

A COMPENDIUM OF
FISHERIES RESEARCH AND DEVELOPMENT AGENCIES
AND FUNDING SOURCES

compiled for the

FISHERIES RESEARCH AND DEVELOPMENT CORPORATION

by

Mary Lack

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RESEARCH PROVIDERS

A. GOVERNMENT DEPARTMENTS AND AGENCIES

COMMONWEALTH

1.

AUSTRALIAN FISHERIES MANAGEMENT AUTHORITY (AFMA)

Burns Centre 28 National Circuit Forrest ACT
PO Box 7051 Canberra Mail Centre ACT 2610
Phone: 06 272 5785 Fax: 06 272 5175
Contact: Mr Richard Stephens (Managing Director)

Keywords: #management - fisheries; #resource assessment; #technology - fishing

Research Objectives/Role: AFMA receives research funding through the Fisheries Resources Research Fund. In 1991/92 AFMA received \$1.72m and will undertake some projects on its own behalf or in conjunction with other bodies.

Fisheries Related R & D: In 1992/93 the following programs will be undertaken by AFMA

- to monitor Russian fishing outside the Australian fishing zone
- development of a benevolent prawn trawl
- Australian-Indonesian workshop on fish stocks in the Arafura Sea
- consolidation of Southern Bluefin Tuna database
- acquisition of a transportable acoustic system for the assessment of fish aggregations
- monitoring of southern bluefin tuna catches off Indonesia

Bodies including Queensland and Northern Territory Departments of Fisheries, CSIRO, ABARE and the Indonesian Institute of Marine Sciences will collaborate with AFMA in conducting this research. AFMA has also engaged others, including ABARE, BRR, the Victorian Marine Science Laboratories and the NSW Fisheries Research Institute, to carry out projects on its behalf:

- information base of production, value and trade statistics for the Australian fishing industry (ABARE)
- exploratory fishing in Australian waters (ABARE)
- foreign involvement in the Australian fishing industry (ABARE)
- to improve assessments of southern bluefin tuna stocks (BRR)
- to print the Fisheries Resources Atlas (BRR)
- work on mesh selectivity and population estimates for warehou (VIC. Marine Science Labs.)
- southern shark research program (VIC. Marine Science Labs)
- assessment of the impact of Papua New Guinean Mining on the Torres Strait Fisheries (Consultant)
- research on the south east fishery (NSW Fisheries Research Institute)
- development of a bioeconomic risk assessment model (CSIRO/ABARE)

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ management
 - ⊙ knowledge
 - ⊙ maintenance and improvement
- ◆ Harvesting
 - ⊙ technology

2.

AUSTRALIAN NUCLEAR SCIENCE AND TECHNOLOGY ORGANISATION Environmental Science Program

Lucas Heights Research Laboratories Private Mail Bag 1
Menai NSW 2234

Phone: 02 543 3111 Fax: 02 543 5097
Contact: Mr Glynn Peady (Grants co-ordinator)

Keywords: #technology - nuclear; #seafood - irradiation; #pollution - marine; #environment - marine

Research Objectives/Role: The Environmental Science Program involves long term research on the identification, characterisation and understanding of physical, chemical and biological processes associated with the broad spectrum of generic environmental issues. This basic research complements and provides the scientific support and data platform for wide-ranging applied research and development activities that focus on the formulation and implementation of cost effective solutions to immediate environmental problems.

Fisheries Related R & D: Under the Environmental Chemistry sub-program strategic and applied research is undertaken into the chemistry of waters (including estuarine and marine), soils and wastes. There are parallel studies on the chemistry and photochemistry of marine water columns and the marine surface micro-layer. This work assists in assessing the impact of land-based agricultural and mining operations on the Great Barrier Reef and the deep ocean outfalls off Sydney. Recent research has also involved radiation treatment in seafoods, degradation of tributyltin in the marine environment and sources of radioactivity in the marine environment.

Strong bilateral and multilateral collaborative research links are maintained with academic institutions, industry and other government agencies at the national and international level.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ fisheries habitat-ecosystem
- ◆ Harvesting
 - ⊙ product handling and preservation

3.

CSIRO

Limestone Avenue, Campbell ACT
PO Box 225 Dickson ACT 2602

Phone: 06 276 6696 Fax: 06 276 6301
Contact: Dr John Stocker (Chief Executive)

Other locations:

Institute of Animal Production and Processing
105 Delhi Rd North Ryde NSW
PO Box 93 North Ryde NSW 2113
Phone: 02 887 8222 Fax: 02 887 8260
Contact: Dr Alan Donald (Director)

Institute of Natural Resources and Environment
PO Box 225 Dickson ACT 2602
Phone: 06 276 6614 Fax: 06 276 6207
Contact: Dr Roy Green (Director)

Institute of Industrial Technologies
Normanby Rd Clayton VIC
Private Bag 28 Clayton VIC 3168
Phone: 03 542 2968 Fax: 03 543 2114
Contact: Dr Colin Adams (Director)

Research Objectives/Role: To:

- improve the export and import replacement performance of Australia's primary and manufacturing industries;
- develop ecologically sound management principles and practices for the use and conservation of Australia's natural resources;
- achieve sustainable development in production systems and develop technologies to minimise environmental damage from economic development;
- reduce the trade deficit of the information and communications industries; and
- enhance productivity and effectiveness in provision of infrastructure and services, particularly public health and construction.

Fisheries Related R & D: Fisheries related R&D is carried out predominantly in the Institute of Natural Resources (by the Divisions of Fisheries, Oceanography and Water Resources and the Centre for Environmental Mechanics) and the Institute of Animal Production and Processing (the Divisions of Food Processing, Human Nutrition and Animal Health).

The CSIRO is actively involved in domestic and international collaborative research work.

See separate entries for each of the above Divisions/Centres.

4.

CSIRO INSTITUTE OF NATURAL RESOURCES AND THE ENVIRONMENT

Centre For Environmental Mechanics

Black Mountain Laboratories Clunies Ross Street Canberra ACT

GPO Box 821 Canberra ACT 2601
Phone: 06 246 4911 Fax: 06 246 5560
Contact: Dr J Finnigan

Keywords: #pollution - water; #ecology - estuarine; #ecology - freshwater

Research Objectives/Role: To solve problems in hydrology, environmental quality, industrial processes and plant productivity by understanding physical processes in the natural environment.

Research focuses on perceived gaps in scientific understanding required for effective management of hydrological, environmental and agricultural resources, and on the development of techniques, analyses and instruments to expedite the practical application of results.

Fisheries related R & D: Relevant programs include:

- physical ecology;
- micrometeorology;
- soil physics;
- physical limnology; and
- applied mechanics.

Relevant research has included an assessment of the impact of sugar cane land drainage on development of acid sulphate soils and pollution of tidal estuaries and physical processes in Australian freshwater bodies

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- ⊗ habitat-ecosystem

5.

CSIRO INSTITUTE OF NATURAL RESOURCES AND ENVIRONMENT

Division Of Fisheries

Marine Laboratories Castray Esplanade Hobart TAS
GPO Box 1538 Hobart TAS 7001
Phone 002 206 222 Fax: 002 240 530
Contact: Dr Peter Young (Chief)

Keywords: #resource assessment; #aquaculture; #aquaculture - nutrition; #mariculture; #mariculture - nutrition; #seafood - storage/preservation; #biology - marine

Other Locations:

CSIRO Marine Laboratory
233 Middle Street
Cleveland QLD 4163
PO Box 120 Cleveland QLD 4163
Phone: 07 286 8222 Fax: 07 286 2582

CSIRO Marine Laboratory
Leach Street Marmion WA 6020
PO Box 20 North Beach WA 6020
Phone: 09 246 8288 Fax: 09 246 8233

CSIRO Marine Laboratory
Range Road HMAS Creswell
Jervis Bay NSW
PO Box 94 Vincentia NSW 2540
Phone: 044 421155 Fax: 044 421164

Research Objectives/Role: To maintain, develop and improve Australia's wild and mariculture fisheries, with particular reference to the rational exploitation of the resource, the interests of the catching sector and the quality and value of product.

Fisheries Related R & D: The Division investigates the distribution, abundance and population dynamics of commercial and potentially commercial fisheries through studying the physical, chemical and biological factors. The Division also has an increasing interest in environmental protection and climate change, so far as these topics relate to marine fisheries. The Division is increasing resources to support research relevant to mariculture. There are seven main areas of fisheries research:

1. Population dynamics and fish stock assessment
2. Phytoplankton resources
3. South and South east fisheries resources
4. North and North East fisheries resources
5. West and North West fisheries resources
6. Biological Oceanography
7. Environmental Management and Protection

Potential Areas Of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊗ Knowledge
 - ⊗ Maintenance and improvement
 - ⊗ Management
 - ⊗ Habitat - ecosystem
- ◆ Harvesting
 - ⊗ Product handling and preservation
 - ⊗ Processing
- ◆ Aquaculture/mariculture
 - ⊗ growth and survival

Note: The CSIRO has announced that it will be closing its Jervis Bay & Brisbane laboratories in order to form a Marine and Environment Laboratory to be located in Marmion, WA. The Laboratory will involve collaboration between a number of CSIRO Divisions, including the Institute of Natural Resources, Division of Coal and Energy Technology, and the Western Australian Environment Protection Authority.

6.
CSIRO INSTITUTE OF NATURAL RESOURCES AND ENVIRONMENT

Division Of Oceanography
Castray Esplanade Hobart TAS
GPO Box 1538 Hobart TAS 7001
Phone: 002 206 222 Fax: 002 237 125
Contact: Dr AD McEwan (Chief)

Keywords: #climate change; #ecology - estuarine; #pollution - marine; #Antarctica; #Southern Ocean; #oceanography; #instrumentation - marine; #remote sensing

Other Locations:
CSIRO Marine Laboratories
Leach Street Marmion WA
PO Box 20 North Beach WA 6020
Phone: 09 246 8288 Fax: 09 246 8233

Research Objectives/Role: To improve:

- the efficiency of all forms of Australian maritime activity dependent on oceanic knowledge;
- the rational management of the ocean and estuarine environment; and
- the quantitative understanding of those aspects of the interaction between the atmosphere and the regional oceans which relate to the variability and change of the Australian climate.

The Division aims to develop marine instrumentation and software and where possible promote its exploitation commercially in collaboration with industry and to develop links with other scientific agencies and universities, particularly through special purpose and collaborative grants and Co-operative Research Centres.

Fisheries Related R & D: There are four program areas:

1. Climate
 - ocean's role in the El Nino - southern oscillation phenomenon
 - ocean's role in climate change
 - ocean's role in global carbon cycle
2. Environment
 - environmental studies in coastal and estuarine waters
 - trace elements and organic pollutants
 - Antarctic and Southern Ocean studies
3. Resources
 - prediction of tides and currents for off-shore resources
 - surface wave climatology and prediction
 - characterisation and prediction of major ocean current systems and continental shelf oceanic processes in Australian waters
 - biological and chemical resources
4. Technology
 - developments of marine instrumentation
 - developments and commercialisation of remote sensing products
 - RV Franklin research

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ maintenance and improvement
 - ⊙ habitat - ecosystem

7.
CSIRO INSTITUTE OF NATURAL RESOURCES AND ENVIRONMENT

Division Of Water Resources
Underwood Ave Floreat Park Wembley WA
Private Bag PO Wembley WA 6014
Phone: 09 387 0200 Fax: 09 383 7208
Contact: Dr GB Allison (Chief)

Keywords: #water quality; #resource-use conflicts;

Other Locations:
Black Mountain Laboratories
Clunies Ross St Black Mountain Canberra ACT
GPO Box 1666 Canberra ACT 2601
Phone: 06 246 4911 Fax: 06 247 9958

Waite Laboratories
Waite Road Urrbrae SA
Private Bag No 2 Glen Osmond SA 5064
Phone: 08 274 9381 Fax: 08 338 2144

Griffith Laboratories
CSIRO Griffith NSW
Private Bag No 3 Griffith NSW 2680
Phone: 069 62 0500 Fax: 069 62 7362

Murray Darling Freshwater Research Centre
Ellis St Thurgoona NSW
PO Box 921 Albury NSW 2640
Phone: 060 43 1002 Fax: 060 43 1626

Research Objectives/Role: To provide public agencies and the private sector with improved methods for the definition, use and management of Australia's water resources. Of particular importance is the maintenance of the quantity and quality of urban, rural and industrial water supplies.

The Division studies the processes involved in the interactions between the atmosphere, plants, land and water, and translates the findings into practical techniques to assist agencies in managing natural resources to meet community and environmental needs. The division will consult with the water "industry" and develop collaborative research with user agencies. Research is often multidisciplinary and concentrates on solving problems at a system level.

Fisheries Related R & D: Integrated management of recreation, tourism and water resources; Analysis of spectrographic data of coral reef and coastal features, and water masses in the Great Barrier Reef Marine Park.

Potential areas of Collaborative Research:

- ◆ Harvesting
 - ⊙ resource use conflicts
- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem
 - ⊙ knowledge

8.
CSIRO INSTITUTE OF ANIMAL PRODUCTION AND PROCESSING

Australian Animal Health Laboratory
Ryrie Street East Geelong VIC
PO Box 24 Geelong VIC 3220
Phone: 052 265222 Fax: 052 23 1424
Contact: Dr P Keith Murray (Deputy Chief/Head of Laboratory)

Keywords: #disease - fish; #aquaculture - health management

Research Objectives/Role: To enhance Australia's capability and preparedness to combat exotic livestock disease outbreaks through diagnosis, research, training and vaccine development.

Fisheries Related R & D:

- Diagnosis and epidemiology of exotic diseases
- development of diagnostic diseases
 - Australian Fish Health Reference Laboratory
 - training in recognition of exotic diseases

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - maintenance and improvement
- ◆ Aquaculture
 - growth and survival

9.

CSIRO INSTITUTE OF ANIMAL PRODUCTION AND PROCESSING

National Centre For Food Processing And Packaging
 Division Of Food Processing
 Food Research Laboratory 39-51 Delhi Road North Ryde NSW
 PO Box 52 North Ryde NSW 2113
 Phone: 02 887 8360 Fax: 02 887 3107
 Contact: Dr Norman Parker

Keywords: #seafood - manufacturing processes; #seafood - storage/preservation; #seafood - biological analysis; #seafood - packaging/transport

Research Objectives/Role: The objectives of the Division are to extend knowledge of the chemical, physical, sensory and nutritional properties of foods and their components and to apply this to the development of new packaging, processing and control technologies for the generation of high quality products, particularly for specific export markets.

The National Centre for Food Processing and Packaging, based at the Food Research Laboratory, provides research and consulting services in food processing and packaging to industry on a fee for service basis. It has an ongoing program in active packaging and has recently purchased a packaging film laminator, to develop new packaging materials, which is available for use by industry. Pilot plant machinery is available for clients to simulate many food processing operations and advice is given on the selection of suitable packaging materials.

Fisheries Related R & D: Relevant Programs:

1. Industry and consumer liaison
2. Microbiology and food components
3. Process engineering and preservation technology
 - food process engineering
 - packaging and storage of foods
 - environmental control during transport
 - processing, isolation, functionality and analysis of food proteins and food related proteins
4. Sensory studies

Potential Areas of Collaborative Research:

- ◆ Marketing
 - storage, transport and handling cost competitiveness
- ◆ Harvesting
 - product handling and preservation
 - processing

10.

DEFENCE SCIENCE AND TECHNOLOGY ORGANISATION (DSTO)

Dept. of Defence, Anzac Park West, Canberra ACT 2601
 Phone: 06 266 6111 Fax: 06 266 6320
 Contact: Dr Gary Ashton (Ass. Sec. Dev. projects Branch)

Keywords: #oceanography; #instrumentation - marine; #technology - marine

Other locations:

PO Box 1500 Salisbury SA 5108
 Phone: 08 259 6262 Fax: 08 259 6567

Maritime Operations Division
 Materials Research Laboratory
 PO Box 44 Pymont NSW 2009

Maritime Systems Division
 Po Box 706 Darlinghurst NSW 2010
 Phone: 02 692 1422 Fax: 02 680 0019

Research Objectives/Role: The objective of the DSTO is to enhance Australia's defence capabilities, to contribute to the development and implementation of Australian defence policies and to provide assistance to the defence organisation and Australian industry through the application of science and technology.

From time to time DSTO arranges Research Agreements with university faculties. Under such agreements, DSTO funds research at the University receiving, in exchange, information on intellectual property obtained as a result of the research. Usually DSTO takes the initiative in arranging Research Agreements, in order to meet needs which cannot be met from DSTO's own research resources. However, DSTO is open to proposals from university researchers who consider that their work would be of value to DSTO's research and development objectives.

Fisheries Related R & D: Marine protective chemistry

- surface protection/anti-corrosion
- anti-fouling
- marine fuel technology

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - technology

11.

DEPARTMENT OF ADMINISTRATIVE SERVICES
Australian Government Analytical Laboratory (AGAL)
 Level 2 Churches Centre Belconnen ACT
 PO Box 65 Belconnen ACT 2616
 Phone: 06 252 4293 Fax: 06 252 4981
 Contact: Dr Colin Dahl

Keywords: #microbiology

Research Objectives/Role: To provide analytical chemistry and microbiology services to government departments and industry. The AGAL maintains an R&D Section to assist in the development of new, more efficient test methods, for both internal use and for external clients and to check the quality of results throughout the AGAL. Research relates to R&D of new analytical methods, products and processes. The laboratories operate on a Trust Account on a full cost recovery basis.

Fisheries Related R & D: Analysis of inorganic arsenic in fish and prawns; developing a method for determining the chitin content of krill moult as part of the Antarctic Division's ongoing research into the role of krill in the environment.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - fisheries habitat-ecosystem
 - knowledge of fish resources

12.

DEPARTMENT OF ARTS, SPORT, THE ENVIRONMENT AND TERRITORIES (DASET)

Tobruk House 15 Moore St Canberra ACT

GPO Box 787 Canberra ACT 2601

Phone: 06 274 1550 Fax: 06 274 1552

Contact: Dr David Green (Chief Science Adviser)

Research Objectives/Role: The Department's specific goals are to:

- develop in the national interest, a proper recognition of environmental, social, cultural and related economic values in government decision-making and activities, and
- improve the quality of decision-making process, program delivery and communication by ensuring that government has available to it reliable information and advice and efficient delivery mechanisms.

Fisheries Related R & D: Research is provided by the:

- Antarctic Division;
- Bureau of Meteorology;
- Great Barrier Reef Marine Park Authority; and
- Office of the Supervising Scientist - Alligator River Region Research Institute.

Research funds are provided through the:

- Antarctic Science Advisory Committee Grants Scheme.
- Research and Surveys Program;
- Australian Biological Resources Study;
- Core Research Program;
- Dedicated Greenhouse Research Grants Scheme;
- Endangered Species Program;
- Greenhouse Information Program Grants Scheme; and
- States Cooperative Assistance Program.

See separate entries for each agency and grants scheme.

13.

DEPARTMENT OF ARTS, SPORT, THE ENVIRONMENT AND TERRITORIES

Antarctic Division

Channel Highway Kingston TAS 7050

Phone: 002 323 209 Fax: 002 323 288

Contact: Rex Moncur (Director)

Keywords: #biology - marine; #climate change; #oceanography

Research Objectives/Role: To provide scientific knowledge for the effective management of the environment and the living and non-living resources of the Antarctic and to promote Australia in international scientific forums in order to increase credibility and influence in relation to Australia's Antarctic interests and to take advantage of the unique opportunities Antarctica provides for science.

The Division carries out an extensive program of research into the living and non living resources of the Antarctic, setting out to provide scientific knowledge for the effective management of the region. Research programs cover glaciology, terrestrial and marine biology, cosmic ray physics, upper atmosphere physics and polar medicine. The research program is supporting over 130 projects, about a quarter of them related to climate change and the Greenhouse effect.

Fisheries Related R & D: The Division undertakes logistics support and research into marine biology and oceanography of antarctic and southern ocean waters, with special emphasis on krill, phytoplankton and fish. The Division operates the *R.V. Aurora Australis*.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - knowledge
 - habitat - ecosystem

14.

