areas of research and service provision.

2.4 Maintaining Research Capacity

Purpose
To ensure continuing adequate numbers and quality of people involved in fisheries research and that research is conducted in priority areas.

Action
Collect and analyse data on researchers working in the seafood industry including:
- role of researcher
- age
- qualifications
- years of research in fishing and seafood areas
- employment history
- area of research (projects).

Monitor trends in deployment of the research resource and take action as and when appropriate. For example, if there is a decline in entry to research indicated by ageing of researchers, an undergraduate and postgraduate scholarship scheme could be designed to attract people to the industry.

The data could be collected through:
- analysing data from Fisheries Research and Development Corporation project information base, or
- conducting a regular survey of the research conducted for the seafood industry.

Rationale
The most important role of the Fisheries Research and Development Corporation is the continued creation of knowledge and its dissemination to industry. The industry will stagnate without continually updating and improving its understanding of all aspects of the fish resource and its environment.

There is insufficient information to determine whether there is any relationship between the type of scholarship, award or incentive offered by research corporations and the research capability of the industry. Additional incentives may be warranted if there is a gap between the availability of quality research staff and the industry requirements for research. No person identified research capacity as an immediate or urgent problem for the industry.

Benefits
- The industry will be able to identify and respond to a decline in numbers or quality of researchers.
- Decisions can be based on actual data.
- Should research priorities change, the information will help inform decisions on how to ensure sufficient researchers with the required skills.

Discussion

Information held by the Fisheries Research and Development Corporation is likely to be a good indicator of overall trends in research in commercial fishing, as the Fisheries Research and Development Corporation is the major funding body. It may be easier and less costly than a full survey, to modify the database and data input forms (eg project information) to collect relevant data. An annual report would demonstrate trends over time. Trigger points could be agreed to initiate action. (For example, decline in numbers of new entrants to research, increase in median age of researchers, reduction in qualifications, limitations in areas of research.)

Note that while Fisheries Research and Development Corporation data is likely to be more cost-effective than a full industry survey, it will not show broad shifts in employment of researchers, for example into the private sector.

3. Sharing Information

3.1 Staff Development

Purpose

To enhance the capabilities of staff involved in fisheries management.

Action

The Fisheries Research and Development Corporation work with the agencies responsible for fisheries management to design and develop a program to:

- provide fisheries management officers with the opportunity to discuss common issues with each other on a regular basis (eg yearly or every second year),
- develop priorities and strategies for fisheries management at an interagency (officer) level,
- share experiences and develop solutions to common problems,
- provide experience in common work situations (eg committee meetings, industry / community liaison, group work, team building etc using a case study approach).

The program would complement the courses provided by the Australian Maritime College, not be a substitute.

Rationale

The role and function of fisheries management officers and agencies is changing to one of greater emphasis on policy development, facilitating and coordinating. There is less emphasis on government-driven regulation and more emphasis on industry and community-led management. The Fisheries Research and Development Corporation can play a continuing role in developing inter-agency initiatives aimed at enhancing the facilitation, coordination, communication and networking capabilities of agency staff between agencies and with industry and stakeholders.

The agencies themselves are responsible for their own staff development and training programs. However, the Fisheries Research and Development Corporation can play a role in helping to design and develop inter-agency initiatives, particularly those that enhance the industry's capacity for self-management.

Benefits

- Expose staff involved in fisheries management to a broad range of issues and experiences thereby enhancing their ability to respond to industry issues.
- Enhance skills in facilitation, group techniques and other areas relevant to their role with industry and the community.
- Allow staff the opportunity to exchange information and experiences free from distractions of day-to-day work.

Discussion

Clearly such an initiative would need to be owned by the agencies themselves. It would be expected that the agencies would fund the program on an ongoing basis. The Fisheries Research and Development Corporation could assist in providing funds to design and develop the program, and possibly run the first session as a pilot exercise.

Cost minimisation strategies could be included as a requirement in the design and development phase. (For example, adding the program to an appropriate annual conference or event, rotating the venue around the States.)

3.2 National Industry Conference

Purpose
To provide a forum for sharing information about developments and achievements in the seafood industry.

Action
In partnership with key industry organisations, businesses, research institutions and government authorities, arrange a regular conference (biennial or triennial) for the seafood industry. The conference would bring together participants from all aspects of the industry to exchange information and ideas, provide information on national and global developments and trends, promote the seafood industry and allow the opportunity for promotion of products and services.

Benefits
- Inform industry, service providers, government and business of issues and opportunities.
- Create a culture that recognises opportunities for and the value of learning about industry developments nationally and internationally.
- Generate interest in taking an active part in industry activities.
- Facilitate and speed up the process of developing the capacity of industry to lead, plan and manage Australia's seafood industry.

