

# **Current Fishing and Aquaculture R,D&E Structure and Processes**

**National RD&E Framework for Fisheries and Aquaculture  
Planning Workshop  
22nd 23rd July 2009**

# Fisheries Management Agencies - Service Level Agreements (South Australian Example)

- Individual contracts to undertake research projects (mainly stock assessment) relating to wild fisheries between SARDI Aquatic Sciences and PIRSA Fisheries.
- Funding is based on licence fees collected by PIRSA Fisheries from commercial fishers.
- Discussions take place between industry, PIRSA and SARDI on an annual basis.
- SLA funding is provided to organisations, not individual researchers.

# Fisheries and Research Development Corporation (FRDC)

- FRDC is a Commonwealth statutory authority reporting to the Minister for Department of Agriculture, Fisheries and Forestry (DAFF).
- FRDC's income is primarily from the Commonwealth Government's investment of 0.5% of the Average Gross Value of Production (Public Good) and matching up to 0.25% of AGVP from industry contributions.
- FRDC has three representative bodies that it is accountable to for developing its RD&E Plan and Annual Operating Plan: Recfish Australia, Commonwealth Fisheries Association and National Aquaculture Council.
- The Act objects are Natural Resources Sustainability, Industry Development, People Development and Management and Accountability.

# Fisheries and Research Development Corporation (FRDC)

- FRDC has established a consultation structure that includes: Fisheries Research Advisory Bodies (FRABs), DAFF, Representative Bodies, Peak industry councils (both sector and regional), Subprograms, Australian Fisheries Management Forum, Research Providers, Partnership Agreements (formerly called MOUs), Board Initiatives (People Development, Social Sciences, Fisheries Economics, Resource Access, Climate Change).

# Cooperative Research Centres – Australian Seafood CRC

- Established in 2007 with approximately \$35 million in funding from the Department of Innovation, Industry, Science and Research's Cooperative Research Centre Program.
- The SCRC consists of 27 participants who contribute to its total 7 year budget of approximately \$130 million.
- It consists of 2 programs:
  - Program 1 (Production Innovation) "Pre-harvest activities"  
Outcome: Substantial increase in the production and profitability of selected wild-harvest and aquaculture species,
  - Program 2 (Product and Market Development) "Post-harvest activities"  
Outcome: Increased demand and access to premium markets for Australian seafood; fulfilment of consumer demands for safe, high-quality, nutritious seafood products; and increased profitability throughout the value chain.

# Cooperative Research Centres – Australian Seafood CRC

- The agreement between the Commonwealth and the participants describes the activities that are to be funded and the outputs from the programs.
- Funding is through proposals commissioned in consultation with industry participants and research providers within the SCRC.

# Australian Research Council (ARC)

- As an independent body, funds research and researchers under the National Competitive Grants Program (NCGP).
- The NCGP comprises two main elements - Discovery and Linkage.
- Applications are submitted through a university Research Office, or equivalent.
- ARC funding is provided to organisations, not individual researchers.
- Funding recommendations are made to the Minister for Innovation, Industry, Science & Research by the CEO following independent and extensive competitive peer review.
- Funding rules govern the application and selection processes.

# CSIRO Flagships

- Flagship Collaboration Fund includes collaborative research program (clusters), visiting fellowships and postgraduate scholarships.
- Applications for clusters will be accepted from: eligible Australian and overseas higher education institutions, CRCs, other Australian and overseas publicly funded research agencies.
- Each cluster must include at least one Australian University.
- Clusters will be funded for about 3 years at approximately A\$1M/yr.
- Co-investment from partner organisations is expected, at least matching the contribution from the Flagship Collaboration Fund.
- Cluster applications will be evaluated and approved by CSIRO.

# Australian Institute of Marine Science (AIMS)

- AIMS is a Commonwealth statutory authority.
- AIMS is accountable to the Minister for Innovation, Industry, Science and Research and is part of the IISR Portfolio. It is governed by a Council that reports to the Minister. The Council, which meets quarterly, is the policy-making body of the Institute.
- AIMS research is developed through consultation with the key users of marine science and technology and is prioritised within the framework established by our resources and capabilities, user needs, the National Research Priorities and Australia's Oceans Policy.
- On 1 July 2009 - a \$55 million boost to Tropical Marine Research will greatly increase understanding of Australia's complex marine ecosystems and support jobs, particularly in regional areas.

# State Government Initiatives

## - Marine Innovation SA (MISA)

- Established in September 2005 to support the seafood industry's South Australian Seafood Plan 2005-2015.
- Collaboration between South Australia's key marine science institutions and the seafood industry.
- \$13.7 million over five years (to 2009) in both infrastructure (\$6.9M), and expertise (\$6.8M). In addition, post 2009, a further \$2.4M per year has been allocated as an ongoing commitment to capability funding.