DEPARTMENT OF ARTS, SPORT THE ENVIRONMENT AND TERRITORIES

Bureau of Meteorology

150 Lonsdale Street Melbourne VIC

GPO Box 1289K Melbourne VIC 3001

Phone: 03 669 4000 Fax: 03 669 4699

Contact: Dr John Zillman (Director)

Keywords: #oceanography; #climate change; #meteorology

Research Objectives/Role: The Bureau carries out an extensive pure and applied research program to support its broader role of providing meteorological, hydrological and oceanographic information in support of nationwide forecasts, warning and advisory services. The Bureau's research centre is the principal focus of research which is directed to the advancement of meteorological science and the development of a comprehensive description and scientific understanding of Australia's weather and climate. Research programs include investigations into tropical weather systems; the Greenhouse effect, including development of complex computer models of weather and climate change; work on El Nino and seasonal climate outlooks.

Fisheries Related R & D: The Bureau conducts a research program in oceanography, focussed on air/sea interaction. This complements the program of the CSIRO Divisions of Oceanography and Atmospheric Research. Such research may improve understanding of the "El Nino" effect thought to have implications for productivity of marine waters, while oceanographic research may also lead to a better understanding of the effects and causes of the "Greenhouse Effect" and the possible implications of a rise in the mean sea level on marine habitats.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - fisheries habitat - ecosystem

15.

DEPARTMENT OF ARTS, SPORT, THE ENVIRONMENT AND TERRITORIES

Great Barrier Reef Marine Park Authority (GBRMPA)

2-68 Flinders Street Townsville QLD

PO Box 1379 Townsville QLD 4810

Phone: 077 81 881 Fax: 077 72 6093

Contact: Dr Wendy Craik (Executive Officer)

Keywords: #oceanography; #resource - use conflict; #biology - marine; #water quality

Other Locations:

Gas Industry House Cnr Moore & Rudd Streets
 Canberra ACT
 GPO Box 791 Canberra ACT 2601
 Phone: 06 247 0211 Fax: 06 247 5761
 Contact: Peter Ottesen (Director)

Research Objectives/Role: The Authority focuses all of the research it funds on understanding those particular processes that are seen as being vital to maintaining the natural qualities of the Great Barrier Reef and on assessing the effect of human activity in quantitative terms.

Fisheries Related R & D:

The Research and Monitoring program has eight sub-programs:

- water quality;
- crown-of-thorn starfish;
- effects of fishing;
- reef fishing;
- human use/social impact;
- oceanography;
- torres strait baseline study; and
- off-shore petroleum exploration and oil spills.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - knowledge
 - maintenance and improvement
 - management
 - habitat - ecosystem
- ◆ Harvesting
 - resource - use conflict

16.

DEPARTMENT OF ARTS, SPORT, THE ENVIRONMENT AND TOURISM

Office Of The Supervising Scientist - Alligator River
 Region Research Institute
 Level 24 Triple M Tower Bondi Junction Plaza
 500 Oxford St Bondi Junction
 PO Box 387 Bondi Junction NSW 2022
 Phone: 02 387 0666 Fax: 02 389 0681
 Contact: Mr RM Fry (Supervising Scientist)

Keywords: #biology - freshwater; #ecology - freshwater;
 #water quality

Other locations:

5th Floor MLC Building
 81 Smith Street Darwin NT 0800
 Phone: 089 81 4230 Fax: 089 81 4316
 Contact: Mr PW Waggit (Principal Environmental Assessment Officer)

Research Objectives/Role: Carries out research into the effect of uranium mining operations on the environment of the Alligator River Region and into the environmental effect of general mining operations in the Conservation Zone. It is responsible for supervising and monitoring environment protection measures, providing independent advice and carrying out environmental research in the Alligators Rivers Region. This includes the collection of data on the effects of mining on the environment and the development and promotion of standards and practices for protection and restoration of the environment.

The internal work of the Institute is supplemented by consultancies and collaborative research projects with organisations such as CSIRO, ANSTO and tertiary institutions.

Fisheries Related R & D: The Institute has established research groups in aquatic toxicology, aquatic biology, plant ecology and physiology, environmental chemistry, environmental radioactivity and geomorphology and undertakes biological monitoring of freshwater fish of the Alligator River Region.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - habitat - ecosystem

17.

DEPARTMENT OF INDUSTRY, TECHNOLOGY AND COMMERCE (DITAC)

51 Allara St Canberra ACT
 GPO Box 9839 Canberra ACT 2601
 Phone: 06 276 1000 Fax: 06 276 1111
 Contact:

Research Objectives/Role: Within DITAC research is undertaken by the Bureau of Industry Economics and the Australian Institute of Marine Science. The latter being the main research provider in respect of fisheries related matters. DITAC has responsibility for the administration of a number of research and development grants.

Research funds are provided through the National Teaching Company Scheme and the Industry Research and Development Board's:

- Grants for Industrial Research and Development;
- International Conference Support Scheme; and
- International Science and Technology Program

See separate entries for AIMS and each of the above Programs.

18.

DEPARTMENT OF INDUSTRY, TECHNOLOGY AND COMMERCE

Australian Institute Of Marine Science
 Cape Ferguson Queensland
 PMB No 3 Mail Centre Townsville QLD 4810
 Phone: 077 78 9211 Fax: 077 72 5852
 Contact: Dr Joe Baker (Director)

Keywords: #oceanography; #environment - marine;
 #biotechnology; #mariculture; #biology - marine; #marine - tropical

Research Objectives/Role: The Institute's functions are

- to carry out research in marine science;
- to arrange for the carrying out of research in marine science by any other institute or person;
- to co-operate with other institutions and persons in carrying out research in marine science;
- to provide any other institution or person with facilities for carrying out research in marine science or otherwise assist any other institution or person carrying out research in marine science;
- to collect and disseminate information relating to marine science and, in particular, to publish reports, periodicals and other papers relating to marine science; and
- to do anything incidental or conducive to the performance of any of the foregoing functions.

AIMS has as its objectives for research and communications:

- to put particular emphasis on tropical marine research in order to advance and apply scientific

- knowledge in response to national needs and priorities; and
- to demonstrate and communicate the results of research and the importance of marine science in the management, maintenance and development of resources based on marine ecosystems.

Research may be carried out in-house or undertaken under contract, co-operatively or by providing outsiders with facilities and assistance.

Fisheries Related R & D: Present research effort is organised within 4 programs:

- coastal processes and resources;
- coral reef ecosystems;
- environmental studies and biotechnology; and
- tropical oceanography

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - knowledge
 - maintenance and improvement
 - management
 - habitat-ecosystem
- ◆ Aquaculture/mariculture
 - growth and survival
 - biology and genetics

Note: It has been announced recently that a marine science research facility, an extension of the AIMS, will be established in Western Australia. This facility will provide for research into ecosystem analysis and environmental monitoring particularly in relation to off-shore exploration activities.

19.

DEPARTMENT OF PRIMARY INDUSTRIES AND ENERGY (DPIE)

Edmund Barton Building Cnr Broughton & Blackall Sts
Barton ACT
GPO Box 858 Canberra ACT 2601
Phone: 06 272 3933 Fax: 06 272 5161
Contact: Geoff Miller (Secretary)

Research Objectives/Role: Provision of accurate information and high quality scientific, economic and policy analysis and advice to assist informed and objective decision making processes for resource development and conservation

Fisheries Related R & D: The Department's Australian Bureau of Agricultural and Resource Economics, Australian Geological Survey Organisation and the Bureau of Rural Resources undertake research related to fisheries. The Murray-Darling Basin Commission provides funds for research into fisheries related matters.

See separate entries for each of the above Bureaux/Commission.

20.

DEPARTMENT OF PRIMARY INDUSTRIES AND ENERGY

Australian Bureau Of Agricultural And Resource Economics (ABARE)

Edmund Barton Building Cnr Broughton & Blackall Sts
Barton ACT
GPO Box 1563 Canberra ACT 2601
Phone: 06 272 3933 Fax: 06 272 2001
Contact: Mr Murray Lembit (A/g Manager)

Keywords: #marketing - seafood; #management - fisheries; #aquaculture

Research Objectives/Role: The Fisheries Economic Research Section aims to efficiently and effectively provide high quality economic information of direct relevance to Australia's fishing industries in order to enhance their economic performance and that of Australia as a whole.

Fisheries Related R & D: ABARE conducts economic surveys of fisheries, reports on the economic status of these fisheries, provides advice on policy options for fisheries management and forecasts market trends for fisheries products. Other research areas have included feasibility of electronic marketing of fisheries production, institutional impediments to fish marketing, government assistance to the fishing industry and potential for aquaculture. ABARE has also been engaged by AFMA to conduct various projects on its behalf in relation to data base development, bioeconomic modelling, exploratory fishing and foreign involvement in the Australian fishing industry.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - management of fisheries
- ◆ Marketing
 - improved understanding of the domestic market
 - improved understanding of the export market and opportunities
 - status of competing overseas suppliers
 - improved pricing efficiency in marketing
 - assessment of promotion opportunities
- ◆ Aquaculture/mariculture
 - economics and marketing
- ◆ Harvesting
 - harvest economics

21.

DEPARTMENT OF PRIMARY INDUSTRIES AND ENERGY

Australian Geological Survey Organisation (formerly BMR)

Anzac Park East Building
Cnr Constitution Avenue & Anzac Parade Parkes ACT
GPO Box 378 Canberra ACT 2601
Phone: 06 249 9111 Fax: 06 249 9111
Contact: Dr David Falvey (Chief, Marine Geoscience & Petroleum Geology)
Dr L Jacques (Chief, Environmental Geoscience and Groundwater)

Keywords: #geoscience

Research Objectives/Role: To:

- generate publicly accessible information necessary for the exploration and assessment of the nation's petroleum, mineral and groundwater resources;
- participate in monitoring and developing an understanding of the natural environment;
- participate in global and regional geoscientific programs of importance to Australia; and
- provide independent scientific advice to government, industry and the public for the management of Australian's resources, the development of multiple land use policies, environmental protection, the mitigation of earthquakes and other natural hazards and the detection of underground nuclear explosions.

Fisheries Related R & D: The two most relevant Programs are the:

- Environmental Geoscience Program; and the
- Marine Geoscience and Petroleum Geology Program

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ knowledge
- ◆ Harvesting

22.

DEPARTMENT OF PRIMARY INDUSTRIES AND ENERGY

Bureau Of Rural Resources

John Curtin House 22 Brisbane Avenue Barton ACT
PO Box E11 Queen Victoria Terrace Parke ACT 2600
Phone: 06 272 5177 Fax: 06 272 4747

Contact: Dr Russell Reichelt (Director, Fisheries Resources Branch)

Keywords: #resource assessment; #pollution - marine; #resource monitoring

Research Objectives/Role: The Fisheries Resources Branch links the policy and scientific research environment by reviewing, analysing and interpreting the output of research agencies in terms of significance for Commonwealth policy and programs.

Fisheries Related R & D: The Branch undertakes the planning, review and co-ordination of fisheries research, research and monitoring projects, filling perceived gaps in work undertaken elsewhere, and the interpretation and dissemination of fisheries research results to managers and industry.

The Branch has 4 sections:

- Resource assessment;
- Environment and technology;
- Demersal fisheries; and
- Pelagic fisheries

The BRR has also been engaged by AFMA to undertake research in relation to stock assessment of southern bluefin tuna and printing of the Fisheries Resources Atlas.

Potential Areas of Collaborative Research:

- ◆ Natural fish Resources
 - ⊙ knowledge
 - ⊙ maintenance and improvement
 - ⊙ management
 - ⊙ habitat - ecosystem

Note: The BRR is likely to undergo a name change shortly as a consequence of the recent incorporation of the Minerals and Petroleum Resource areas of the former Bureau of Mineral Resources.

23.

ROYAL AUSTRALIAN NAVY- HYDROGRAPHIC BRANCH

PO Box E33 Queen Victoria Terrace ACT, 2600
Phone: 06 265 9111

Contact: Mr BH Willington (Director, Operation Facilities Section)

Keywords: #instrumentation - marine; #oceanography

Other locations:

161 Walker St North Sydney NSW
RAN/Australian Oceanographic Data Centre
PO Box 1332 North Sydney NSW 2059
Phone: 02 925 4870
Contact: BJ Searle (Head, Science & Oceanography)

Research Objectives/Role: Responsible for bathymetric surveying and the production of hydrographic charts. Responsible for the Australian Oceanographic Data Centre located in Sydney, and the secretariat for the Permanent Committee on Tides and Mean Sea Level.

The objective of the Oceanographic Survey component is to collect and acquire environmental data in areas of direct military interest

- oceanographic survey plans
- maritime environment data acquisition and quality control

The objective of the Environment Services component is the provision of maritime environment products and services to support defence needs and meet national and international obligations

- Australian Oceanographic Data Centre
- Naval weather and Oceanographic Centre

Fisheries Related R & D: Hydrographic surveys; depth sounding systems; chart production

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ knowledge
- ◆ Harvesting
 - ⊙ technology

NEW SOUTH WALES

24.

AUSTRALIAN MUSEUM

6 College St Sydney
 PO Box A285 Sydney South NSW 2000
 Phone: 02 3398111 Fax:
 Contact: Dr D Griffin (Director)

Keywords: #ecology - marine; #biology - marine; #resource assessment; #ecology - estuarine

Research Objectives/Role: The Marine Ecology section of the Division of Earth and Environmental Sciences carries out ecological research that will lead to better knowledge of ecological distributions and processes and better environmental management.

The Museum also operates the Lizard Island Research Station providing housing and research facilities on the Great Barrier Reef for scientist and educational groups.

Fisheries Related R & D: Biochemical genetics and stock assessment of the common gemfish and ocean perch; biology and ecology of selected marine/estuarine invertebrate species; survey of molluscs of the eastern Australian continental slope and Tasman Basin; design and development of Hawkesbury Estuary environmental research programs.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ knowledge
 - ⊙ maintenance and improvement
 - ⊙ habitat - ecosystem

25.

ENVIRONMENT PROTECTION AUTHORITY OF NSW

Civic Tower Cnr Rickard Rd & Jacobs St Bankstown NSW
 PO Box 367 Bankstown NSW 2200
 Phone: 02 793 0000 Fax: 02 793 0002
 Contact: : Mr John Court (Chief, Water and Chemicals Division)

Keywords: #pollution - marine; #ecotoxicology - freshwater; #water quality

Research Objectives/Role: Corporate goals are:

- to achieve protection of the States waters for the greatest present and future benefit;
- to achieve land, biota and ecosystems either preserved in their natural condition or conserved and sustainably utilised for the benefit of present and future generations; and
- to achieve protection of the environment from the impact of chemicals and wastes.

Fisheries Related R & D: Water quality, effect of pollution on marine species, freshwater ecotoxicology

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

26.

HUNTER WATER BOARD

King St Newcastle West NSW
 PO Box 5171B Newcastle West NSW 2302
 Phone: 049 267 267 Fax: 049 297 649
 Contact: Mr Paul Broad (Managing Director)

Keywords: #pollution - marine; #ecotoxicology - marine

Research Objectives/Role: To carry out research into methods of decreasing the Board's impact on the environment.

Fisheries Related R & D: The board has funded research into the bioaccumulation of various contaminants within fish, marine snails and plankton within the Newcastle region and is researching the effect of sewage on marine communities.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ maintenance and improvement
 - ⊙ habitat - ecosystem

27.

NSW DEPARTMENT OF WATER RESOURCES

Macquarie Tower 10 Valentine Avenue Parramatta NSW
 PO Box 3720 Parramatta NSW 2150
 Phone: 02 895 6211 Fax: 02 895 7281
 Contact: Mr J Campbell (Chairman)

Keywords: #water quality; #eutrophication; #environment - freshwater; #ecology - freshwater

Research Objectives/Role: The Water Environment Management Performance Area aims to:

- protect and enhance the aquatic and related environment;
- to contribute to the integrated management of natural resources within the catchment areas; and to
- mitigate the effects of flooding on community, property and land productivity.

Fisheries Related R & D: The Department carries out detailed studies of potential solutions to water quality problems. The major focus of these studies is eutrophication. The Department is also preparing inventories of all significant aquatic environments in each region of NSW and a qualitative assessment of the status of each.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

28.

NSW FISHERIES

Level 5 Minerals and Energy House 29-57 Christie St
 Leonards NSW
 GPO Box 4805 St Leonards NSW 2065
 Phone: 02 906 3111 Fax: 02 906 1636
 Contact: Mr Robin Claxton (Director)

Research Objectives/Role: The Department is involved in fisheries research in aquaculture, mariculture, freshwater fisheries and marine fisheries research and exploration. Fisheries research in the Department is carried out by the:

- NSW Brackish Water Fish Culture Research Station
- NSW Eastern Freshwater Fish Hatchery;
- NSW Fisheries Research Institute; and
- NSW Inland Fisheries Research Station.

See separate entries for each of the above.

29.

NSW FISHERIES

NSW Brackish Water Fish Culture Research Station
 Taylor's Beach Road Salamander Bay NSW 2301
 C/-Post Office Salamander Bay NSW 2301
 Phone: 049 821 232 Fax: 049 821 107
 Contact: Dr J Neil (Senior Research Scientist)

Keywords: #aquaculture; #aquaculture - nutrition;
 #mariculture; #ecology - estuarine

Fisheries Related R & D: Breeding techniques for Australian bass, disease management in oysters, nursery techniques for juvenile Sydney rock oysters, biology of Pacific oysters. Aspects of aquaculture of a number of species of oysters, prawns and fish

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics

30.

NSW FISHERIES

Eastern Freshwater Fish Hatchery
 Agricultural Research & Advisory/Station
 Trenayr Rd Junction Hill Grafton NSW
 Locked Bag 3 Grafton NSW 2460
 Phone: 066 44 588 Fax: 066 44 7868
 Contact: Stuart Rowland (Manager)

Keywords: #aquaculture; #ecology - freshwater

Fisheries Related R & D: Culture of silver perch, breeding of freshwater fish and freshwater ecology

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics

31.

NSW FISHERIES

Fisheries Research Institute
 202 Nicholson Parade Cronulla NSW
 PO Box 21 Cronulla NSW 2230
 Phone: 02 527 8411 Fax: 02 527 8576
 Contact: Dr Bob Kearney (Director)

Keywords: #aquaculture; #aquaculture - nutrition;
 #resource assessment

Fisheries Related R & D: Marine exploration, crustacean stocks, trawl fish, king fish, snapper, artificial reefs, stream surveys, trout assessment, fish habitats, benthic studies, aquaculture and mariculture. The Institute is contracted to host and oversee the fisheries activities of the Australian Centre for International Agricultural Research. Aquaculture constitutes a major component of the total work program of the Institute. Major ongoing initiatives are concentrated on oysters, silver perch and other native freshwater species, snapper and mullocky, scallops and the development of cheaper and more efficient feeds for all forms of aquaculture.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ knowledge
 - ⊙ maintenance and improvement
 - ⊙ management
 - ⊙ habitat - ecosystem

32.

NSW FISHERIES

Inland Fisheries Research Station
 Buckingham Road Narrandera NSW
 PO Box 182 Narrandera NSW 2700
 Phone: 069 591 498 Fax: 069 592 935
 Contact: J Timmins (Manager)

Keywords: #fish - freshwater; #genetics; #aquaculture

Fisheries Related R & D: Effect of river regulation on fish communities, artificial reproduction of endangered species, environmental factors influencing spawning and recruitment of native fish, production of warm water native fish for stocking large impoundments, physiology and behaviour of native fish.

Potential Areas of Collaborative Research:

- ◆ Aquaculture
 - ⊙ growth and survival
 - ⊙ biology and genetics
 - ⊙ management and the environment
- ◆ Natural Fish Resources
 - ⊙ knowledge
 - ⊙ habitat - ecosystem

33.

PACIFIC POWER

Supply Planning Group
 Electricity House Cnr Park & Elizabeth Sts Sydney NSW
 GPO Box 5257 Sydney NSW 2001
 Phone: 02 268 8333 Fax: 02 268 8323
 Contact: Dr Neil Marshman (Scientist/Environmental Strategist)

Keywords: #ecology - freshwater; #pollution - water;
 #ecology - estuarine

Fisheries Related R & D: Impact of power stations on bio-physical environments, eutrophication of inland lakes, geomorphological studies. In the mid 80s the Commission conducted a study of the ecology of selected estuarine organisms in Lake Macquarie, Tuggerah Lake and Lake Illawarra, New South Wales to determine the effect of power station operation on prawn post-larvae, juvenile fish, fish larvae, zooplankton.

Potential Areas of Collaborative Research:

- ◆ Natural Fisheries Resources
 - ⊙ habitat - ecosystem

34.