Rationale
The seafood industry as a whole does not have many opportunities to come together to consider broad issues of economics, marketing, technical developments and management. The industry is dispersed and many participants are geographically isolated. A national conference would provide the opportunity for people to come together from around Australia and would benefit attendees as well as those unable to directly participate.

Discussion
There has been recent discussion of attaching a national conference to the ABARE Outlook Conference. This would have the advantage of exposing industry to the wider economic implications for rural industries as a whole as well as sharing information specific to the seafood industry.

Again, publicity and promotion through Fisheries Research and Development Corporation and industry publications and other fora will be crucial to encourage industry participation. It will be important to publish reports and commentary on the conference sessions after each conference.

6
Refining Options

Stakeholder Discussions

The options presented in Chapter 5 have not been discussed widely with industry, research or management organisations.

It is essential to the success of any option that it be developed in association with those affected.

Industry initiatives will only succeed if they are embraced and driven by industry. Industry will only support activities for which benefits can be clearly demonstrated. In some cases, the initiative will need to be put in place for the benefits to become apparent. It is absolutely essential to involve industry from the outset to have industry ownership, demonstrate benefits and thereby generate commitment. This is particularly important with options involving concepts or activities unfamiliar to many in the seafood industry. Experience elsewhere suggests that industry itself will ultimately adopt and drive programs seen as important.

Refine and prioritise options

Before agreeing which options to adopt, it is strongly suggested that discussions take place with representatives of industry organisations, management authorities, research organisations and other stakeholders. The purpose of these discussions is to agree on priorities, refine options and explore alternative approaches that examination of these options may suggest.

The discussions could occur through individual meetings or one or more workshops. It is strongly recommended that a face-to-face approach be taken rather than soliciting written comments to ensure greater confidence in and general acceptance of the resulting recommendations.

In development and prioritising recommendations, consideration will need to be given to cost. (It was seen as premature to provide cost estimates at this stage.)

Appendices

Appendix 1

Persons interviewed

Michael Beckingham
Australian Rural Leadership Program
Kingston ACT

Ian Cartwright
Australian Maritime College
Beauty Point Tas

Claudio Ciuffetelli
Rural Industries Research and Development Corporation
Barton ACT

David Conley
Dairy Research and Development Corporation
Glen Iris Victoria

Lara Damiani
South Australian Fishing and Seafood Industry Skills Centre
Port Adelaide South Australia

Dr Paul Donnelly
Dairy Research and Development Corporation
Glen Iris Victoria

Peter Dundas-Smith
Fisheries Research and Development Corporation
Deakin ACT

Dr Neil Evans (Arranged for 6 June)
Wool Research and Development Corporation
Melbourne Victoria

Dr Burke Hill
CSIRO
Cleveland Qld

Professor Bob Kearney
University of Canberra
Bruce ACT

Ted Loveday
Queensland Commercial Fishermans Organisation
Clayfield Qld

Professor John Lovett
Grains Research and Development Corporation
Barton ACT

James McColl
Australian Fisheries Management Authority
Canberra ACT

Alistair McIlgorm
Australian Maritime College
Beauty Point Tas

Bob Miller
South Australian Fishing and Seafood Industry Training Council Inc
Adelaide South Australia

Vince Mungomery
Sugar Research and Development Corporation
Brisbane Qld

Anthony Peacock
Barton ACT

Dr Roslyn Prinsley
Rural Industries Research and Development Corporation
Barton ACT

Dr Chris Rigney
Horticultural Research and Development Corporation
Gordon NSW

Nigel Scullion
Australian Seafood Industries Council
Darwin NT

Richard Stevens
Australian Fisheries Management Authority
Canberra ACT

Ralph Schulze
Cotton Research and Development Corporation
Narrabri NSW

John Tanzer
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Fortitude Valley Qld