**PUBLIC WORKS DEPARTMENT
 Water and Sewerage Branch**

Level 11 State Office Block Phillip St Sydney NSW 2000
 Phone: 02 231 7174 Fax: 02 228 5433
 Contact: Manager: Coast and Rivers Branch

Keywords: #water treatment; #ecology - marine

Other Locations:

Manly Hydraulics Laboratory
 110b King Street Manly Vale NSW 2093
 Phone: 02 949 0200

Fisheries Related R & D: Effect of sewage effluent on marine communities; ocean tide levels in NSW

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

VICTORIA

35.

ENVIRONMENT PROTECTION AUTHORITY OF
VICTORIA

477 Collins St Melbourne VIC
PO Box 4395QQ Melbourne 3000
Phone: 03 628 5957 Fax:
Contact: Graham Rooney

Keywords: #Aquaculture - environmental impact; #pollution
- marine; #pollution - water

Research Objectives/Role: To provide information and data from which to develop environmental objectives and control strategies and to assess the attainment and maintenance of objectives and standards. The nutrient impact program monitors the effects of sewerage discharge effects on streams.

Fisheries Related R & D: Study of the impact of fish farms on water quality in the Goulburn River has shown that the water is nutrient enriched. Have also developed a system of Biomarkers using fish as an early warning system of environmental stress. Research has also been carried out in relation to the influence on the anti foulant tributyltin on the biota of Port Phillip Bay and in particular the effect on molluscs.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - habitat - ecosystem
- ◆ Aquaculture/Mariculture
 - management and the environment

36.

VICTORIAN DEPARTMENT OF CONSERVATION AND
NATURAL RESOURCES

240 Victoria Parade East Melbourne
PO Box 41 East Melbourne VIC 3002
Phone: 03 412 4011 Fax: 03 412 4623
Contact: Steve McCormack

Fisheries Related R & D: Fisheries research is carried out by:

- Arthur Rylah Institute for Environmental Research
- Kaiela Fisheries Research Station
- Marine Science Laboratories
- Snobs Creek Freshwater Fisheries Research Station and Hatchery

See separate entries for each of the above

37.

VICTORIAN DEPARTMENT OF CONSERVATION AND
NATURAL RESOURCES

Arthur Rylah Institute for Environmental Research
123 Brown Street Heidelberg VIC
PO Box 137 Heidelberg VIC 3084
Phone: 03 450 8600 Fax:
Contact: The Director:

Keywords: #biology - freshwater; #ecology - freshwater;
#aquaculture

Fisheries Related R & D: Freshwater fish habitats, aquatic biology, tolerance levels of fish to toxicity and salinity, aquaculture of salmon and native fish.

Potential Areas of Collaborative Research:

- ◆ Aquaculture
 - growth and survival
 - biology and genetics
 - management and the environment
- ◆ Natural Fish Resources
 - maintenance and improvement
 - habitat - ecosystem

38.

VICTORIAN DEPARTMENT OF CONSERVATION AND
NATURAL RESOURCES

Kaiela Fisheries Research Station
Reedy Swamp Road North Shepparton VIC
PO Box 1226 Shepparton VIC 3630
Phone: 058 21 1199 Fax: 058 21 218
Contact: Officer in charge

Keywords: #ecology - freshwater; #pollution - water;
#salinity; #water quality

Fisheries Related R & D: Native fish management and stock monitoring, fish habitat assessment, effects of salinity on environment in rivers and streams, native fish habitat requirements including water quality and environmental flows

Potential Areas of Collaborative Research:

- ◆ Natural fish Resources
 - knowledge
 - maintenance and improvement
 - management
 - habitat - ecosystem

39.

VICTORIAN DEPARTMENT OF CONSERVATION AND
NATURAL RESOURCES

Marine Science Laboratories
Weeroona Parade Queenscliff VIC
Box 114 Queenscliff VIC 3225
Phone: 052 52 0111 Fax: 052 52 0270
Contact: Ron Gladwin

Keywords: #mariculture; #resource assessment;
#environment - marine; #water quality

Fisheries Related R & D: Mariculture of oysters and abalone; stock assessment of commercial fisheries, including shark, trawl fish, abalone, scallops and rock lobsters; marine environment; water quality and nutrients.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/mariculture
 - growth and survival
 - general biology and genetics
- ◆ Natural Fish Resources
 - knowledge
 - maintenance and improvement
 - management
 - habitat - ecosystem

40.

VICTORIAN DEPARTMENT OF CONSERVATION AND
NATURAL RESOURCES

Snobs Creek Freshwater Fisheries Research Station
and Hatchery
Goulburn Valley Highway Eildon VIC
Private Bag 20 Alexandra VIC 3714
Phone: 057 74 2208 Fax: 957 74 2659
Contact: Dr P Cadwallader, Manager

Keywords: #aquaculture; #aquaculture - nutrition;
#aquaculture - health management; #fish -
freshwater

Fisheries Related R & D: Propagation and rearing systems for Australian native freshwater fish and salmonids, fish health and diseases, Murray cod, Macquarie perch, golden perch, trout cod, rainbow trout, brown trout, Chinook salmon. Culture of brine shrimp as food for other cultured species. On-going research is aimed at developing techniques and facilities for the intensive production of yearling Murray cod. This has required the development of temperature-controlled, recirculating, rearing systems and the development of an artificial, pelleted diet.

Research is also underway into the factors which stimulate spawning of native fish. For this purpose, selected broodfish are housed in specifically built rooms in which day length, together with water and air temperatures are controlled.

The Research Station also provides advice on fish health matters to the operators of private fish farms throughout Victoria. It is anticipated that the diseases which affect native fish will be a significant area of research as production of native fish expands.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival
 - general biology and genetics
- ◆ Natural Fish Resources
 - knowledge

41.

**VICTORIAN DEPARTMENT OF FOOD AND
AGRICULTURE
Food Research Institute**

State Research Farm Sneydes Rd Werribee VIC 3030
Phone: 03 742 0146 Fax: 03 742 0201
Contact: Ray Mawson

Keywords: #seafood - manufacturing processes; #seafood -
packaging/transport; #seafood -
storage/preservation

Research Objectives/Role: The Institute provides a national facility for the Australian processed food industry dealing with meat, fish, flour, cereal products, fruit, vegetables and dairy products. It aims to help the industry develop new products and processes, improve packaging and shelf life of processed foods and identify and solve technical and quality problems as well as provide a source of information and technical advice for industry. It carries out basic research projects, mainly supported by the rural industry R&D corporations, and also undertakes collaborative or contract research projects for the food industry in areas such as fresh and processed food technology and analytical and information services.

Fisheries Related R & D: The Institute is available for fisheries related work. A food technologist with considerable experience in seafood product development is on staff. In the past the Institute has done some work on abalone processing and quality assurance for abalone exports. It is not currently carrying out any fisheries related R&D.

Potential Areas of Collaborative Research

- ◆ Harvesting
 - processing

42.

VICTORIAN INSTITUTE OF MARINE SCIENCES
14 Parliament Place East Melbourne VIC
Phone: 03 651 1998 Fax: 03 651 1702
Contact: Dr. Laurie Hammond (Director)

Keywords: #mariculture; #environment - marine; #biology -
marine

Other locations:
Marine Studies Centre
Weeroona Parade Queenscliff VIC 3225
Phone: 052 52 0375

Research Objectives/Role: Works in close association with higher education institutions in Victoria. Its operation includes organising co-operative ventures, the executing body for each project being the laboratory best equipped for the purpose.

Fisheries Related R & D: Studies of larval ecology of the predatory starfish *Coscinasterias calamaria*; identification of eggs of commercially important fish species and further studies for diagnosis of fish pathogens using monoclonal antibody technology; assessment of potential of hybrid abalone for mariculture; patterns of utilisation of seagrass habitats as nursery areas by commercially important fish; influence of water circulation patterns in Bass Strait on recruitment success and stock differences in scallops; consequences for commercial fisheries of loss of seagrass beds in southern Australian waters.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - knowledge
 - maintenance and improvement
 - habitat - ecosystem
- ◆ Aquaculture/Mariculture
 - growth and survival
 - biology and genetics

QUEENSLAND

43.

QUEENSLAND DEPARTMENT OF ENVIRONMENT AND HERITAGE

PO Box 155 North Quay QLD 4002

Phone: 07 227 7782 Fax:

Contact: Dave Walter (Marine Parks Section)

Keywords: #management - fisheries; #resource assessment; #disease - fish

Research Objectives/Role: The Marine Parks Section has a strong involvement in co-ordinating research with the Great Barrier Reef Marine Park Authority.

Fisheries Related R & D: Total exclusion devices, resource assessment in mangroves, endangered species, coral trout survey techniques, parasitic diseases of reef bivalves, reef fish tagging in the Great Barrier Reef Marine Park.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - knowledge
 - maintenance and improvement
 - management

44.

QUEENSLAND DEPARTMENT OF PRIMARY INDUSTRIES

4th Floor Primary Industries Building 80 Ann St Brisbane QLD

GPO Box 46 Brisbane QLD 4001

Phone: 07 239 3380 Fax: 07 229 8146

Contact: Peter Neville (General Manager)

Fisheries Related R & D: Fisheries research is undertaken within the following areas of the Fisheries Division:

- Bribie Island Aquaculture Centre;
- Burnett Heads Fisheries Laboratory;
- Fisheries Research Station Walkamin;
- Northern Fisheries Research Centre;
- Southern Fisheries Research Centre; and

the International Food Institute of Queensland.

See separate entries for each of the above

45.

QUEENSLAND DEPARTMENT OF PRIMARY INDUSTRIES

Bribie Island Aquaculture Centre

North Street Woorim Bribie Island QLD

PO Box 191 Bribie Island QLD 4507

Phone: 07 408 3399 Fax: 07 4083535

Contact: Dr N Gillespie

Keywords: #mariculture - nutrition; #aquaculture

Fisheries Related R & D: Introduction and development of overseas techniques for production scale maturation of penaeid prawns and development of cost-effective diets for prawn grow-out using local ingredients

Potential Areas of Collaborative Research:

- ◆ Aquaculture/mariculture
 - growth and survival
 - biology and genetics

46.

QUEENSLAND DEPARTMENT OF PRIMARY INDUSTRIES

Burnett Heads Fisheries Laboratory

c/- Post Office Burnett Heads QLD

Gibson St Burnett Heads QLD 4670

Phone: 071 594 155 Fax: 071 594 502

Contact: Chris Lupton

Keywords: #biology - marine; #resource assessment; #fish - estuarine

Fisheries Related R & D: Fishery biology and stock assessment of marine and estuarine species, prawns, scallops of the Queensland continental shelf and yield modelling.

Potential Areas of Collaborative Research:

- ◆ Natural Fish resources
 - knowledge
 - maintenance and improvement

47.

QUEENSLAND DEPARTMENT OF PRIMARY INDUSTRIES

Fisheries Research Station Walkamin

Walkamin QLD 4872

Phone: 070 933 834 Fax: 070 933 903

Contact: Alf Hogan

Keywords: #fish - freshwater; #ecology - freshwater; #fishing - recreational; #aquaculture

Fisheries Related R & D: Freshwater fish biology and ecology, recreational fishing, aquaculture of barramundi, redclaw, mud crab and sooty grunter

Potential Areas of Collaborative Research:

- ◆ Natural fish resources
 - knowledge
 - maintenance and improvement
 - habitat - ecosystem
- ◆ Aquaculture
 - growth and survival
 - biology and genetics

48.

QUEENSLAND DEPARTMENT OF PRIMARY INDUSTRIES

International Food Institute of Queensland

19 Hercules St Hamilton QLD 4007

Phone: 07 2688 555 Fax: 07 268 4798

Contact: Steven Thrower

Keywords: #seafood - manufacturing processes; #marketing - seafood; #seafood - dried; #seafood - packaging/transport; #seafood - storage/preservation; #seafood - irradiation

Research Objectives/Role: The International Food Institute of Queensland is a sub-program of the Department's Food Technology Program. The Institute was established to help the State take advantage of export and import substitution opportunities. There are three main areas of activity:

- industry development;
- research and development; and
- marketing and technical information.

The Institute is interested in innovative ways of adding value to products. It supports a wide range of research in the areas of dairy products, horticultural products, meat and seafood. The Institute is also involved in food engineering and disinfestation.

Fisheries Related R & D: Transportation and storage of live seafood, post harvest quality of seafood, handling methods for high quality fish, irradiation of seafood as a means of preservation and detection of such, techniques for producing quality dried seafood.

Potential Areas of Collaborative Research:

- ◆ Marketing
 - ⊙ improved understanding of the domestic market
 - ⊙ improved understanding of the export market and opportunities
- ◆ Harvesting
 - ⊙ product handling and preservation
 - ⊙ processing

**49.
QUEENSLAND DEPARTMENT OF PRIMARY
INDUSTRIES**

Northern Fisheries Research Centre
Cnr Aumuller and Tingara Sts Portsmith, Cairns QLD
PO Box 5396 Cairns Mail Centre Cairns QLD 4871
Phone: 070 351 580 Fax: 070 351 401
Contact: Mike Potter (Manager)

Keywords: #biology - marine; #fish - estuarine; #mariculture

Fisheries Related R & D: Fish biology and stock assessment of tropical estuarine and marine species, habitat research of seagrass communities, mariculture of barramundi and marine fish.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ knowledge
 - ⊙ maintenance and improvement
 - ⊙ habitat - ecosystem
- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics

**50.
QUEENSLAND DEPARTMENT OF PRIMARY
INDUSTRIES**

Southern Fisheries Research Centre
13 Beach Rd Deception Bay QLD
PO Box 76 Deception Bay QLD 4508
Phone: 07 203 1444 Fax: 07 203 3517
Contact: Mike Dredge

Keywords: #biology - marine; #fish - estuarine; #biology - freshwater; #genetics; #aquaculture

Fisheries Related R & D: Fishery biology and stock assessment of significant commercial and recreational marine, estuarine and freshwater species; habitat research; population genetics; aquaculture and aetiology; and pharmacology of ciguatera.

Potential Areas of Collaborative Research:

- ◆ Natural fish resources
 - ⊙ knowledge
 - ⊙ maintenance and improvement
 - ⊙ habitat - ecosystem
- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics

51.

QUEENSLAND MUSEUM
PO Box 300 South Brisbane QLD 4101
Phone: 07 840 7723 Fax: 07 8461 915
Contact: RJ MacKay

Keywords: #taxonomy - marine; #taxonomy - freshwater

Fisheries Related R & D: Identification and taxonomy of marine and freshwater fishes. Consultants on common names of commercial fish and consultants on aquarium industries.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ knowledge
 - ⊙ maintenance and improvement

SOUTH AUSTRALIA

52.

**SOUTH AUSTRALIAN DEPARTMENT OF
ENGINEERING AND WATER SUPPLY**
200 Victoria Square Adelaide SA
GPO Box 1751 Adelaide SA 5001
Phone: 08 259 0211 Fax:
Contact:

Keywords: #pollution - marine; #biology - marine; #algology;
#water quality

Fisheries Related R & D: Looks at impact of sewage discharge on the marine environment; monitors water quality and carries out biological surveys, research into phytoplankton and zooplankton and algology. The marine biology program is in abeyance at the moment with the departure of the marine biologist.

Potential Areas of Collaborative Research:

- ◆ Natural fish resources
- ⊙ habitat - ecosystem

53.

**SOUTH AUSTRALIAN DEPARTMENT OF PRIMARY
INDUSTRIES**
Fisheries Division
135 Pirie Street Adelaide SA
GPO Box 1625 Adelaide SA 5001
Phone: 08 226 0600 Fax: 08 226 0664
Contact:

Keywords: #aquaculture; #ecology - marine; #resource
assessment; #mariculture; #oceanography;
#fish - freshwater

Research Objectives/Role: Prior to the recent reorganisation of State Departments in South Australia fisheries research was carried out by the Department of Fisheries concentrating on the maintenance of wild stocks although a component of research funding was allocated to aquaculture and environmental studies. Major research areas are in abalone, aquaculture, aquatic ecology, artificial reefs, Great Australian Bight trawl fishery, inland waters, marine scalefish farming, oceanography, planktology, population dynamics, prawns, southern bluefin tuna and southern rock lobster.

Fisheries Related R & D: The Research Branch of the Department was involved in research in the following areas:

- South Australian inland fisheries;
- collection and collation of oceanographic data;
- development of computer-based graphic packages to aid understanding of alternative fisheries management strategies;
- aquaculture research and development projects with both tertiary institutions and private companies;
- development of real time management strategies within prawn fisheries to prevent recruitment overfishing; and
- assessment of the impact of recreational fishers on the State's marine scalefish fishery.

The Department operated an Aquaculture Research Station and a Marine Research Laboratory.

In the previous Department of Agriculture fisheries related research was also carried out by the Agricultural Chemicals Branch and the Department's Veterinary Laboratory - Vetlab.

See separate entries for each of these

Note: The research components of the former Departments of Agriculture, Fisheries and Woods and Forests will be combined to form the South Australian Research and Development Institute - John Radcliff (Director) Rob Lewis (Deputy Director) at the above address.

54.

**SOUTH AUSTRALIAN DEPARTMENT OF PRIMARY
INDUSTRIES**
Agricultural Chemicals Branch
Box 16271 Adelaide SA 5001
Phone: 08 226 0222 Fax:
Contact: Mr David Walker

Keywords: #mariculture - health management

Fisheries Related R & D: Interested in the area of the use of veterinary chemicals, such as antibiotics, in the culture of species such as tuna.

Potential Areas of Collaborative Research:-

- ◆ Aquaculture/Mariculture
- ⊙ growth and survival

55.

**SOUTH AUSTRALIAN DEPARTMENT OF PRIMARY
INDUSTRIES**
Aquaculture Research Station
1 Riverview Rd Port Noarlunga SA
GPO Box 1625 Adelaide SA 5001
Phone: 08 226 0620 Fax: 08 226 0664
Contact: Senior Research Officer

Keywords: #aquaculture

Fisheries Related R & D: Aquaculture of yabbies, Murray crayfish and freshwater fish

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
- ⊙ growth and survival
- ⊙ biology and genetics

56.

**SOUTH AUSTRALIAN DEPARTMENT OF PRIMARY
INDUSTRIES**
Marine Research Laboratory
Hamra Avenue West Beach SA 5024
GPO Box 1625 Adelaide SA 5001
Phone: 08 226 0620 Fax: 08 226 0664
Contact: Mr S Clarke

Keywords: #mariculture; #mariculture - nutrition;
#aquaculture; #biology - marine

Fisheries Related R & D: Abalone growth and nutrition, development of artificial food for abalone, development of "clean water" certification for oyster growing sites, environmental impact of oyster farming, environmental impact of caged-culture fin fish, closing life cycles of marine fin fish, growth hormones and transgenic fish, improved production of freshwater crustacean farms; and biology of South Australian marine flora and fauna (including plankton and macro-algae), aquaculture biology of prawns, biology and finfish.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival
 - biology and genetics
 - management and environment
- ◆ Natural Fish Resources
 - knowledge
 - maintenance and improvement

57.

SOUTH AUSTRALIAN DEPARTMENT OF PRIMARY INDUSTRIES**Vetlab**

GPO Box 1671 Adelaide SA 5001

Phone: 08 228 7537 Fax:

Contact: Dr P Phillips

Keywords: #aquaculture - health management; #disease - fish;

Research Objectives/Role: Perform a diagnostic/support role to the fisheries area of the Department of Primary Industries. Vetlab does not routinely initiate research although it has done so on a small number of occasions in the past. One such project related to parasitology of yabbies.

Fisheries Related R & D: Disease aspects of aquaculture species in South Australia

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival

WESTERN AUSTRALIA

58.

ENVIRONMENT PROTECTION AUTHORITY OF
WESTERN AUSTRALIA
Marine Impacts Division

Westralia Square 36 Mounts Bay Rd Perth WA 6000
Phone: 09 222 7000 Fax: 09 322 1596
Contact: Chris Simpson

Keywords: #pollution - marine; #environment - marine

Fisheries Related R & D: Four year program examining the marine waters off Perth in relation to nutrient effects and primary production in order to develop a predictive model for use in determining the effect on the marine environment if current waste disposal measures are continued. Also examining phytoplankton/zooplankton interaction. Have links with Western Australian Department of Fisheries in relation to their work on the whitebait and sardine fishery off Western Australia.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

59.

WESTERN AUSTRALIAN DEPARTMENT OF FISHERIES
108 Adelaide Terrace East Perth WA 6004
Phone: 09 220 5321 Fax: 09 325 3134
Contact: Peter Rogers (Exec. Director)

Fisheries Related R & D: Fisheries research is undertaken at the Department's:

- Bernard Bowen Fisheries Research Institute;
- Fish Health Laboratories; and
- Pemberton Fish Hatchery

See separate entries for each of the above.

60.

WESTERN AUSTRALIAN DEPARTMENT OF FISHERIES
Bernard Bowen Fisheries Research Institute
Waterman WA
PO Box 20 North Beach WA 6020
Phone: 09 246 8444 Fax: 09 447 3062
Contact: Dr JW Penn

Keywords: #biology - marine; #biology - freshwater;
#aquaculture; #mariculture; #pollution -
marine; #genetics; #management - fisheries;
#fishing - recreational; #environment - marine

Fisheries Related R & D: Fisheries science and biology for the management of recreational and commercial fisheries, aquaculture and mariculture, environmental studies of fish and fish habitats, fisheries chemistry particularly heavy metals, stock identity and genetics, marron and pearl oysters.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ knowledge
 - ⊙ maintenance and improvement
 - ⊙ management
 - ⊙ habitat - ecosystem
- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics

61.

WESTERN AUSTRALIAN DEPARTMENT OF FISHERIES
Fish Health Laboratories
C/- Dept of Agriculture Barron Court South Perth WA 6151
Phone: 09 368 3646 Fax:
Contact: Dr J Langdon

Keywords: #aquaculture - health management; #disease - fish

Fisheries Related R & D: Study diseases in aquaculture and marron aquaculture systems.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival

62.

WESTERN AUSTRALIAN FISHERIES DEPARTMENT
Pemberton Fish Hatchery
Pemberton WA
PO Box 91 Pemberton WA 6260
Phone: 097 761 044 Fax:
Contact: Manager

Keywords: #biology - freshwater; #aquaculture

Fisheries Related R & D: Biology and aquaculture of freshwater fish and crustaceans.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics
- ◆ Natural Fish Resources
 - ⊙ maintenance and improvement

TASMANIA

63.

TASMANIAN DEPARTMENT OF PRIMARY INDUSTRY
AND FISHERIES

23 Old Wharf Hobart TAS
GPO Box 619F Hobart TAS 7001
Phone: 002 30 6280 Fax: 002 23 1539
Contact: Paul Crew (Director)

Fisheries Related R & D: The Department's fisheries research is carried out by the:

- Division of Sea Fisheries, largely through the Fisheries Research Laboratory;
- Fish Health Unit of the Department's Mount Pleasant Laboratories; and
- Inland Fisheries Commission.

See separate entries for each of the above

64.

TASMANIAN DEPARTMENT OF PRIMARY INDUSTRY
AND FISHERIES

Division of Sea Fisheries
Fisheries Research Laboratory
Crayfish Point Taroona TAS
GPO Box 619F Hobart TAS 7001
Phone: 002 30 6528 Fax: 002 23 1539

Keywords: #aquaculture; #aquaculture - health management; #mariculture - health management; #aquaculture - environmental impact; #management - fisheries

Fisheries Related R & D: Aquaculture of shellfish and salmonids, resource management, disease control in farmed fish, environmental effects of marine farming, reseedling of scallops

Potential Areas of Collaborative Research:

- ◆ Natural fish resources
 - ⊙ management
- ◆ Aquaculture/mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics

65.

DEPARTMENT OF PRIMARY INDUSTRY AND
FISHERIES

Fish Health Unit Mount Pleasant Laboratories
Westbury Road Launceston TAS 7250
Phone: 003 41 5406 Fax:
Contact: Dr J Carson

Keywords: #aquaculture - health management; #disease - fish

Fisheries Related R & D: Diagnosis and identification of fish diseases (esp. in salmonids)

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ maintenance and improvement
- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival

66.

TASMANIAN DEPARTMENT OF PRIMARY INDUSTRY
AND FISHERIES

Inland Fisheries Commission
127 Davey St Hobart TAS
GPO Box 182B Hobart TAS 7001
Phone: 002 23 6622 Fax: 002 23 4372
Contact: Wayne Fulton (Commissioner)

Keywords: #ecology - freshwater; #mariculture; #fish - freshwater; #fish - estuarine; #pollution - water

Research Objectives/Role: Conducts research for the acquisition of knowledge about the freshwater environment, the impact of other activities and the management of the inland fisheries resource.

Fisheries Related R & D: Effects of forestry pest control practices on freshwater biota; effects of agricultural pesticides on invertebrates of Tasmanian streams; Triploid trout for mariculture; conservation of endangered species of Tasmanian native freshwater fish; environmental effects of pulp mill effluent on fish of the Derwent Estuary.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics
- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem
 - ⊙ maintenance and improvement

NORTHERN TERRITORY

67.

DEPARTMENT OF PRIMARY INDUSTRY AND
FISHERIES

Fisheries Division

2nd Floor Harbourview Plaza Cnr McMinn & Bennett Sts
Darwin NT

GPO Box 990 Darwin NT 0801

Phone: 089 89 4321 Fax: 089 81 1475

Contact: Daryl Grey (A/g Ass. Sec.)

Keywords: #Aquaculture - nutrition; #resource assessment;
#technology - fishing; #seafood -
packaging/transport; #fishing - recreational

Research Objectives/Role: Effective utilisation of Territory
fish stocks

Fisheries Related R & D: Fisheries research is carried out
within the Fisheries Division by the Aquaculture Branch and
the Research and Development Branch. Research
programs in these Branches focus on barramundi, threadfin
salmon, Spanish mackerel, shark, trawl fish, mudcrabs and
pearl oysters and recreational fishing. Specific areas of
interest include prawns; aerial pelagic fish survey; methods
of catching fish and lobsters, scallop processing, edible
oyster culture, cryovac packaging of reef fish; barramundi;
and salmon gill net and longline survey of pelagic fish,
mercury in shark.

Potential Areas of Collaborative Research:

- ◆ Natural Fish resources
 - ⊙ knowledge
 - ⊙ maintenance and improvement
 - ⊙ management
- ◆ Harvesting
 - ⊙ technology

B. TERTIARY INSTITUTIONS AND RESEARCH CENTRES

NEW SOUTH WALES

68.

MACQUARIE UNIVERSITY
Balaclava Rd, North Ryde NSW
Sydney NSW 2109

A.

Graduate School Of The Environment
Phone: 02 805 7988 Fax: 02 805 7972
Contact: Dr P Fairweather

Keywords: #ecology - freshwater; #ecology - estuarine;
#pollution - marine

Research relates to freshwater ecotoxicology, flora and fauna of estuarine and freshwater habitats and marine pollution.

Potential Areas of Collaborative Research:

- ◆ Natural fish Resources
- ⊙ habitat - ecology

B.

Climatic Impacts Centre
Phone: 02 805 8398 Fax: 02 805 8428
Contact: Prof. A.n Henderson-Sellers

Keywords: #climate change

Provides research, training and consultancies on a range of issues surrounding the impact of climate on the natural environment and society. Its major aim is to improve understanding of the interaction of climate and society in Australia and the Asia Pacific region and to reduce vulnerability to and increase advantages of such climatic impacts. Research interests include climate modelling, hydrological models and water resources, historical records of regional climate, and social economic and physical impacts of climatic variability and change.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- ⊙ habitat - ecosystem

69.

UNIVERSITY OF NEW ENGLAND
Zoology Department
Armidale NSW 2351
Phone: 067 732 846 Fax:
Contact: Prof. W Panthararyana (Head)

Keywords: #taxonomy - marine; #parasites - fish; #ecology - marine; #biology - freshwater

Research relates to community ecology of coral cays; taxonomy of marine fish; parasitism of marine fish; breeding cycle of fresh water fish.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- ⊙ habitat - ecosystem
- ⊙ maintenance and improvement

70.

UNIVERSITY OF NEW SOUTH WALES
ANZAC Park Kensington NSW
PO Box 1 Kensington NSW 2033

A.

Centre For Marine Science
Phone: 02 697 2681 Fax: 02 662 2918
Contact: Dr Patricia Dixon (Director)

Keywords: #ecology - marine; #aquaculture; #genetics;
#management - fisheries; #biology - marine;
#mariculture

Research relates to management of estuaries, transport of nutrients, larvae and pollutants, aquaculture, genetic improvement of stocks, fish stock identity, population dynamics, fisheries management, bioeconomics

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecology
 - ⊙ maintenance and improvement
 - ⊙ management
- ◆ Aquaculture/Mariculture

B.

School of Applied Bioscience
Phone: 02 697 4370 Fax: 02 662 1923
Contact: Assoc. prof. KA Buckle (Hd of Dept)

Keywords: #Biotechnology; #food - nutrition; #food - storage/preservation; #food - products; #food - manufacturing processes; #seafood - storage/preservation

Research relates to food analysis, composition and microbiology; product development; sensory analysis, food chemistry, waste utilisation, food processing, drying and salting processes.

Potential Areas of Collaborative Research:

- ◆ Harvesting
- ⊙ processing

C.

Key Centre For Food Industry Development
Phone: 02 697 4360 Fax: 02 313 6403
Contact: Dr Peter Cranston

Keywords: #food - nutrition; #technology - post harvest;
#food -manufacturing processes; #food - microbiology

Conducts collaborative research, training and extension programs, and provides consultancy and analytical services to assist innovation and improve efficiency in the Australian food industry, particularly the import replacement and export sectors. Areas of expertise include food processing, product development, food microbiology, post harvest technology of plant and animal commodities, food analysis, sensory analysis, nutrient evaluation, consumer education and food legislation.

Potential Areas of Collaborative Research:

- ◆ Harvesting
- ⊙ processing

D.
CRC for Waste Management and Pollution Control
 Phone: 02 697 2700 Fax: 02 313 6805
 Contact: Prof. Chris Fell (Chairman)

Keywords: #pollution - water; #water quality

Research relates to the development of new approaches to liquid waste management and pollution control, including new and potentially commercial technologies and equipment. Major research areas include waste reduction and minimisation, sewage and water quality, site remediation, instrumentation and monitoring, waste management and pollution control in intensive rural industries, on site treatment of liquid wastes, safe disposal of wastes and solids, odour and atmospheric emissions, social ecology of waste management.

Major partners in the CRC are the Universities of NSW, Western Sydney and Wollongong, ANSTO, CSIRO Division of Water Resources, Australian Defence Industries, BHP, Brambles, ICI Australia Ltd, Sydney Water Board, NSW Waste Management Authority and NSW Depts of Public Works and Water Resources.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- habitat - ecosystem

71.

UNIVERSITY OF SYDNEY
 Marine Studies Centre
 Sydney NSW 2006
 Phone: 02 692 2222 Fax: 02 692 4203
 Contact: DT Anderson (Director)

Keywords: #oceanography; #technology - marine; #ecology - marine; #biology - marine

The Centre coordinates marine based research carried out by the following groups within the University:

- Coastal Studies Unit
- Institute of Marine Ecology
- Ocean Sciences Institute
- One Tree Island Field Station
- Ocean Technology Group
- Physical Oceanography Group

Research has included a Botany Bay Environmental Project, strategies for enhanced exploitation of abalone in New South Wales, metabolism and function of vitamin D in rainbow trout and identification systems for marine species.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- habitat - ecosystem
- knowledge
- maintenance and improvement

72.

UNIVERSITY OF TECHNOLOGY, SYDNEY
 NSW Centre For Environmental Toxicology
 PO Box 367 Bankstown NSW 2200
 Phone: 02 330 4151 Fax: 02 330 4003
 Contact: Dr Robert Baker (Director)

Keywords: #pollution - marine; #ecology - freshwater; #ecology - marine

The Centre focuses on the toxicology of hazardous chemicals in the Australian environment, with particular emphasis on aquatic ecosystems and terrestrial plants. There are three main strands of activity - research, teaching and commercial testing into the toxicology of hazardous

chemicals with respect to fishes and invertebrates. The research program is aimed at relating laboratory test data to natural aquatic and terrestrial ecosystems. The Centre is a joint venture between the State Pollution Control Commission and the University of Technology, Sydney. Laboratories are located at the university's Gore Hill campus. Research has included toxicology of crude oil and oil dispersants, using prawns as an indicator species, sublethal effects on gastropods of marine anti-fouling paints containing tributyltin, use of native mussels and oysters as biomonitors of heavy metal pollution and the effect of temperature on the toxicity of chemicals to native freshwater fish.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- habitat - ecosystem

73.

UNIVERSITY OF WESTERN SYDNEY
 Science and Technology School
 PO Box 10 Kingswood NSW 2750
 Phone: 02 635 9028 Fax: 02 891 2780
 Contact: Martin Walterding (Lecturer)

Keywords: #environment - marine; #ecology - coastal; #biology - marine

Research relates to environmental impact assessments, ecology of pacific islands and biology of cephalopods.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- habitat - ecosystem

74.

UNIVERSITY OF WOLLONGONG
 Centre for Applied Biological Research
 Northfields Ave Wollongong NSW
 PO Box 1144 Wollongong NSW 2500
 Phone: 042 213 013 Fax: 042 214 135
 Contact: Prof H M Garnett (Director)

Keywords: #ecology - marine; #ecology - freshwater; #biotechnology; #biology - marine; #algology

The Centre carries out specific consultancies and contracts for industry in the fields of microbiology, biotechnology and environmental biology. It has biotechnological expertise in plant and animal cell culture; algal and microbial culture; antibody technology and nucleic acid technology.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- habitat - ecosystem
- ◆ Aquaculture/Mariculture

75.

WORLD LIFE RESEARCH INSTITUTE
 Australian Division
 68A Seaview Avenue Newport Beach NSW
 PO Box 126 Newport Beach NSW 2106
 Phone: 02 991 979 Fax: 02 997 5933

Keywords: #Aquaculture; #pollution - marine

Research relates to aquaculture; crown -of-thorn starfish; shark repellants and lures; poisonous and venomous marine animals and marine pollution.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
- ◆ Natural Fish Resources
- knowledge

VICTORIA

76.
DEAKIN UNIVERSITY
 Warrnambool VIC
 PO Box 825 Geelong VIC 3217

A.
 Division of Biological and Health Science
 Phone: 052 47 111 Fax: 052 44 777
 Contact: Dr P Hanna

Keywords: #aquaculture, #management - fisheries;
 #disease - fish

Research relates to aquaculture, fisheries management and harvesting and has included in particular disease management in fisheries and aquaculture.

Potential Areas of Collaborative Research:
 ♦ Aquaculture/Mariculture
 ♦ Natural Fish Resources
 ● management

B.
Deakin University - Warrnambool Campus
 Sherwood Park Princes Highway Warrnambool VIC
 PO Box 423 Warrnambool VIC 3280
 Phone: 055 64 0111 Fax: 055 62 6750
 Contact: Dr RG Loch (Head)

Keywords: #aquaculture; #aquaculture - nutrition;
 #mariculture

Research relates to aquaculture of freshwater crustacea, effect of stress on growth of golden perch, aquaculture of freshwater and marine finfish, development of cost effective diets for aquaculture species, the causes of morbidity/mortality in black lipped abalone in Victoria.

Potential Areas of Collaborative Research:
 ♦ Aquaculture/Mariculture
 ● growth and survival

77.
LA TROBE UNIVERSITY
 Bundoora VIC 3083
 Phone: 03 479 2049 Fax: 03 478 5814

Keywords: #mariculture; #genetics; #biology - marine

Research relates to assessment of hybrid abalone for mariculture, biology and population genetics of scallops and abalone.

Potential Areas of Collaborative Research:
 ♦ Aquaculture/Mariculture
 ● growth and survival
 ♦ Natural Fish Resources
 ● knowledge
 ● maintenance and improvement

78.
ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY
 124 La Trobe St Melbourne VIC
 GPO Box 2476V Melbourne VIC 3001
 Phone: 03 660 2001 Fax: 03 660 2718
 Contact: Research Co-ordinator

A.
Food Technology Unit

Keywords: #seafood - manufacturing processes; #seafood - product development; #seafood - quality;
 #marketing - seafood

Research areas include origin of polyunsaturated fatty acids in marine species, microbiology and chemistry of fish spoilage, factors affecting the quality of fish products. The Institute undertakes R&D into food analysis, product development, marketing and processing. It has a fully equipped food manufacturing pilot plant with associated packaging facilities.

Potential Areas of Collaborative Research:
 ♦ Harvesting
 ● processing
 ● product handling and preservation

B.
Dept of Applied Biology

Keywords: #aquaculture; #mariculture

Research areas include mussel and oyster farming techniques, growth of the yabbie in unisexual populations

Potential Areas of Collaborative Research:
 ♦ Aquaculture/Mariculture
 ● growth and survival

79.
UNIVERSITY OF MELBOURNE
 Grattan St Parkville VIC 3052
 Phone: 03 344 4000 Fax: 03 344 5104

Keywords: #mariculture; #ecology - marine; #biomass estimation; #algology

Research relates to variation in growth of abalone affecting recruitment to the fishery, assessment of hybrid abalone for mariculture, effect on reef growth of mainland run-off from agricultural catchments, pollution in the marine environment, the aerial line transect survey as a method of estimating tuna abundance, strain selection and mass culture for the commercial production of agar from Australian marine red algae.

Potential Areas of Collaborative Research:
 ♦ Aquaculture/Mariculture
 ● growth and survival
 ♦ Natural Fish Resources
 ● knowledge
 ● maintenance and improvement
 ● habitat - ecosystem

80.
VICTORIAN INSTITUTE OF TECHNOLOGY
Australian Food Marketing Centre
 PO Box 64 Footscray VIC 3011
 Phone: 03 688 4710 Fax: 03 687 2089
 Contact: Mr Geoff Cox

Keywords: #marketing - food; #marketing - training

To help Australian food manufacturers gain increased exports of value added food products into Japanese markets. It links food suppliers into end user companies in Japan and has developed strong links with Japanese retailers, restaurants and food companies. It also offers training to improve the marketing skills of Australian companies. The Centre is funded through the Federal Department of Primary Industries and Energy's Marketing Skills Program.

Potential Areas of Collaborative Research:
 ♦ Marketing
 ● improved understanding of the export market

QUEENSLAND

81.

GRIFFITH UNIVERSITY
 Institute of Applied Environmental Research
 Nathan QLD
 Phone: 07 875 7444 Fax: 07 875 7459
 Contact: Dr Geoff McDonald (Director)

Keywords: #water quality; #ecology - freshwater

The Institute, located in the Division of Environmental Studies carries out commissioned research and training activities in the field of environmental management. It incorporates the specialised activities of units dealing with catchment and in stream research, waste management, land conservation, environmental quality and impact assessment.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - habitat - ecosystem

82.

JAMES COOK UNIVERSITY OF NORTH QUEENSLAND
 Post Office James Cook University QLD 4811

A.

Sir George Fisher Centre For Tropical Marine Studies
 Phone: 077 81 4111 Fax: 077 79 6371
 Contact: Prof. D Hopley

Keywords: #water quality; # disease - fish; #mariculture; #microbiology; #marine - tropical

Research relates water quality and bacterial disease problems for the mariculture industries and tropical marine microbiology studies.

Potential Areas of Collaborative Research:

- ◆ Natural fish Resources
 - habitat - ecosystem
 - maintenance and improvement
- ◆ Aquaculture/Mariculture
 - growth and survival

B.

Australian Centre For Tropical Freshwater Research
 Phone: 077 81 4262 Fax: 077 75 1184
 Contact: Prof. Raymond Volker

Keywords: #water quality

Research involves the effects of irrigation, water quality, soil erosion, infiltration and runoff water.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - habitat - ecosystem

83.

QUEENSLAND UNIVERSITY OF TECHNOLOGY
 2 George St Brisbane QLD
 GPO Box 2434 Brisbane QLD 4001
 Phone: 07 223 2195 Fax: 07 221 0313
 Contact:

Keywords: #mariculture; #fish - estuarine; #ciguatera

Research relates to ciguatera, mariculture and reproductive physiology of estuarine species

Potential Areas of Collaborative Research:

- ◆ Aquaculture/mariculture
 - growth and survival
- ◆ Natural Fish Resources
 - maintenance and improvement

A.

Centre for Population Management
 Phone: 07 864 2779 Fax: 07 864 1534
 Contact: Assoc. Prof. Michael Capra

Keywords: #population dynamics; #aquaculture; #biotechnology

Located within the Faculty of Science the Centre provides a focus for research, education and consultancy in population management. Work includes vertebrate populations, bioculture, particularly aquaculture and tissue culture. It aims to provide practical solutions to problems in population management by developing cost effective and environmentally sound management strategies for important species and by developing new economic resources through the application of biotechnology to bioculture. It also provides training in population biology, population management, aquaculture and tissue culture.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival
 - biology and genetics

84.