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Appendix 2

Research and Development Corporation Funding

	Fisheries Research and Development Corporation	Cotton Research and Development Corporation	Dairy Research and Development Corporation	Grains Research and Development Corporation	Horticultural Research and Development Corporation	Land and Water Resources Research and Development Corporation	Meat Research Corporation	Pig Research and Development Corporation	Rural Industry Research and Development Corporation	Sugar Research and Development Corporation	Wool Research and Development Corporation
Annual budget											
1994/95:				$48.4m				$7.49m			
1995/96:	$14.58m		$22.7m		$23m					$10.47m	
Research											
Undergraduate				Undergraduate Honours ($5,000 plus $1,000 to institution, up to 12 a year).	Undergraduate Scholarships (currently four)			Undergraduate Summer Scholarship (up to $3,500); Undergraduate Encouragement Award ($600)			
Postgraduate Scholarships	No scholarships, project-based postgrads.	Approx 6 a year ($21,000 plus $3,000 costs).	Postgraduate Scholarships for Research; Postgraduate Scholarships in Extension- joint with industry (up to 5 a year); Graduate Traineeship in dairy processing- joint with industry (6 to 8 a year approx). Postgraduate scholarships for dairyfarmers.	Junior Research Fellowships ($21,000 plus $3,000 to institution - up to nine 6-monthly a year,new award); project-based postgrads.	No scholarships, project-based postgrads.	Up to 4 scholarships a year ($20,000 plus $5,000 operating / travel)	Postgraduate Scholarships (6 to 8 a year, $20,000); also Masters (approx $14,000).	Postgraduate Research Scholarship: Full scholarships ($21,000), Top up awards ($3,000), project-based postgrads. (16 scholarships at present)	3 to 4 scholarships a year ($21,500 plus $3,500 allowance to institution)	Two or three a year ($22,000 plus $3,000 operating); Augmentation Grants (up to $2,000 "top-up" award to student with scholarship)	
Post Doctorate positions			Post-Doctoral Fellowships (up to 3 years).	Post-Doctoral Fellowship ($50,000 pa plus $3,000 airfare and removal costs, 5 a year at 6 months each)				Post Doctoral Research Scholarship ($35,000); Dr John Ryley Postdoctoral Fellowship ($40,000)			
Senior Research Fellowships and Awards			Visiting Scientist Fellowships - expected to have a strong role in training Australian researchers.	Senior Fellowship (One or two, up to maximum $50,000 each), Visiting Research Fellowship (One or two up to $17,500).	One sabbatical (up to $10,000)		Study awards in research or extension ($15,000 to $20,000).	Distinguished Visitor Award (up to $20,000)			
Industry Placements								Masters in Industry (placement with producer)		Farm Mechanisation Fellowship ($50,000 a year)	
Student Development						Currently preparing career development policy for supported scholars.		Student workshop; career development; student support; team building; industry knowledge. (HR consultant provides career reports)			

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Other			Sponsorship of various dairy industry events such as conferences, workshops and discipline-based events (not outright donations).	In-Service Training for young scientists, technical staff etc (variable: approx 6 a year, average approx $15,000 each)				3 per year, short course fees, travel and accomodation (eg Grad Dip Bus Management)			
Extension											
Group Extension				Support for various eg "Top Crop", "Gain Grain",				Some group extension projects (eg discussion groups)	Support Farm Management 500.		
Other Extension	Support for AUSEAS.		Support for various including major composite programs such as "Target 10", "Project 21"; dairy extension conference.	Four grower newspapers a year (tabloid format); various under project submissions.					Various projects eg looking at extension processes, groups etc		
Training and Development	Development of ASIEN.		Training in extension and related disciplines (postgraduate).				Study awards (refer above under Senior Research Fellowships and Awards)				
Education	Development of ASIEN network.		Developed short course in leadership including market research (refer Leadership below); also some through project submissions (eg resource materials).	Support for Rural Training Council initiatives eg competency standards development							

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Industry											
Awards		Industry Development Award		Industry Development Award (Two a year up to $15,000 each)				Refer Extension above.		Innovators Awards ($40,000 a year budget, up to 4 awards) - currently being reviewed and restructured.	
Industry Development Officers and similar		3 industry extension officers.			Industry Development Officers (currently 18)						
General		Various: eg Cotton Industry Strategic Plan; various extension project support eg for field days, farm walks etc								Various extension including extension evaluation projects.	
Leadership											
General			Developing leadership program with industry including short course.	Short courses for industry (eg with Bread Research Institute)				Facilitator training for industry discussion group leaders.			
Australian Rural Leadership Program	One or two a year	Currently 1 a year funded by Cotton R&D plus one funded by cotton industry processors	Currently 2 a year	Currently 2 a year	Currently 2 a year				Founding members ($1m)	Currently one a year.	
Integrated											
General		Biennial cotton conference (research) on Gold Coast attracts approx 1100 incl almost 50% grower/industry (total 1400 growers); Joint research/industry travelling sessions.	Sponsorship of various dairy industry events such as conferences, workshops and discipline-based events (not outright donations).					Workshop for research, industry and government by invitation, two-days every 4 to 5 years.		Research and Development plan through meetings with industry.	
Other	Sponsorship of attendance at conferences, seminars, workshops etc		General Training and Development - study tours, attendance at conferences, seminars, short courses, workshops.		Sponsorship of attendance at conferences and congresses (open to researchers, industry etc)					Study tours, travel grants etc. Compete with project submissions.	