UNIVERSITY COLLEGE OF CENTRAL QUEENSLAND
 PMB 31 MS 76
 Rockhampton Mail Centre QLD 4702
 Phone: 079 309 317 Fax: 079 309 209
 Contact: Richard Davis

Keywords: #mariculture

Mariculture research and training and research into barramundi biology

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival
 - biology and genetics

85.

UNIVERSITY OF QUEENSLAND
 St Lucia QLD 4072
 Phone: 07 377 1111 Fax: 07 371 5896

A.

Department of Parasitology
 Phone: 07 377 2572 Fax: 07 371 0122

Keywords: #parasites - fish; #aquaculture; #disease - fish; #biology - marine

Research relates to parasitism in the marine and aquaculture environments.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - maintenance and improvement
- ◆ Aquaculture/Mariculture
 - growth and survival

B.
Dept of Mechanical Engineering

Keywords: #aquaculture; #engineering - mechanical

Research relates to solar heating for prawn aquaculture.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival

C.
Dept. of Chemical Engineering

Keywords: #aquaculture - nutrition

Research relates to microencapsulation techniques for prawn feed formulation and waste water guidelines in marine parks.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival

D.
Dept of Physiology

Keywords: #biology - marine; #physiology

Research relates to reproductive physiology in whiting (*Silago ciliata*) and barramundi (*Lates calcarifer*).

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ maintenance and improvement

SOUTH AUSTRALIA

86.

FLINDERS UNIVERSITY OF SOUTH AUSTRALIA
 Flinders Institute For Atmospheric And Marine
 Sciences
 Bedford Park SA
 GPO Box 200 Adelaide SA 5001
 Phone: 08 275 2198 Fax: 08 275 2676
 Contact: Prof P Schwerdtfeger

Keywords: #Oceanography; #meteorology; #hydrology

Research relates to oceanography, meteorology and hydrology. The Institute has a Tides and Mean Sea Level Laboratory.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

87.

UNIVERSITY OF ADELAIDE
 Department Of Zoology
 North Terrace Adelaide SA
 GPO Box 498 Adelaide SA 5001
 Phone: 08 228 5847 Fax: 08 228 5576
 Contact:

Keywords: #aquaculture; #mariculture; # fish - freshwater;
 #disease - fish

Research relates to aquaculture, freshwater fish, agarophytes suitable for mariculture, restocking of Murray river crayfish.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics

WESTERN AUSTRALIA

88.

CURTIN UNIVERSITY OF TECHNOLOGY
 Kent St South Bentley WA
 GPO Box U1987 Perth WA 6001
 Phone: 09 351 2000 Fax: 09 351 2255

A.

School of Medical Technology
 Phone: 09 350 7374 Fax: 09 458 4661

Keywords: #disease - fish; #aquaculture

Research relates to health management practices and diseases of cultured fish, molluscs and crustaceans, particularly freshwater crayfish, sea trout, dolphin fish, rock lobsters and scallops.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ maintenance and improvement;
- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival

B.

Centre for Marine Science and Technology
 Phone: 09 351 7380 Fax: 09 351 2377
 Contact: Assoc. Prof. John Penrose (Director)

Keywords: #acoustics - marine; #oceanography; #biomass estimation

The Centre, located in the School of Physics and Geosciences, concentrates on marine acoustics, oceanographic modelling, satellite oceanography and small naval vessel architecture. The Centre is currently developing a computer based measurement system for use in conjunction with an acoustic biomass estimation program being undertaken by the Antarctic Division. Research relates to underwater vehicle development, determination of the target strength of free swimming krill, A computer-based measurement system for an acoustic biomass estimation program, acoustic sensing of ocean temperature, underwater acoustic systems design, 3D modelling of shallow water barotropic circulation.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ knowledge
 - ⊙ maintenance and improvement

89.

MURDOCH UNIVERSITY
 School Of Biological And Environmental Sciences
 South St Murdoch WA 6150
 Phone: 09 332 2211 Fax: 09 332 2507
 Contact: RJ McKay (Dean)

Keywords: #fish - estuarine; #fish - marine; #climate change

Research relates to estuarine and marine fisheries and climate impacts.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

90.

UNIVERSITY OF WESTERN AUSTRALIA
 Nedlands WA 6009
 Phone: 09 380 2697 Fax:
 Contact:

Keywords: #genetics; #fish - marine; #fish - estuarine; #fish - freshwater; #biology - marine

Research relates to distributional patterns of freshwater fish, gene flow in marine and estuarine fish populations, behavioural and physiological studies on *Phyllosoma* larvae of the Western rock lobster.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ knowledge
 - ⊙ maintenance and improvement

A.

Centre for Water Research
 Nedlands WA 6009
 Phone: 09 380 3085 Fax: 09 380 1015
 Contact: Prof. Jorg Imberger (Director)

Keywords: #hydrology; #oceanography; #engineering - marine

The Centre carries out a wide range of fundamental and applied aquatic, coastal and marine engineering research. The Coastal and Hydraulic Engineering Laboratory provides industry with specialist applied coastal and hydraulic research. It offers a broad range of services in coastal, ocean, estuarine and river engineering, hydrology, oceanography, reservoirs and process engineering.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

TASMANIA

81.

AUSTRALIAN MARITIME COLLEGE
Newnham TAS
PO Box 986 Launceston TAS 7250

Keywords: #technology - seafood processing;
#management - fisheries; technology - fishing

The College carries out research and teaching in areas including seafood technology, fisheries management, simulation models, fisheries bio-economics and gear technology.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - processing
 - technology
- ◆ Natural Fish Resources
 - management

A.

Australian Maritime Engineering CRC
Newnham Launceston TAS
PO Box 986 Launceston TAS 7250
Phone: 003 260 700 **Fax:** 003 266 493
Contact: Em. Prof. Tom Fink

Keywords: #technology - marine; #engineering - marine

The Centre aims to enhance Australia's maritime manufacturing related industries by improving their technology and transferring technology. It will provide an applied research and specialist problem solving facility for Australian ship designers and builders and for the off-shore engineering industry.

Three research programs are planned covering design and construction of ships and off-shore structures, including work on the calm water performance of maritime vehicles, the ocean influence on ships and maritime structures and structural design and fabrication of ships and maritime structures.

Centre partners are:

The Australian Maritime College
Curtin University's Centre For Marine Science and Technology
Monash University's Off-Shore Engineering Program
University Of New South Wales' Naval Architecture Section
DSTO's Materials And Underwater Systems Divisions

Major Industry partners are:

BHP Transport
Hercus Marine Designs
Maritime Dynamics International
Phil Curran Designs
Ship Design and Management
Tasman Shipbuilding and Off-Shore Engineering
Thomson Sintra Pacific.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - technology

82.

UNIVERSITY OF TASMANIA
Sandy Bay TAS
GPO Box 2520 Hobart TAS 7001

A.

Key Centre For Teaching And Research in Aquaculture,
PO Box 1214 Launceston TAS 7250
Phone: 003 26 0201 **Fax:** 003 26 3664
Contact: Prof. Nigel Forteach

Keywords: #aquaculture; #mariculture; #algology;
#genetics; #disease - fish; #aquaculture -
nutrition; #physiology

Carries out research and consultancies into various aspects of aquaculture and mariculture, including algology, crustacean and molluscan aquaculture, genetics, health, nutrition and physiology. Microbiology laboratory allows fish disease diagnosis. Toxicology laboratory provides for testing chronic effects of potentially toxic substances entering aquatic environments.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/mariculture
 - growth and survival
 - biology and genetics

B.

Dept. Of Agricultural Science

Keywords: #aquaculture; #disease - fish; #mariculture

Research relates to mariculture, algology, prevention of bacterial disease in aquaculture species, productivity and habitat quality of aquaculture waters.

Potential areas of collaborative Research

- ◆ Aquaculture/Mariculture
 - growth and survival
 - management and the environment

C.

Dept Of Civil And Mechanical Engineering

Keywords: # seafood - dried; #seafood -
storage/preservation

Research relates to improved solar drying and storage of fish and abalone

Potential areas of Collaborative Research

- ◆ Harvesting
 - handling and preservation

D.

Dept. Of Zoology

Keywords: #ecology - marine; #algology; #aquaculture -
environmental impact; #aquaculture

Research relates to areas including orange roughy, ecological impact of organic input from salmonid farms, diseases in cultured trout, nutritional requirements of the greenlip abalone and bacterial quality of micro-algal mariculture

Potential areas of collaborative Research

- ◆ Natural Fish Resources
 - habitat - ecosystem
- ◆ Aquaculture/Mariculture
 - growth and survival
 - management and the environment

E.

Centre For Environmental Studies
 GPO Box 252C Hobart TAS 7250
 Phone: 002 20 2834 Fax: 002 20 2989
 Contact: Assoc. Prof. John Todd (Coordinator)

Keywords: #aquaculture - environmental impact;
 #aquaculture

A research and post graduate training unit in the Dept. of Geography and Environmental Studies focusing on interdisciplinary and transdisciplinary study of the environment. Research themes include environmental values, environment and development, energy and society, environmental education and protection of the physical and biological environment. Research has included an examination of environmental impacts of salmonid fish farming in temperate coastal waters.

Potential Areas of Collaborative Research:

◆ Aquaculture/Mariculture
 ● management and the environment

F.

Institute of Antarctic and Southern Ocean Studies
 GPO Box 252C Hobart TAS 7001
 Phone: 002 202 971 Fax: 002 202 973
 Contact: Prof. Garth Paltridge (Director)

Keywords: #Antarctica; #Southern Ocean

The institute is funded by matching grants from the University and the key centre for teaching and Research Program. The Institute is developing units in the physical sciences, biological sciences, legal and policy studies, cold regions engineering and polar technology. It collaborates with the Antarctic Division, CSIRO's Divisions of Oceanography and Fisheries Research, the Bureau of Meteorology. It aims to become a major centre for Antarctic and Southern Ocean studies offering specialist teaching and research facilities, undertaking contract research and providing data bank and information services.

Potential Areas of Collaborative Research:

◆ Natural Fish Resources
 ● knowledge
 ● habitat - ecosystem

G.

CRC For The Antarctic and Southern Ocean Environment
 GPO Box 252C Hobart TAS 7001
 Phone: 002 202 971 Fax: 002 202 973
 Contact: Prof. Garth Paltridge (Director)

Keywords: #Antarctica; #Southern Ocean; #climate change

The Centre is involved in research into the environmental management of Antarctica, the use of Antarctica and its surrounding oceans as a monitor of climate change and its role in controlling climate and environmental change. Research focuses on the oceanic and atmospheric circulations of the region, their interaction with sea ice and the continental ice sheet and their relation to global environmental change and biological productivity. Centre participants include the University of Tasmania's Institute of Antarctic and Southern Ocean Studies, the Antarctic Division, CSIRO's Division of Oceanography, the Bureau of Meteorology and the Bureau of Mineral Resources.

Potential Areas of Collaborative Research:

◆ Natural Fish Resources
 ● habitat - ecosystem

NORTHERN TERRITORY

93.
NORTHERN TERRITORY UNIVERSITY
Faculty Of Science
Myilly Point Campus
PO Box 40146 Casuarina NT 0811
Phone: 089 462 211 Fax: 089 410 460
Contact:

Keywords: #aquaculture - nutrition

Research relates to cultivation of algae and brine shrimps for use in the formulation of aquaculture feeds and control of algae for use in the formulation of aquaculture feeds.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival

C. PRIVATE SECTOR

94.

AMDEL LIMITED,
PO Box 338 Torrensville SA 5031
Phone: 08 418 5200 Fax: 08 234 3222
Contact: Mr Raymond Dougherty

Keywords: #water quality; #trace elements - in fish

Other locations

Amdel Environmental Services Pty Ltd
88 Chandos St St Leonards NSW 2065
Phone: 02 906 2311 Fax: 02 906 2322

Amdel provides mineral processing test work at laboratory and pilot scale, process control technology, instrumentation and process control systems for mineral and coal processing, mineralogies and petrographic services. Amdel Environmental Services manages environmental hazards.

Fisheries Related R & D: Detection and identification of trace elements in fish. The company's clients include State departments of fisheries and CSIRO.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

95.

BETATENE INDUSTRIES LTD,
71 Taunton Drive Cheltenham VIC 3192
Phone: 03 584 4588 Fax: 03 584 8348
Contact: Lance Schlipalius

Keywords: #biotechnology; #aquaculture - nutrition; #animal feeds

Fisheries Related R & D: Commercial algae biotechnology; Extraction techniques for beta-carotene from Dunaliella allowing the production of an algal meal for animal production, particularly for use in production of aquaculture feeds.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - ⊙ processing
- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics

96.

BOTTRILL RESEARCH PTY LTD
282 Glen Osmond Rd Fullarton SA 5063
Phone: 08 794 869 Fax:
Contact: Dr DE Bottrill (Managing Director)

Keywords: #seafood - manufacturing processes; #seafood - product development; #technology - seafood processing

To provide better utilisation of the resource by improving yields, quality and developing new products, whether canned fresh, frozen, dried, marinated etc. The major areas of work are in abalone and prawn processing although work has been conducted on a wide range of species in Australia and SE Asia, and on a wide range of food products.

Fisheries Related R & D: Improved utilisation of Australian abalone resource; development of canned abalone products, methods of utilising the royal red prawn resource in Australia and development of equipment to aid utilisation and application of microprocessors to fish processors.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - ⊙ product handling and preservation
 - ⊙ processing

97.

EDGELL BIRDS EYE KELSO
Bradford St Bathurst NSW
PO Box 705 Bathurst NSW 2795
Phone: 063 31 5888 Fax: 063 321 013
Contact: Robert Sugden (Manager)

Keywords: #seafood - manufacturing processes; #seafood - product development

Fisheries Related R & D: Product development, new equipment design; Value added seafood manufacturing. Product development has been mainly in the area of coated fish products however they are now considering development of filleted products for use in microwave cooking.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - ⊙ product handling and preservation
 - ⊙ processing

98.

ESSO AUSTRALIA LTD
360 Elizabeth St Melbourne VIC 3000
Phone: 03 270 3333 Fax:
Contact: Tracey Winters

Keywords: #water quality; #environment - marine

Fisheries Related R & D: Evaluation of potential environmental impact of discharge into marine environment.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

99.

INDUSTRIAL ECOLOGISTS PTY LTD
TD Meagher & Associates
18 Kings Park Road West Perth WA 6005
Phone: 09 321 5369 Fax:
Contact: TD Meagher (Principal)

Keywords: #environment - marine; #water quality

Fisheries Related R & D: The use of satellite imagery for bathymetric and off-shore geologic studies; impact of hydrocarbons on the marine environment; oil spill contingency plans; biological effects and environmental management implications of dredge spoil in the marine environment; industrial waste disposal; water quality studies in canal development projects.

Potential Areas of Collaborative Research:

- ◆ Natural Fish resources
 - ⊙ habitat - ecosystem

100.
KINHILL ENGINEERS,
200 East Terrace Adelaide SA 5000
West Beach Laboratory
Phone: 08 235 0882 Fax: 08 232 0163
Contact: Jim Morrison

Keywords: #aquaculture; #environment - marine

Fisheries Related R & D: Aquaculture/fisheries, environmental assessment, abalone, fingerling supply, live abalone, snapper and tuna. Collaborate with South Australian Department of fisheries particularly in relation to abalone mariculture.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival
 - biology and genetics

101.
KRUPP (AUSTRALIA) PTY LTD
Unit 6, 39 Herbert St St Leonards NSW 2065
Phone: 02 437 4577 Fax: 02 436 3751
Contact: Brian Groves

Keywords: #instrumentation - marine

Fisheries Related R & D: Marine products with emphasis on acoustics ,radar, radar systems, navigation systems for acoustic devices.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - technology

102.
MEMTEC LTD
1 Memtec Parkway South Windsor NSW, 2756
Phone: 045 776 800 Fax: 045 776 804
Contact: Dr C Kopp (Research Manager)

Keywords: #biotechnology; #aquaculture

Fisheries Related R & D: In the past MEMTEC has been involved in R&D relating to microfilters, water treatment, biosensors in relation to aquaculture. The company is not currently doing any research in this area.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival
 - biology and genetics

103.
NEVILLE JONES AND ASSOCIATES
33 Cinderella Drive Springwood QLD
PO Box 546 Springwood QLD 4127
Phone: 07 208 1100 Fax:
Contact: WL Parry (Associate)

Keywords: #aquaculture - equipment

Fisheries Related R & D: Development of aquaculture equipment.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival

104.
OCEANIA TRADING PTY LTD
2 Giblin Drive, Sorrell TAS
PO Box 285 Sorrell TAS 7172
Phone: 002 65 2762 Fax: 002 65 2900

Keywords: #seafood - quality

Processors and exporters of tuna, crayfish and sea urchin

Fisheries Related R & D: Improvement of the quality of sea urchin roe for export

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - handling and preservation
 - processing

105.
PHILLIPS OYSTERS AUSTRALIA LTD
RMB 25 Oyster Cove Via Williamtown NSW 2301
Phone: 049 824 116 Fax: 049 823 202
Contact: BG Phillips (Marketing director)

Keywords: #aquaculture; #biotechnology

Fisheries Related R & D: Development of tray base farming of single seed Sydney rock oysters; biotechnology.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival

106.
SAFCOL HOLDINGS LTD
Technical services Dept
30 Wright St Adelaide SA
GPO Box 2463 Adelaide SA 5001
Phone: 08 510 431 Fax: 08 212 2264
Contact: PG Taylor(Manager Technical Services)

Keywords: #seafood - manufacturing processes; #seafood - product development

Fisheries Related R & D: Methods of improving techniques of fish handling and processing in the areas of canned and frozen fresh products. Methods for utilising waste products generated from the above areas

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - processing
 - handling and preservation

107.
SAFCOL SEAFOOD PTY LTD
Research and Development Department
107 Whitehall Street, Footscray VIC 3011
Phone: 03 684 258 Fax:

Keywords: #seafood - manufacturing processes

Fisheries Related R & D: Utilisation of raw materials; application of new technological methods; elaboration of recipes and methods for new and modified products; mechanization of production; evaluation of materials used for canned food.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - processing

108.

SALMON ENTERPRISES OF TASMANIA (SALTAS),
PO Box 103 Dover TAS 7117
Phone: 002 23 5376 Fax:
Contact

Keywords: #marketing - seafood; #mariculture; #disease - fish; #mariculture - nutrition

Fisheries Related R & D: Market research for Tasmanian cultured Atlantic salmon; sea cage farming of Atlantic salmon; control of amoebic gill disease in salmonids farmed at sea; survey of the quality of fishmeal available to the Tasmanian salmon industry

Potential Areas of Collaborative Research:

- ◆ Aquaculture/ Mariculture
 - ⊙ growth and survival
 - ⊙ economics and marketing

109.

SEA HARVEST PTY LTD,
Mourilyan Harbour Rd Mourilyan QLD
PO Box 4 Mourilyan QLD 4858
Phone: 070 632 455 Fax: 070 632 377
Contact: M Heasman/D Fielder

Keywords: #aquaculture; #mariculture; #disease - fish

Fisheries Related R & D: Development of barramundi (*Lates calcarifer*), prawn (*Penaeidae*) and mud crab (*Scylla serrata*) hatchery and farming techniques; development of intensive and farming techniques for the mud crab *Scylla serrata* in northern Australia; diseases of abalone and cultured penaeid prawns.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival

110.

SEVRUP FISHERIES
c/- 134 Tarrleton St East Devonport TAS 7310
Phone: 004 279 033 Fax: 004 279 743
Contact: Una Rockliff

Keywords: #aquaculture; #mariculture; #disease - fish

Salmon and trout growers

Fisheries Related R&D: Streptococosis in rainbow trout

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival

111.

SHELLFISH CULTURE PTY LTD
Tasman Highway Bicheno TAS 7215
Phone: 003 751 188 Fax:
Contact:

Keywords: #mariculture

Fisheries Related R & D: Mass cultured microalgae used in mariculture

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival

112.

STEEDMAN SCIENCE AND ENGINEERING
31 Bishop St Jolimont WA 8014
Contact Dr RK Steedman
Phone: 09 387 7955 Fax: 09 387 8886
Contact: Dr RK Steedman

Keywords: #meteorology; #oceanography; #instrumentation - marine

Research is directed to applied sciences of meteorology and oceanography for industry and government.

Fisheries Related R & D: Instrumentation and systems engineering; mathematical and computing techniques; applied science - coastal and ocean; data acquisition system for ocean data buoys; real-time port access system

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem
- ◆ Harvesting
 - ⊙ technology

113.

STRATEGIC RESEARCH FOUNDATION (SRF)
191 Drummond St Carlton VIC 3053
Phone: 03 663 3077 Fax: 03 663 3348
Contact: Ms Jo Staines (Project Manager)

Keywords: #engineering - marine

The foundation specialises in the establishment of large scale collaborative research initiatives which are of long term economic and scientific benefit to Australia. The SRF bridges the gap between the private sector and publicly funded research organisations such as CSIRO and universities by:

- identifying strategic research opportunities;
- identifying suitable industrial and research partners;
- providing management expertise;
- handling legal, financial and commercial matters; and
- negotiating funds

Partners to date have included CSIRO, IBM, RMIT, Computer Power, BHP and the Energy R&D Corporation.

Fisheries Related R & D: The Foundation is a partner in the Marine and Heavy Engineering Centre expected to be established in the near future as an umbrella group to promote and initiate industry led research projects in the field. Members will include Amecon, CSA, Australian Defence Industries, ESSO, Wormald Technology, The Department Of Defence, Monash And Melbourne Universities, RMIT, Victorian University of Technology, The Australian Maritime College, DSTO's Materials Research Laboratory along with the Strategic Research Foundation.

Projects will be supported on an individual project by project basis with members of the centre funding only those proposals which they are directly interested in. No project will proceed without industry backing and it is expected that most projects will be suggested by the industry partners.

The foundation is also a partner in a joint venture establishing the Institute of Food and Agricultural Research which conducts collaborative research projects in horticulture, grains, animal health and animal biotechnology. At this stage fish products are not actively involved in the institute however there remains a possibility that they may be included in the longer term.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - ⊙ processing
 - ⊙ technology

114.

TASMANIA ATLANTIC SALMON LTD

7-9 Franklin Wharf Hobart TAS
 PO Box 1645 Hobart TAS 7001
 Phone: 002 24 0355 Fax: 002 24 0373
 Contact: P Cooper

Keywords: #mariculture; #marketing - seafood

Fisheries Related R&D: Producers and exporters of Atlantic salmon; Japanese markets for processed Atlantic salmon.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ economics and marketing

115.

T.P.S. PTY LTD

4 Jamberoo St Springwood Brisbane QLD 4127
 Phone: 07 208 8447 Fax: 07 808 487
 Contact: Michael Schimkat

Keywords: #water quality; #aquaculture - equipment

Fisheries Related R & D: Water quality analysis by electrochemical methods; aquaculture instrumentation including computer based and hand held monitoring devices. Devices are used extensively in Australia on fish farms and by organisations such as AIMS for research purposes. The company also exports products to South East Asia.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival

116.

TRIDENT SEAFOODS PTY LTD,

9th Floor Marine Board Building 1 Franklin Wharf Hobart TAS
 GPO Box 1797 Hobart TAS 7001
 Phone: 002 313 833 Fax: 002 313 705
 Contact: David Dowling

Keywords: #seafood - manufacturing processes

Producers and exporters of fish meal and oil, fish emulsion, organic fertilizer, bait, sea bass, smooth dory, orange roughy, frozen fish and fish fillets

Fisheries Related R & D: Nutritional evaluation of orange roughy fishmeal

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - ⊙ processing

117.

TTD INTERNATIONAL PTY LTD

PO Box 425 Seven Hills NSW 2147
 Phone: 02 674 1406 Fax: 02 674 6582
 Contact: T Ostrowski-Meissner (Director, Administration)

Keywords: #Aquaculture - nutrition; #biotechnology; #seafood - product manufacturing; #animal feeds

Fisheries Related R & D: Value-added feeds; feed manufacturing technologies; food and feed quality control

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - ⊙ handling and preservation
 - ⊙ processing

118.

TUNA BOAT OWNERS ASSOCIATION

PO Box 711 Port Lincoln SA 5806
 Phone: 086 82 2022 Fax: 086 82 4850
 Contact:

Keywords: #mariculture

Fisheries Related R & D: Southern Bluefin Tuna grow out

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ marketing and economics

119.

**UNCLE BENS OF AUSTRALIA
 Research And Development Division
 Kelly St Wodonga VIC**

PO Box 153 Wodonga VIC 3690
 Phone: 060 55 5200 Fax: 060 55 5347
 Contact: Dr RN Armfield (Director, R&D Division)

Keywords: #seafood - product manufacturing; #animal feeds

Food processing, canning technology, animal nutrition, extrusion cooking, continuous meat handling and cooking systems, process analysis and control.

Fisheries Related R & D: Applied research, devilmint and manufacture of pet food and fish meal.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - ⊙ processing
 - ⊙ product handling and preservation

120.

WESTERN BIOTECHNOLOGY LTD,
 2-6 Railway Parade Bayswater WA 6053
 Phone: 09 378 1777 Fax: 09 378 2562
 Contact: Dr Leslie Borowitzka

Keywords: #biotechnology; #aquaculture

Fisheries Related R & D: Commercial algal biotechnology; culture of alga and extraction of beta carotene pigments; the effects of pigmentation and growth rate of algal products in the development of Penaeid prawns.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - ⊙ growth and survival
 - ⊙ biology and genetics

RESEARCH FUNDING BODIES

D. RESEARCH AND DEVELOPMENT CORPORATIONS

121.

ENERGY RESEARCH AND DEVELOPMENT CORPORATION (ERDC)

Level One Legal and General Building 15 Barry Drive
Turner ACT 2601
GPO Box 525 Canberra ACT 2601
Phone: 06 274 4800 Fax: 06 274 4601
Contact: Ms Kathryn Adams (Managing Director)

Keywords: #ecotoxicology - marine; #off-shore drilling

Research Objectives/Role: The Corporation's objectives are to:

- assist the development of new and improved technologies for the discovery, production, transport and use of energy;
- achieve an expansion in the level of resources applied to energy R&D; and
- improve the management of energy R&D to maximise benefits to the energy industries, energy users, and the community in general.

In 1990/91 ERDC approved 52 projects with a total commitment of \$3.4 million.

Fisheries Related R & D: A project examining the ecotoxicological impact of off-shore drilling is about to get underway. The project will involve funding from the Corporation and a number of companies involved in oil exploration together with support in kind from the Western Australia Environment Protection Authority and Kailis Gulf Fisheries. The research will be carried out by Curtin University.

The Corporation is also funding a proposal by the Australian Petroleum Exploration Association Ltd to carry out a review of research into the environmental effects of off-shore drilling in Australia.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - habitat - ecosystem
- ◆ Harvesting
 - resource - use conflict

122.

GRAINS RESEARCH AND DEVELOPMENT ORGANISATION (GRDC)

NFF House 14-16 Brisbane Avenue Barton ACT 2600
PO Box E6 Queen Victoria Terrace Barton ACT 2600
Phone: 06 272 5525 Fax: 06 271 6430
Contact: Mr Dick Davies (Executive Director)

Keywords: #aquaculture - nutrition; #grains; #oilseeds

Research Objectives/Role: The Corporation's objectives are:

- to develop products for markets;
- to identify and meet the needs of more discerning markets and increasing consumer demand for particular processed end products; to establish better linkages between the growing and processing sectors;
- to improve production efficiency;
- to improve levels of productivity and enable growers and processors to be more competitive;
- to optimise use of the natural resource base; and
- to establish more sustainable land use methods.

Fisheries Related R & D: Use of grains and oilseeds in the development of aquaculture feeds.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - growth and survival

123.

LAND AND WATER RESEARCH AND DEVELOPMENT CORPORATION (LWRDC)

Columbia House 101 Northbourne Ave Turner ACT 2601
GPO Box 2182 Canberra ACT 2601
Phone: 06 257 3379 Fax: 06 257 3420
Contact: Dr Phil Price

Keywords: #ecology - freshwater; #ecology - marine; #ecology - coastal

Research Objectives/Role: The LWRDC will fund land, water and vegetation R&D activities which will contribute to sustainability of resource use, increased land productivity, improved water quality, a better understanding of ecological processes and better management and conservation of these resources. The Corporation will actively seek to increase funding of interdisciplinary R&D, will foster and expand collaborative work with other R&D funding bodies and will endeavour to reduce duplication in the overall R&D effort.

The Corporation has responsibility for 11 water research centres set up by the Australian Water Research Advisory Council in 1987. These are co-operative ventures with the water industry and are being supported with \$1.1m from industry, universities and CSIRO. These centres are:

- Australian Centre For Catchment Hydrology, CSIRO Division of Water Resources (ph. 06 246 5792)
- Centre For Wastewater Treatment Processes, Univ. of NSW (ph. 02 697 5060)
- Australian Centre For Tropical Freshwater Research, James Cook Univ. (ph. 077 81 4262)
- Centre for Environmental Modelling, Univ. of Western Australia, (ph. 09 380 3085)
- Centre For Water Policy Research, Univ. of New England (ph. 067 73 2420)
- Centre For Ground-Water Studies, Flinders University (ph. 08 274 9387)
- Centre For Environmental Applied Hydrology, Univ. of Melbourne (ph. 03 344 6641)
- Centre For Ground-Water Management And Hydrogeology, Univ. of NSW (ph. 02 697 4275)
- Centre For Stream Ecology, Monash University (ph. 03 573 2502)
- Centre For Catchment And In-Stream Research, Griffith University (ph. 07 875 7403)
- Australian Centre For Water Treatment And Water Quality Research.(ph. 08 259 0240)

In 1992 13 new projects were funded at a cost of \$1.8 million. In 1992/93 a substantial amount of funds will be available for blue-green algae research.

Fisheries Related R & D: A large proportion, up to 25%, of the projects funded by the Corporation involve research into freshwater ecology. In recent times the Corporation has also supported projects involving the effects on marine ecology run off from land after fertilizer application and from acid sulphate soils.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - habitat - ecosystem

124.

RURAL INDUSTRIES RESEARCH AND DEVELOPMENT CORPORATION (RIRDC)

1st Floor NFF House Brisbane Avenue Barton ACT 2600
 PO Box 4776 Kingston ACT 2604
 Phone: 06 272 4539 Fax: 06 272 5877
 Contact: Mr Keith Hyde (Executive Director)

Keywords: #infrastructure; #seafood - packaging/transport

Research Objectives/Role: RIRDC's charter is to support industries not encompassed by other rural industry research corporations and to address issues which are multi-industry in that they affect several or all agricultural industries. There are two key activity areas:

- specific industry projects and programmes
 - .. to invest in R&D that has the potential to provide a high payoff to smaller, emerging or new rural industries
- multi-industry projects and programmes
 - .. to invest in multi-industry R&D projects and programmes that have a high potential payoff for Australian rural industries but which would not be funded by other R&D organisations acting alone

Fisheries Related R & D: While the Corporation is not currently involved in any projects linked to fisheries there are a number of areas of RIRDC's interest which may overlap with those of the Fisheries Research and Development Corporation. These include

- infrastructure support
- processing, packaging, handling and distribution

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - ⊙ product handling and preservation

125.

SUGAR RESEARCH AND DEVELOPMENT CORPORATION (SRDC)

26th Floor Lennon's Plaza 66 Queen's St Brisbane QLD
 PO Box 12050 Elizabeth Street Brisbane QLD 4002
 Phone: 07 210 0495 Fax: 07 210 0506
 Contact: Executive Director: Mr. Eoin Wallis

Keywords: #ecology - freshwater; #sugar; #ecology - estuarine

Research Objectives/Role: The Corporation's objectives are:

- to improve efficiency in the growing, processing, manufacture and refining of raw sugar to ensure a sustainable industry;
- to attract increased and new resources into the industry's research and development programs;
- to improve training in sugar research and development;
- to establish effective lines of communication with and between industry bodies and the research and academic institutions; and
- to discharge effectively and efficiently the Corporation's responsibilities

The Corporation regards the area of impact of sugar cane farming systems on the environment to be an important

potential focus for future research. The Corporation will seek to co-operate with various R&D agencies and other public bodies on aspects of the management of research into the environmental impact of the Australian sugar industry.

Fisheries Related R & D: A considerable number of new projects relate to aspects of the environment. These include studies of the movement of nutrients and agricultural chemicals in soil and into the ground water and river systems, as well as measurement of the nature of sediments and water quality in a number of river systems.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

E. RESEARCH GRANTS

126.

ANTARCTIC SCIENCE ADVISORY COMMITTEE GRANTS SCHEME

Antarctic Division Channel Highway Kingston TAS
GPO Box 554F Hobart TAS 7000
Phone: 002 32 3209 Fax: 002 32 3288
Contact: ASAC Grants Officer

Keywords: #R&D grants - climate change; #R&D grants -
Antarctica; #R&D grants - Southern Ocean

To assist in the development of Australia's scientific programs, policies and interests in the Antarctic and sub-Antarctic, taking into account foreign policy objectives and international obligations. The Committee recommends grants to non-government institutions.

The Scheme supports research by scientists outside the Antarctic Division in a range of disciplines and has a budget of around \$500,000 per annum. Priority research areas for the 1991/92 grants scheme include Antarctic environmental management, Antarctic weather and climate; marine science relevant to an understanding of the Southern Ocean ecosystem; the natural environment, incorporating research into unique features of the Antarctic; social science relevant to Antarctica; and Antarctic technology and support.

Only those researchers who are not in receipt of a full-time government salary are entitled to receive grant funds. However collaborative proposals between government scientists and outside organisations (i.e. university researchers) may be eligible.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

127.

AUSTRADE

Export Market Development Grants Scheme:
Export Development Incentives Austrade
GPO Box 2386 Canberra ACT 2601
Phone: 06 201 7620 Fax: 06 201 7305
Contact: Greg McClelland (Manager)

Keywords: #R&D grants - seafood marketing; #R&D grants -
- exports; #R&D grants - market development;

The Scheme provides taxable cash grants to Australian exporters for a range of eligible activities. The aim is to encourage exporters to seek out and develop export markets for goods, services, industrial property rights and know how. Claims are paid only after expenditure has been incurred.

Eligible expenditure includes market research and development, representation, advertising, cost of participating in overseas exhibitions, fares, the cost of bringing agents and buyers to Australia for the promotion of export sales, cost of brochures or pamphlets, provision of free samples to buyers, cost of preparing overseas tenders and quotes, foreign language training.

Potential Areas of Collaborative Research:

- ◆ Marketing
 - ⊙ improved understanding of the export market
 - ⊙ assessment of promotion opportunities

128.

AUSTRADE

Innovative Agricultural Marketing Program
GPO Box 2386 Canberra ACT 2601
Phone: 06 201 7646 Fax: 06 201 7527
Contact: Peter Kane(Manager)

Keywords: #R&D grants - exports; #R&D grants - seafood
marketing; #R&D grants - seafood processing

To stimulate innovation in the production and marketing of agricultural products overseas. Any person or organisation involved in the agriculture, fishing or agro-forestry sector can apply for a grant. Preference is given to projects which involve innovative production, processing and related activities and which are likely to lead to increased overseas market penetration or the establishment of new export markets.

Funds are typically used in such areas as improved production and handling techniques, market research and development for new products, shipping trials to assess commercial feasibility of transportation methods, commercialisation of innovative processing methods, the development of new products from waste and by-products and the development of new markets for Australian products.

Applications can be made at any time.

Potential Areas of Collaborative Research:

- ◆ Marketing
 - ⊙ improved understanding of the domestic market
 - ⊙ improved understanding of the export market
 - ⊙ improved operational efficiency
 - ⊙ assessment of promotion opportunities
- ◆ Harvesting
 - ⊙ processing

128.

AUSTRALIAN CENTRE FOR INTERNATIONAL AGRICULTURAL RESEARCH

GPO Box 1571 Canberra ACT 2601
Phone: 06 248 8586 Fax: 06 257 3051
Contact: Dr GHL Rothschild (Director)

Keywords: #R&D grants - mariculture; #R&D grants -
aquaculture; #R&D grants - seafood quality;
#R&D grants - post-harvest technology; #R&D
grants - fisheries

The Centre aims to identify major agricultural problems in developing countries and to harness Australia's agricultural research skills to help solve them. It brings together research scientists in Australia and developing countries and sets up collaborative research programs in fields in which Australia has special expertise. It then funds and manages the joint research programs.

"Agricultural " is defined broadly so that "... no activity that has as its objectives the production of a commodity that grows on or depends upon the land, or lives in or depends upon the water (is) excluded from the Centre's possible attention".

ACIAR conducts research in nine areas: animal sciences, crop sciences, economics and farming systems, fisheries, forages, forestry, plant nutrition, post-harvest technology and soil and water. Relevant research has related to culture of the giant clam and factors affecting the quality of fish products.

Suggestions for possible projects may originate from:

- developing country research institutions seeking a solution to an agricultural problem facing the country;
- Australian research institution currently researching a problem in Australia the solution to which could be relevant to a similar problem in a developing country;
- an initiative arising from a field visit, workshop or conference; or
- ACIAR may be asked to become a partner in a research activity which seeks a solution to an agricultural problem.

In 1991/92 expenditure by ACIAR is estimated to have been \$18.9 million.

Potential Areas of Collaborative Research:

◆ Aquaculture/Mariculture

◆ Harvesting

- product handling and preservation
- processing
- technology
- alternative techniques
- economics

130.

AUSTRALIAN NATIONAL PARKS AND WILDLIFE SERVICE (ANPWS)

Construction House 217 Northbourne Ave Turner ACT
GPO Box 636 Canberra ACT 2601
Phone: 06 250 0200 Fax: 06 250 0399
Contact: Dr P Bridgewater (Director)

The ANPWS has responsibility under the *National Parks and Wildlife Conservation Act 1975* for marine conservation and for management of protected areas in Commonwealth areas other than in the Great Barrier Reef region

Objectives include to:

- conserve and manage special areas recognised as being of national conservation significance;
- protect and conserve native terrestrial, marine and freshwater fauna and flora so as to maintain biodiversity in Australia;
- develop & manage scientific collections representative of Australian and related biotas for purposes of conservation, study, education and display;
- collect information and enhance knowledge of the environment and it's biota to inform government, the professions community and the public;
- encourage Aboriginal and Torres Strait Islander involvement in the management of natural and cultural heritage;
- cooperate with Commonwealth, State, Territory and other organisations for the conservation, protection and management of the environment;
- initiate and support activities which promote nature conservation internationally.

The ANPWS makes funds available for research through the:

- Australian Biological Resources Study;
- Endangered Species Program;
- Research and Surveys Program; and the
- States Cooperative Assistance Program

The Service also administers the programs of the National Greenhouse Advisory Committee

- Core Research Program
- Dedicated Greenhouse Research Grants Scheme
- Greenhouse Information Program Grants Scheme

See separate entries for each of the above.

131.

AUSTRALIAN NATIONAL PARKS AND WILDLIFE SERVICE

Australian Biological Resources Study (ABRS)
Construction House 217 Northbourne Ave Turner ACT
GPO Box 636 Canberra ACT 2601
Phone: 06 250 0224 Fax: 06 250 0399
Contact: Dr D Kay

Keywords: #R&D grants - taxonomy; #R&D grants - ecology

The Study attempts to answer two questions:

- what kinds of plants and animals are there in Australia; and
- where are these plants and animals found?

Seeks to stimulate taxonomic and ecological studies of Australian biodiversity through a grants scheme and publishes a major national series of flora and fauna. The current emphasis of the program is on improving and increasing taxonomic research and documentation of the Australian flora and fauna by means of the Participatory Grant Program. The Program funds taxonomic and distributional research on Australia's flora and fauna. It had a budget of \$2.3 million in 1991/92 supporting 98 research projects.

Potential Areas of Collaborative Research:

◆ Natural fish Resources

- maintenance and improvement
- habitat - ecosystem

132.

AUSTRALIAN NATIONAL PARKS AND WILDLIFE SERVICE

Endangered Species Program

Construction House 217 Northbourne Ave Turner ACT
GPO Box 636 Canberra ACT 2601
Phone: 06 250 0280 Fax: 06 250 0214
Contact: Dr Barry Reville (Director)

Keywords: #R&D grants - endangered species; #R&D grants - marine habitat

Objectives of the Program are to prevent the extinction of native species due to human causes, to prevent further species from becoming endangered, and to return endangered species to a secure status in the wild. Priorities are being determined through the funding of overviews and action plans which identify the conservation status of animal and plant groups and the management action needed for their protection. Preference is given to projects which contribute to the development and implementation of recovery plans for the conservation of endangered species habitats or communities.

Funding is awarded for research and other projects in a number of priority areas, including the development of national overviews and action plans for specific species. Preference is given to projects which contribute to the development and implementation of recovery plans for the conservation of endangered species, habitats or communities and for the identification of patterns and common causes of species extinction. The Program had budget of \$5 million in 1991/92.

Potential Areas of Collaborative Research:

◆ Natural Fish resources

- maintenance and improvement
- habitat - ecosystem

133.
AUSTRALIAN NATIONAL PARKS AND WILDLIFE SERVICE
Research and Surveys Program
 Construction House 217 Northbourne Ave Turner ACT
 GPO Box 636 Canberra ACT 2601
 Phone: 06 250 0337
 Contact: Chris Mobbs

Keywords: #R&D grants - environmental impact of fisheries; #R&D grants - marine environment; #R&D grants - marine research ;#R&D grants - freshwater research

In order to fulfil its role of providing expert advice on national nature conservation issues the ANPWS draws on the breadth of the scientific community by making funds available through the Research and Surveys program to external consultants under formal contracts for the provision of specific services.

Most marine research is in the areas of whales, albatross, sea turtles etc and often involves their interaction with fishing methods such as longlining. In 1990/91 the program supported projects to the value of more than \$1.2 million.

Ocean Rescue 2000 is also administered by DASET. This Program was initiated in 1990/91 and is planned to run for 10 years. The aim of the program is to identify areas suitable for inclusion in a system of marine conservation reserves. State agencies such as State departments of fisheries and national parks and wildlife are eligible for funds under the Program.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - alternative technologies
 - technology
- ◆ Natural fish Resources

134.
AUSTRALIAN NATIONAL PARKS AND WILDLIFE SERVICE
States Co-Operative Assistance Program
 Construction House 217 Northbourne Ave Turner ACT
 GPO Box 636 Canberra ACT 2601
 Phone: 06 246 6211 Fax:
 Contact:

Keywords: #R&D grants - endangered species; #R&D grants - marine environment

The Program enables the ANPWS to foster co-operative projects between the Commonwealth and States and between States in order to develop nature conservation projects of national or international significance related to wildlife, and to national parks and reserves. The program includes projects related to marine, freshwater and terrestrial habitats and covers research projects, development of management plans and workshops.

Projects carried out under this program are initiated by the State or Territory agencies with resources being provided jointly by the ANPWS and the States and Territories. The ANPWS may be involved by the provision of funds and/or expertise. In 1990/91 the ANPWS provided \$976 390 for 49 projects through the Program.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - knowledge
 - maintenance and improvement
 - management
 - habitat - ecosystem

135.
AUSTRALIAN RESEARCH COUNCIL (ARC)
 Research Policy and Grants Branch Higher Education
 Division DEET
 12 Mort St Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Principal functions of the Australian Research Council are:

- to make recommendations to the relevant Ministers on the distribution of resources provided under research support schemes for which it is responsible; and

- to inquire into, and to provide information and advice to the National Board of Employment, Education and Training with respect to, any matter referred to the Council by the Minister or the Board including research priorities, the co-ordination of research policy, and measures to improve interaction between the different research sectors in Australia.

The Council funds a major part of higher education research by way of the:

- Grants Scheme;
- Collaborative Research Grants Scheme;
- Research Centres Program; and the
- Research Infrastructure Program.

See separate entries for each of the above

136.
AUSTRALIAN RESEARCH COUNCIL
Australian Research Council Grants Scheme
 Research Policy and Grants Branch Higher Education
 Division DEET
 12 Mort St Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Keywords: #R&D grants - equipment; #R&D grants - investigator awards; #R&D grants - research grants; #R&D grants - project grants; #R&D grants - pilot grants

The ARC Research Grants Scheme aims to fund research to produce economic and social benefits for the nation. Funds are directed to projects which are not appropriately supported through other channels.

There are a number of categories of ARC Grants including:

- Research grants, awarded annually;
- Project Grants awarded to more highly rated projects and supported for up to three years;
- Pilot Grants aimed at testing the feasibility of larger scale projects;
- Small Grants providing grants of between \$5000 and \$24999 to institutions for allocation for small or low cost research projects;
- Special Investigator Awards providing a three year grant to highly rated researchers who have previously had research grants; and the
- Large Equipment Grants providing funding for equipment items with a purchase price or construction cost over \$200,000.

Potential Areas of Collaborative Research:

- ◆ Natural fish Resources
- ◆ Marketing
- ◆ Harvesting
- ◆ Aquaculture/Mariculture

137.

AUSTRALIAN RESEARCH COUNCIL
Collaborative Research Grants Scheme
 Research Policy and Grants Branch Higher Education
 Division DEET
 12 Mort St Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 7159 Fax: 06 276 7188
 Contact: John Parr (Assist. Sec.)

Keywords: #R&D grants - collaborative; #R&D grants - natural sciences

The Scheme supports collaborative research projects between university researchers and industry or government users of research. It aims to develop a greater understanding of industry's needs within higher education institutes, encourage co-operative links with industry and public sector users of research and provide support for researchers who wish to further develop projects of economic or social benefit to Australia. The social sciences and humanities as well as the natural sciences and engineering will be supported.

Matching industry support can be in cash or kind and may include contributions to staffing the project, provision of equipment or use of a laboratory. Industry collaborators can include both private and public sector commercial enterprises as well as government departments which are users of the research but not government research funding or research performing agencies, such as CSIRO. However, collaboration between the partners and research performing agencies is regarded favourably.

In 1992 41 collaborative projects were supported under the Scheme with \$2.35 million.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- ◆ Aquaculture/Mariculture

138.

AUSTRALIAN RESEARCH COUNCIL
Research Centres Program
 Research Policy and Grants Branch Higher Education
 Division DEET
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Keywords: #R&D grants - special research centres; #R&D grants - key research centres

Under its Research Centres Program, which promotes specialisation in research at Australian higher education institutions, the ARC gives financial support to Special Research Centres and Key Centres of Teaching and Research. In 1991 20 Special Research Centres and 32 Key Centres were supported at a cost of \$19.3m.

Special Research Centres are aimed at facilitating concentrations of research workers and resources in Australian higher education institutions.

Key Centres are concentrations of high level activity within higher education institutions based upon teaching and research work of existing departments, units or groups. The program is designed to give equal weight to teaching and research activities and to provide a greater impetus to existing high-quality programs and encourage centres of teaching and research in areas which are national priorities. Centres are funded at around \$200,000 p.a. for an initial 3 years with a maximum 9 year life cycle.

A review of the programs in 1991 found it very effective and recommended their continuation. However, budget constraints mean that, while existing Centres will continue to be funded it is unlikely that another round of applications will be possible prior to 1994/95.

Potential Areas of Collaborative Research:

- ◆ Natural fish Resources
- ◆ Marketing
- ◆ Harvesting
- ◆ Aquaculture/Mariculture

139.

AUSTRALIAN RESEARCH COUNCIL
Research Infrastructure Program
 Research Policy and Grants Branch Higher Education
 Division DEET
 12 Mort Street Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Keywords: #R&D grants - infrastructure

The Research Infrastructure Program was established to develop research infrastructure in higher education institutions. A total of \$120m is available in the 1990-92 triennium (\$52m in 1992). Funding is made through:

- **Infrastructure Block Grants**, allocated to the 19 universities established before 1987 according to their success in obtaining grants from competitive Commonwealth schemes for research funding. \$17.2m was allocated in 1991.
- **Infrastructure Development Grants**, intended to provide research infrastructure support to develop the research capacity of higher education institutions from the former advanced education sector. \$16m was awarded in 1991.
- **Co-operative Infrastructure Development Grants**, intended to fund relatively large-scale initiatives to develop research infrastructure on a co-operative basis across groups of institutions or the higher education system as a whole. \$7.1m was awarded in 1991.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- ◆ Marketing
- ◆ Harvesting
- ◆ Aquaculture/Mariculture

140.

DEPARTMENT OF BUSINESS, INDUSTRY AND REGIONAL DEVELOPMENT (DBIRD)
Queensland Grants for Research and Development (QGRAD) Scheme
 GPO Box 1141 Brisbane QLD 4001
 Phone: 07 224 7603 Fax: 07 234 1399
 Contact: QGRAD Secretariat

Keywords: #R&D grants - manufacturing; #R&D grants - traded services

Had a budget of \$2.5 million in 1990/91 and provides support for R&D in the manufacturing and traded services sectors. It provides:

- supplementary funding to Queensland firms which have sought funding under the GIRD scheme and have received insufficient funds or no funding at all;

- funding for strategic research relevant to Queensland's industry development; and
- funding to support the development of R&D infrastructure in the State.

Applications will only be considered if projects:

- are directed at the development of internationally competitive, value added goods;
- are unable to proceed satisfactorily without state funding; and
- have significant industry involvement and financial commitment to ensure the R&D is market driven.

The scheme provides grants of up to 50% of total R&D expenditure, paid over 3 years subject to the achievement of agreed milestones.

Potential Areas of Collaborative Research:

- ◆ Harvesting
 - technology
- ◆ Aquaculture/Mariculture
 - growth and survival

141.

DEPARTMENT OF EMPLOYMENT, EDUCATION AND TRAINING (DEET)

Evaluations And Investigation Program
Higher Education Division DEET
12 Mort Street Canberra ACT
GPO Box 9880 Canberra ACT 2601
Phone: 06 276 8111 Fax: 06 276 7330
Contact: The Manager

Keywords: #R&D grants - education issues

The Program funds studies and research projects to evaluate performance and investigate issues of national importance in higher education. Priority areas for study are determined annually by DEET in consultation with organisations and interested persons in the higher education system.

Recent reviews include

- a discipline review of agricultural and related education
- a discipline review of computing studies and information sciences education.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- ◆ Harvesting
- ◆ Aquaculture/Mariculture

142.

DEPARTMENT OF INDUSTRY TECHNOLOGY AND COMMERCE

National Teaching Company Scheme
51 Allara Street Canberra ACT
Research and Development Grants Branch, DITAC
GPO Box 9839 Canberra 2601
Phone: 06 276 1036 Fax: 06 276 1122
Contact: Mr Alan Bannister (Director)

Keywords: #R&D grants - manufacturing; #R&D grants - marketing

Scheme aims to foster links between companies and public sector research institutions by providing support of up to \$50,000 over 2 years towards the high cost of employing and supervising graduates on projects designed to improve company performance. The scheme allows graduates to be placed in companies to undertake R&D on projects which are important to the commercial success of the firm.

Projects involving the adoption of appropriate technology or methodology in manufacturing, marketing, management accounting, design and strategic planning have received support under the scheme. In 1990/91 approval was given to 53 of 143 applications at an estimated total cost of \$2.65m.

Applications can be made at any time and are considered at quarterly committee meetings.

Potential Areas of Collaborative Research:

- ◆ Marketing
- ◆ Harvesting
- ◆ Aquaculture/Mariculture

143.

DEPARTMENT OF INDUSTRY, TRADE AND TECHNOLOGY, SOUTH AUSTRALIA
South Australian Development Fund
GPO Box 1264 Adelaide SA 5001
Phone: 08 210 8333 Fax: 08 231 0440
Contact: Mr John Frogley (Executive Director)

Keywords: #R&D grants - industry development; #R&D grants - technology

The Fund provides a range of financial incentives to encourage new industry and help existing local enterprises expand. Incentives under the Fund aim primarily to encourage investment in the State which will lead to increased international competitiveness and the creation of long term employment. The incentives can take the form of grants, loans or equity contributions, government guarantees, land and premises packages. The incentives apply to manufacturing and service sector projects, particularly in technology based industries. The main programs within the fund are the:

- Industry development payments program;
- Structural adjustment program;
- Regional Industry development program; and the
- Technology and Innovation program.

In 1990/91 the Fund allocated \$12.64 million to 80 projects and made available a further \$2 million in government guarantees and another \$6.75 million for land and industrial premises packages.

Potential Areas of Collaborative Research:

- ◆ Harvesting
- ◆ Marketing
- ◆ Aquaculture/Mariculture

144.

ENVIRONMENT PROTECTION AUTHORITY OF NSW
Environmental Trusts
PO Box 367 Bankstown NSW 2200
Phone: 02 793 0266 Fax: 02 793 0002
Contact: Dr Neil Shepherd (Secretary)

Keywords: #R&D grants - environment protection

The Trust was established in 1990 to provide grants to individuals and organisations to carry out pollution reduction and environmental restoration, research and education projects. The Trusts are funded from the interest accumulated on capital gained from the imposition of a trade waste charge imposed on industries which discharge pollutants into the Water Board sewerage system. The three trusts are:

Environmental Restoration and Rehabilitation Trust
 - to initiate, encourage and support a range of projects in both the private and public sectors to reduce environmental degradation and rehabilitate damaged sites and waterways;

Environmental Research Trust
 - to promote R&D in both the public and private sectors into environmental problems, particularly to provide solutions to significant local problems, to establish less environmentally harmful methods of operations for industries located in NSW and assessment of environmental degradation; and

Environmental Education Trust
 - to promote environmental education and, in particular, to encourage development of educational programs in both the public and private sectors that will increase public awareness of environmental issues.

\$1.5 million was available through the trusts in 1990/91 and this will be increased in subsequent years.

Applications for grants close in March for the following financial year.

Potential Areas of Collaborative Research:

- ◆ Aquaculture/Mariculture
 - management and the environment
- ◆ Natural fish Resources
 - habitat - ecosystem
- ◆ Harvesting
 - technology

145.

INDUSTRY RESEARCH AND DEVELOPMENT BOARD
 DITAC 51 Allara Street Canberra ACT
 GPO Box 2704 Canberra ACT 2601
 Phone: 06 276 1000 Fax: 06 276 1122
 Contact: Derek Lambert (Director, Secretariat Section)

The Board administers two relevant schemes:

- the Discretionary Grants Scheme, and
- the Generic Technology Grants Scheme.

The Board is empowered to:

- study research and development opportunities, problems and target areas;
- promote and market industry research and development activities, programs, opportunities and benefits;
- maintain an awareness of industry research and development programs administered by the Board;
- foster greater understanding and collaboration between Australian and overseas research and development activities; and
- advise the minister on funds which should be committed to the above activities.

See separate entries for each of the above Schemes.

146.

INDUSTRY RESEARCH AND DEVELOPMENT BOARD
Discretionary Grants Scheme
 Discretionary Grants Section DITAC
 51 Allara Street Canberra ACT
 GPO Box 9839 Canberra ACT 2601
 Phone: 06 276 1000 Fax: 06 276 1122
 Contact: Mr A Bannister (Director)

Keywords: #R&D grants - manufacturing; #R&D grants - service industries

The Discretionary Grants Scheme aims to improve the efficiency and international competitiveness of Australian industry by encouraging research and development activities by companies which have insufficient taxation liability to adequately benefit from the Tax Concessions for R&D. Special consideration is given to applications which show the greatest technical, commercial and economic merit and have the greatest potential for sustainable international competitiveness. In 1990/91 78 applications were approved at a total value of \$22.2 million over 3 years.

Under the scheme, research and development projects can be supported for up to three years at a maximum of 50% of eligible project expenditure. Eligible applicants must be companies involved in manufacturing, mining, construction, service industries, computer software or in developing new systems or processes for any of these.

Potential Areas of Collaborative Research:

- ◆ Harvesting
- ◆ Aquaculture/Mariculture

147.

INDUSTRY RESEARCH AND DEVELOPMENT BOARD
Generic Technology Grants Scheme
 Research and Development Tax Concession Branch DITAC
 51 Allara Street Canberra ACT.
 GPO Box 9839 Canberra ACT 2601

Keywords: #R&D grants - biotechnology; #R&D grants - communications; #R&D grants - environment; #R&D grants - information; #R&D grants - manufacturing and materials; #aquaculture - nutrition

The scheme supports innovative, commercially driven research and development projects which are likely to be of particular significance to the growth of Australian industry. It aims to encourage collaboration and cooperation between publicly funded research organisations and industry and to support the development of industrial capacity in strategically important technologies. The Scheme is administered by 5 committees the objectives of which are to:

Biotechnology Committee:

- stimulate Australian industry to adopt biotechnology as an essential component of its long term strategy for sustained international competitiveness;
- support market led biotechnology research and development in areas considered most likely to have significant benefits for Australia; and
- change attitudes of both researchers and business leaders so that they recognise the critical value of industrial research and development, and the benefits of collaboration.

In 1990/91 the Committee facilitated the commencement of networking in aquaculture and food sectors to identify information needs and potential linkages. Expressions of interest for 1992-94 were sought particularly in:

- food technology and processing;
- bioprocessing,
- forestry, and
- adding value to primary products.

Contact: Brian Delroy (Phone: 06 276 1182 Fax: 06 276 1206)

Manufacturing and Materials Technology Committee:

- focus on key issues in developing the commercial potential of Australian materials technology;
- provide a forum for the materials community to concentrate R&D activity in selected target areas which will provide maximum leverage in increasing the efficiency and international competitiveness of Australian manufacturing industry;
- develop a culture of collaboration and commonality of purpose between tertiary institutions, publicly funded research organisations and industry in carrying out professionally managed, task oriented R&D on an internationally competitive scale across institutional boundaries; and
- encourage the development of appropriate linkages between Australian R&D consortia and international groups to enhance the competitive position of Australian industry.

Contact: M Parker (Phone: 06 276 1181 Fax: 276 1547)

Information Technology Committee:

- provide grants for strategic research projects in information technology of special significance to the long term growth and competitiveness of Australian industry;
- bring about a long term structural change with the aim of increasing the level of R&D investment in information technology by the private sector;
- act as a catalyst in promoting closer collaboration between publicly funded research organisations and industry;
- strengthen the mechanisms by which R&D in Australia can be commercially exploited off-shore;
- identify priority areas of information technology and regularly review these priority areas;
- highlight the urgent need to maintain a pool of people with technical skills in information technology; and
- raise awareness in Australia of the importance of information technology to future economic growth and international competitiveness.

in 1990/91 8 new projects were supported involving a commitment of \$4.05m.

Contact: David Watson (Phone: 06 276 1183 Fax: 06 276 1206)

Communications Technology Committee:

- to focus R&D in communications technology within Australia and thereby to assist in the creation of national wealth and to increase the international competitiveness of our industries;
- provide grants for strategic research in areas of communications technology most likely to have economic significance for Australian industry; and
- promote closer collaboration between publicly funded research organisations and industry, and thereby to change attitudes of both researchers and business leaders as to the critical value of industrial R&D.

Contact: David Watson (Phone: 06 276 1183 Fax: 06 276 1206)

Environmental Management Technology Committee:

- enable Australian industry to perform more efficiently and competitively through the application of effective waste management, recycling and waste minimisation technologies;
- facilitate resource development projects and industrial activities proceeding with acceptable minimal environmental impacts;
- help develop products or systems which assist in the maintenance, restoration or monitoring of the environment; and

- address the environmental needs of the Australian- and international- community through new methods for collecting, treating and disposing of urban and industrial wastes.

In 1991/92 9 grants averaging \$380,000 were approved by the Committee. One of these was to the Queensland Dept. of Primary Industries/University of Queensland/R&H Water Management Ltd for research into converting waste products to fish food for aquaculture.

Contact: John Morris (Phone: 06 276 1554 Fax: 06 276 1306).

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- ◆ Marketing
- ◆ Aquaculture/Mariculture
- ◆ Harvesting

148.

THE INTERNATIONAL SCIENCE AND TECHNOLOGY ADVISORY COMMITTEE (ISTAC)

International Science and Technology Section DITAC

51 Allara St Canberra ACT

GPO Box 9839 Canberra 2601

Phone: 06 276 1069 Fax: 06 276 2188

Contact: David Nicholls (Director)

The objectives of the ISTAC are to:

- increase Australian participation in international S&T research which contributes to national social and economic objectives;
- use international links to help gain the benefits of research and to increase interaction between research and commerce;
- increase access to major international research facilities unavailable in Australia;
- use international research links to facilitate the creation of competitive national research strengths and to promote recognition of those strengths; and
- contribute to government policy on international interactions in science and technology.

The Committee oversees and advises on the allocation of funds through the International Science and Technology Program and the International Conference Support Scheme.

A total of \$17.5 million has been made available over 5 years for major international science and technology collaborative projects.

See separate entries for each of these programs/schemes.

149.

INTERNATIONAL SCIENCE AND TECHNOLOGY ADVISORY COMMITTEE

International Conference Support Scheme

Institution of Engineers, Australia

11 National Circuit Barton ACT 2600

Phone: 06 270 6555 Fax: 06 273 1488

Contact: The Manager

Keywords: #R&D grants - conferences

The purpose of the scheme is to encourage the holding of major international science and technology conferences and symposia in Australia, to attract significant numbers of overseas delegates and to promote knowledge of Australian capabilities in science and technology in the international arena.

The scheme is administered on behalf of DITAC by the institution of Engineers, Australia in consultation with the Australian Academy of Science and the Australian Academy of Technological Sciences and Engineering. The International Science and Technology advisory committee oversees and advises on the allocation of funds.

Up to \$15000 is available for any one conference where there are at least 100 paying delegates. An advance may be in the form of a loan, repayable from conference profits, or a grant, where assistance is sought to support the preparation of a bid to hold the conference in Australia.

Applications can be lodged at any time and will be considered at assessment meetings held in April and October each year.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- ◆ Marketing
- ◆ Harvesting
- ◆ Aquaculture

150.

THE INTERNATIONAL SCIENCE AND TECHNOLOGY ADVISORY COMMITTEE

International Science and Technology Program
Science and Technology Section DITAC
51 Allara St Canberra ACT
GPO Box 9839 Canberra 2601
Phone: 06 276 1069 Fax: 06 276 1157
Contact: David Nicholls (Director)

Keywords: #R&D grants - international collaboration; #R&D grants - marine sciences; #R&D grants - biotechnology; #R&D grants - environmental management technology; #R&D grants - communications technology; #R&D grants - biology; #R&D grants - climate change; #R&D grants - manufacturing

The Program is the main source of funding support within DITAC for collaboration between Australian scientists, research organisations and industry, and their overseas counterparts. The objectives of the program are to stimulate Australian involvement in international research collaboration and generate awareness of Australian science and technology capabilities. A longer-term aim is to build commercial opportunities through collaborative research.

The Program has two sub-programs, the:

- Bilateral Science and Technology Program, and
- Major Grants Program

The **Bilateral Science and Technology Program** supports exchanges between individual Australian researchers and their colleagues overseas. Grants for international collaboration between researchers in the UK, New Zealand and Australia in the specific areas of biology and biotechnology, advanced manufacturing and climate change are also awarded through the program.

Applications close on April 30 and October 1 each year. In 1992 the Program provided \$677,000 for 88 projects.

The **Major Grants Program** is aimed at larger scale collaboration between Australian and overseas consortiums. Emphasis is on industry involvement and strategic research with likely commercial benefits. The Program supports major longer term strategic and pre competitive collaborative research between overseas and Australian research teams. Projects should have significance to Australian industry and the national interest and have potential to generate

commercial activity in Australia. Priority is given to projects which:

- involve pre-competitive R & D;
- establish longer term strategic relationships with overseas institutions and research consortia;
- build on Australian research strengths; and
- give early access to emerging technologies for industrial exploitation.

Eligible research areas include advanced materials, biotechnology, information technologies, communications technology, marine sciences, biomedical sciences, manufacturing technology and environmental management technology.

Support of between \$100,000 and \$400,000 a year is available for up to three years with \$25,000 to \$75,000 available for one year for promising start up projects. In 1991/92 13 grants were approved valued at \$2.1 million. They were in biotechnology, information and communications technology, advanced manufacturing, energy research, mining and agricultural engineering.

Organisations eligible for support include any Australian institution, corporation or government body which has R & D expertise in a proposed field. Applications close on February 28 and August 31 each year.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- ◆ Marketing
- ◆ Harvesting
- ◆ Aquaculture/Mariculture

161.

**THE MURRAY-DARLING BASIN COMMISSION
Murray-Darling Basin Natural Resources Management Strategy Program**

Gas Industry House Moore St Canberra ACT
GPO Box 409 Canberra ACT 2601
Phone: 06 279 0140 Fax: 6 248 8053
Contact: Barbara Moss

Keywords: #R&D grants - riverine management

Co-ordinates government and community action, addressing the major problems of degradation of the land, and conserving the natural and cultural environment of the Murray-Darling Basin.

Funding for 1992/93 was \$19 million covering interstate and intrastate activities for projects dealing with land and vegetation management, community education, aquatic and riverine management etc, with emphasis on community involvement.

Proposals for funding should reach the Commission by March.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
- ⊙ habitat - ecosystem

152.

NATIONAL GREENHOUSE ADVISORY COMMITTEE (DASET)

Core Research Program
Environment Branch DASET
GPO Box 787 Canberra ACT 2601
Phone: 06 276 1919 Fax: 06 274 1439
Contact: Gerry Morvell (Secretariat)

Keywords: #R&D grants - climate change; #R&D grants - Greenhouse effect

The National Greenhouse Advisory Committee was formed in 1989 to overview and advise government on priority areas for greenhouse research and funding. The committee oversees the Core Research Program, The Dedicated Greenhouse Research Grants Scheme and the Greenhouse Information Program Grants Scheme (see separate entries for the latter two Schemes).

The Core Research Program is being undertaken by CSIRO, the Bureau of Meteorology and the Dept. of Defence's Permanent Committee on Tides and Mean Sea Level. It had a budget of \$3.5m in 1991/92 and the research program involves modelling of the climate system; research into important regional climate processes; monitoring of the climate system to identify special regional characteristics; establishment of sea level monitoring stations at appropriate sites around Australia; and examination of the response of plants to increased carbon dioxide and groundwater levels.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

153.

NATIONAL GREENHOUSE ADVISORY COMMITTEE
Dedicated Greenhouse Research Grants Scheme
 Environment Branch DASET
 GPO Box 787 Canberra ACT 2601
 Phone: 06 276 1919 Fax: 06 274 1439
 Contact: Gerry Morvell (Secretariat)

Keywords: #R&D grants - climate change; #R&D grants - Greenhouse effect

The scheme aims to complement existing greenhouse work by focussing on research that is ineligible for funding from either the Core Research Program or other existing Grant schemes. Proposals for funding must cover at least two of the following areas:

- an understanding of the scientific processes underlying greenhouse induced climatic change, including sinks and transport of greenhouse gases, ocean atmosphere coupling and land atmosphere coupling;
- an understanding of the impacts of climatic change, including impacts on the coast zone, catchment hydrology, ecosystems and agricultural production; and
- development of effective mitigation and adaptation responses.

Proposals are expected to involve co-operation with other research groups, particularly those involved in the core research program, and to involve research training. Applications are judged by the committee on their intrinsic scientific merit, geographic spread, spectrum of study and experience of the applicants. A second round of funding will take place in 1993. The Scheme had a budget of \$1.5m in 1991/92 and 1992/93.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

154.

NATIONAL GREENHOUSE ADVISORY COMMITTEE
Greenhouse Information Program Grants Scheme
 Environment Branch DASET
 GPO Box 787 Canberra ACT 2601
 Phone: 06 274 1414 Fax: 06 274 1439
 Contact: Peter Channels (Greenhouse Unit leader)

Keywords: #R&D grants - environment education; #R&D grants - Greenhouse effect

The Scheme provides funds to environment and community groups, local government, professional associations, educational institutions and other non profit organisations to undertake a range of greenhouse awareness and education projects. Preference is given to those projects that examine limitation and adaptation responses to climate change, have a national rather than a regional focus, are self contained or clearly defined within a continuing program and encourage States and local funding authorities, private enterprise and community groups to share project costs. Applications for funding close in December.

In 1990/91 38 Grants with a value of \$500,000 were approved.

Potential Areas of Collaborative Research:-

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

155.

NATIONAL PULP MILLS RESEARCH PROGRAM
 CSIRO Institute of Natural Resources and Environment
 PO Box 225 Dickson ACT 2602
 Phone: 06 276 6615 Fax: 06 276 6207
 Contact: Wendy Parsons

Keywords: #R&D grants - pulp mill impact

To address key areas of pulp and paper technology and the environmental impact of bleached eucalypt kraft mill operations. The first phase of the program focuses on:

- in-plant research, including modern pulping and bleaching processes, the chemical composition of mill effluent from mature and plantation eucalypt woods, processes for kraft pulps, treatment of effluent and alternative pulping and bleaching technologies; and
- environmental research relevant to the dispersal and monitoring of effluents in Australian coastal waters and investigation of the biological effects of mill effluents on the Australian marine ecosystem as well as risk and assessment.

Research contracts worth \$3.7 million were awarded to seven projects in 1991.

Potential Areas of Collaborative Research:

- ◆ Natural Fish Resources
 - ⊙ habitat - ecosystem

F. RESEARCH FELLOWSHIPS AND SCHOLARSHIPS

166.
AUSTRALIA-NEW ZEALAND FOUNDATION
 Asia Pacific Fellowship Program
 GPO Box 2356 Canberra ACT 2601
 Phone: 06 276 5690 Fax:
 Contact: (Manager)

Keywords: #research fellowship - Asia-Pacific; #research fellowship - marketing

The Program aims to help Australian businesses tackle the language and cultural barriers they face in Asian markets particularly Japan, Korea, China, Thailand, Vietnam, Malaysia, Indonesia and Taiwan. Two categories of fellowships are awarded - Graduate Business and Management Executive, with 25 fellowships awarded in each category annually. \$3m is available under the program in 1991/92 and a further \$7m over the next 2 years.

167.
AUSTRALIAN ACADEMY OF SCIENCE
 Japan Society for the Promotion of Science
 Postdoctoral Fellowship For Foreign Researchers
 GPO Box 783 Canberra ACT 2601
 Phone: 06 247 3966 Fax:
 Contact: International; Exchanges Officer

Keywords: #research fellowship - natural sciences;

Fellowships provide postdoctoral fellowships for young Australian scientists to do research in Japanese universities. Research fields are any of the natural sciences, non-clinical medicine and engineering.

168.
AUSTRALIAN ACADEMY OF SCIENCE
 China-Scientific Exchanges
 GPO Box 783 Canberra ACT 2601
 Phone: 06 2473966 Fax:
 Contact: International Exchange Officer

Keywords: #research fellowship - natural sciences

The Australian Academy of Science supports scientific exchanges with China through an exchange program with the Chinese Academy of Science. Proposals in any field of natural science, basic and applied, will be considered to support collaborative research between Australian and Chinese scientists.

169.
AUSTRALIA-JAPAN FOUNDATION
 PO Box H260 Australia Square Sydney NSW 2000
 Phone: 02 252 4828 Fax:
 Contact:

Keywords: #research fellowship - science and technology

Awards aim to promote friendly relations between the peoples of Australia and Japan. The number of awards available is dependent on the availability of funds. Awards are made in the areas of education, humanities, arts and media, library, publication, research and human development, science and technology and sport and community services.

160.
AUSTRALIA-NEW ZEALAND FOUNDATION
 Anzac Fellowships
 Dept. of Foreign Affairs and Trade Parkes ACT 2600
 Phone: 06 281 3971 Fax: 06 273 3971
 Contact: Mr Ken Power (Executive officer)

Keywords: #research fellowship - primary industry

Fellowships aim to give Australians the opportunity to research, undertake training or other activities to further their professional experience in New Zealand. Subject areas include primary and secondary industries, commerce, education, the arts or public service. Fellowships are available for between 3 and 12 months.

161.
AUSTRALIAN RESEARCH COUNCIL
 Research Policy and Grants Branch Higher Education
 Division DEET
 12 Mort St Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Principal functions of the Australian Research Council are:

- to make recommendations to the relevant Ministers on the distribution of resources provided under research support schemes for which it is responsible; and
- to inquire into, and to provide information and advice to the National Board of Employment, Education and Training with respect to, any matter referred to the Council by the Minister or the Board including research priorities, the co-ordination of research policy, and measures to improve interaction between the different research sectors in Australia.

The Council funds a major part of higher education research by way of research scholarships and fellowships, specifically the Australian Research Council's

- Australian Postdoctoral Research Fellowship
- Australian Postgraduate Research Award
- Australian postgraduate Research Award (Industry)
- Australian Research Fellowship
- Australian Research Fellowship (Industry)
- Australian Senior Research Fellowship
- Commonwealth Postgraduate Course Award
- Queen Elizabeth II Fellowship

See separate entries for each of the above.

162.
AUSTRALIAN RESEARCH COUNCIL
 Australian Postdoctoral Research Fellowships
 Research Policy and Grants Branch Higher Education
 Division DEET
 12 Mort Street Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Keywords: #research fellowship - postdoctoral

Fellowships aim to strengthen Australia's national research and development capability by providing opportunities for postdoctoral level researchers to undertake research of international significance.

Fellowships are for three years. Applications should be lodged by 1 March of the year before the fellowship is to be commences. 50 fellowships have been offered for 1993.

163.
AUSTRALIAN RESEARCH COUNCIL
 Australian Postgraduate Research Awards
 Higher Education Division DEET
 12 Mort Street Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Keywords: #research fellowship - postgraduate

Awards aim to promote the full intellectual development of Australia's most talented students; develop, maintain and enhance research in Australian higher education institutions, aiming for the highest possible international standards; make the maximum possible contribution to the production of the highly trained personnel required for the national work force.

Closing date for applications is 31 October. In 1991 1000 new awards were made.

164.
AUSTRALIAN RESEARCH COUNCIL
 Australian Postgraduate Research Awards (Industry)
 Higher Education Division DEET
 12 Mort Street Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Keywords: #research fellowship - postgraduate

Awards aim to prepare high calibre researchers for industry research; to produce for Australian industry a pool of world class researchers who are capable of understanding and addressing industry's problems.

Closing date for applications is late July. In 1991, 80 awards leading to master's or PhD degrees were awarded. Students are also supported by companies, which have committed over \$1 million a year to the research projects.

165.
AUSTRALIAN RESEARCH COUNCIL
 Australian Research Fellowships
 Higher Education Division, DEET
 12 Mort Street, Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Keywords: #research fellowship

Fellowships aim to strengthen Australia's national research and development capability by providing opportunities for established researchers to undertake research of international significance.

Fellowships are for 5 years. Applications should be lodged by 1 March of the year before the fellowship is to be commenced. 25 Fellowships have been offered for 1993.

166.
AUSTRALIAN RESEARCH COUNCIL
 Australian Senior Research Fellowships
 Higher Education Division DEET
 12 Mort Street Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Keywords: #research fellowship

Fellowships aim to provide opportunities for outstanding researchers with both proven international reputations to undertake research which is both of major importance in its field and of significant benefit to Australia.

Fellowships are for 5 years. Applications should be lodged by 1 March of the year before the fellowship is to be commences. 15 fellowships have been offered for 1993.

167.
AUSTRALIAN RESEARCH COUNCIL
 Australian Research Fellowships (Industry)
 Higher Education Division DEET
 12 Mort Street Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Keywords: #research fellowship - industry

Fellowships aim to improve the level and quality of collaboration in research and development between industry, commerce and higher education institutions.

Fellowships are available for academics to work for between three and twelve months in an industrial or commercial environment on a project at any stage from fundamental research to experimental development or commercialisation. Offered 8 fellowships in 1991.

168.
AUSTRALIAN RESEARCH COUNCIL
 Queen Elizabeth II Fellowships
 Higher Education Division DEET
 12 Mort Street Canberra ACT
 GPO Box 9880 Canberra ACT 2601
 Phone: 06 276 8111 Fax: 06 276 7330
 Contact: The Director

Keywords: #research fellowship - postdoctoral

Fellowships aim to encourage research in Australia by young postdoctoral graduates of exceptional promise and proven capacity for original work.

Fellowships are for 5 years. Applications should be lodged by 1 March of the year before the fellowship is to be commenced. 15 fellowships have been offered for 1993.

169.
BRITISH COUNCIL (UK)
 British Council Fellowships
 203 New South Head Rd Edgecliff NSW
 PO Box 88 Edgecliff NSW 2027
 Phone: 02 326 2365 Fax:
 Contact:

Keywords: #research fellowship - Britain

Fellowships are not generally restricted with regard to subject matter. Open to candidates from the private and public sectors as well as to academics. Awards, normally for study or research at postgraduate level are generally held at polytechnics and universities. The fellowships are tenable in Britain for periods from 3 months to three academic years.

170.

CANADIAN COMMONWEALTH SCHOLARSHIP AND FELLOWSHIP COMMITTEE

Commonwealth Research Scholarships
Canadian High Commission Commonwealth Avenue
Canberra ACT 2600
Phone: 06 273 3844 Fax:
Contact:

Keywords: #research fellowship - Canada

Scholarships aim to enable scholars from Commonwealth countries to visit Canadian universities. Three Fellowships are offered annually and are tenable at Canadian universities for 1 year. They are open to scholars of established reputation from universities and research centres in Commonwealth countries other than Canada.

171.

CANADIAN COMMONWEALTH SCHOLARSHIP AND FELLOWSHIP COMMITTEE

Commonwealth Scholarships
Canadian High Commission Commonwealth Avenue
Canberra ACT 2600
Phone: 06 273 3844 Fax:
Contact:

Keywords: #scholarship - Canada

To enable citizens of Commonwealth countries to visit Canada to undertake advanced study or research leading towards a university degree or similar qualification. Scholarships are available for any university study excluding clinical training and work towards medical or dental degrees and are tenable in Canadian universities.

172.

DEFENCE SCIENCE AND TECHNOLOGY ORGANISATION

Research Science Cadetships
Dept of Defence, Anzac Park West, Canberra ACT 2601
Phone: 06 266 6823 Fax: 06 266 6654
Contact: The Director, Science Corporate Services

Keywords: #scholarship - PhD; #scholarship - DSTO research

Research Science Cadetships are PhD scholarships offered to postgraduate students who are interested in a career as a research scientist in DSTO. The fields of greatest interest to DSTO are aeronautics, physics, mathematics, electronics, chemistry, computing, marine sciences and materials science.

Cadets are entitled to a basic salary, permanent appointment to the Public Service, a book allowance and a full refund of compulsory fees levied by tertiary institutions, including student association dues. Upon acceptance of the thesis the officer is advanced to the position of research scientist on the base level salary.

173.

FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS (FAO)

Andrew Mayer Research Fellowships
Corporate Policy Division DPIE
GPO Box 858 Canberra ACT 2601
Phone: 06 272 4632 Fax: 06 272 4600
Contact: Assis. Sec. International Branch

Keywords: #research fellowship - FAO

To assist very experienced and highly qualified research workers to carry out research projects of interest to FAO member states in institutes selected by FAO. Research areas include agriculture, fisheries, forestry, nutrition, agricultural economics and statistics. Open to all nationals of all FAO member states for a maximum of 2 years.

174.

JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE Research Fellowship Program

Yamato Building, 6th Floor 6-3-1 Kojimachi, Chiyoda-ku
Tokyo 102 Japan
Phone: Fax:

Contact: Head, Exchange of Persons Division

Keywords: #research fellowship - natural sciences;
#research fellowship - Japan

The Program promotes international cooperation in scientific research in the fields of the humanities, social and natural sciences. 50 fellowships are offered annually, tenable at universities and research institutions in Japan for between 6 and 10 months in the case of senior researchers and for 6 to 12 months in the case of junior researchers.

175.

NATIONAL RESEARCH ADVISORY COUNCIL (NEW ZEALAND)

Postdoctoral Research Fellowships
New Zealand High Commission Commonwealth Ave
Canberra ACT 2600
Phone: 06 273 3611 Fax:
Contact:

Keywords: #research fellowship - postdoctoral; #research fellowship - New Zealand; #research fellowship - science

Fellowships enable young scientists from varied backgrounds to work on problems of particular interest to New Zealand. Fellowships are available in any subject area catered for by the scientific branches of New Zealand governments. Up to 7 fellowships are offered annually, tenable at any scientific branch of New Zealand government departments for two or three years. Open to graduates possessing a PhD or equivalent degree and with some research experience since graduation.

176.

SHELL COMPANY OF AUSTRALIA

Shell Postgraduate Scholarships
Shell Company of Australia Ltd
1 Spring St Melbourne VIC
GPO Box 872K Melbourne VIC 3001
Phone: 03 666 5444 Fax: 03 666 5008
Contact:

Keywords: #scholarship - postgraduate study; #scholarship - United Kingdom; #scholarship - science

Scholarships provide Australian graduates with the opportunity for study in the UK leading to a higher degree. Scholarships are available in Science, including applied science, and engineering and are tenable at a university in the United Kingdom for two years with the possibility of renewal for a third year.

177.

WINSTON CHURCHILL MEMORIAL TRUST
Churchill House Northbourne Ave Braddon ACT
PO Box 478 Canberra City ACT 2901
Phone: 06 247 8333 Fax:
Contact:

Keywords: #research fellowship

The Trust encourages Australians to pursue unrestricted study and research and the pursuit of investigative projects in those areas that require resources not fully available in Australia. Fifty fellowships are offered annually for approximately 12 weeks for practical investigation outside Australia and up to six months for a specific training program.

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