# Commonwealth Government Initiatives

## – Integrated Marine Observing System (IMOS)

- NCRIS is providing \$542 million from 2004-05 to 2010-2011 to develop and fund national research infrastructure projects.
- Independent external facilitators work with researchers, research managers, research funders and users to develop strategic, national investment plans for priority capabilities.
- While it is not a competitive grants program, the projects must represent excellence in their fields.
- \$55.2M has been committed to establish IMOS.
- Coordinated by the UTAS and supported by CSIRO Marine and Atmospheric Research, IMOS involves a large number of Universities, research agencies and government agencies around Australia.
- IMOS comprises a distributed set of equipment, co-operative agreements and data and information services.

# State Government R&D Providers

- Department of Primary Industries NSW,
- Department of Primary Industries Victoria,
- Department of Primary Industries, Parks, Water and Environment (Tasmania),
- Northern Territory Department of Primary Industry and Fisheries,
- Primary Industries and Resources South Australia (PIRSA) through South Australian Research and Development Institute,
- Queensland Primary Industries and Fisheries,
- Western Australian Fisheries,
- Arthur Rylar Institute (ARI) DSE Vic.

# Commonwealth Government R&D Providers

- Australian Institute of Marine Science (AIMS),
- Commonwealth Scientific and Industrial Research Organisation (CSIRO),
- Bureau of Rural Sciences (BRS),
- Australian Bureau of Agricultural and Resource Economics (ABARE),
- Bureau of Meteorology.

# Other R&D Providers

## Universities

- Australian National University,
- Charles Sturt University,
- Deakin University,
- Flinders University,
- James Cook University,
- La Trobe University,
- Melbourne University,
- Monash University,
- Murdoch University,
- Queensland University,
- University of Adelaide,
- University of NSW,
- University of Tasmania,
- University of Technology Sydney,
- University of Western Australia.

## Museums

- Australian and State museums.

## Private Research providers



# Current structure

- Fragmented national plans,
- Possibility of duplication,
- Barriers to cooperative planning between industry and government,
- Competitive environment,
- R&D plans link to strategic plans,
- Multiple jurisdictional and sector plans,
- Competition for capacity,
- Large number of organisations, lack of peak bodies,
- Legislative capacity required for stock assessment and ministerial advice jurisdictional based,
- Limited private RD&E capacity (but growing),
- Little specialisation,
- Limited extension.

# Some Pros of a National Framework

- Improved connectivity,
- Reduction in duplication,
- More efficient use of resources,
- Increased Industry engagement,
- Improved adoption of RD&E,
- Common understanding among clients,
- Clear role of Government and Industry in RD&E investment
  - improved opportunity for funding,
- Transparent funding processes,
- Identification of risks, opportunities and challenges for industry,
- Improved communication and information flow,
- Centres of Excellence,
- Increased specialisation,
- Combine statutory research, but retain regional capability where necessary.

# Some Issues of a National Framework

- Capability to deliver R&D at a regional scale for industry needs may be lost.
- Issues such as geographical distances and differences in ecosystems (e.g. fisheries ecosystem based management).
- Statutory requirements to deliver science on fisheries stock assessment.

**SARDI / DPI Vic Approach –  
A Bilateral Agreement**

# SARDI / DPI Vic Bilateral Agreement

## Alliance Agreement

- Contractual agreement signed by State Ministers in November 2008.

## Governance

- Governance Board is a decision making body with responsibility for managing the business and affairs of the Alliance.
- Reports to relevant Heads of departments.

## Need

- The emerging national trend in the Australian research landscape - national research consolidation - PIMC / PISC Agenda.
- There is decreasing investment in aquatic science nationally.
- There is an increasing competition for funding.
- The complexity of research and the capabilities required are increasing.
- Need to avoid duplication of R&D effort.

# SARDI / DPI Vic Bilateral Agreement

## Purpose

- To consolidate aquatic scientific research capability and capacity between the two main State Research Providers (SRPs) in South Australia and Victoria and enhance public value from fisheries resources.

## Key Result Areas

- Aquaculture
- Wild Fisheries – commercial
- Wild Fisheries - recreational
- Environment and Ecology
- Value Adding

# Capability Matrix – a working example

DPI Vic (V) / SARDI (S) Capability Analysis	Stock Assessment	Population Biology	Aging	Fish Modelling	Statistical Analysis	Data Management
comment	Collaboration - science leadership	Collaboration - science leadership	Consolidation	Consolidation		High organisation al need
Environment/Climate Variability	NA	S	NA	S	S	S
	NA	V	NA		V	V
Abalone	S	S	NA	S	S	S
	V	V	NA	V	V	V
Rock Lobster	S	S	NA	S	S	S
	V	V	NA	V	V	V
Marine Scalefish	S	S	S	S	S	S
	V	V	V	V	V	V
Pelagic Fish	S	S	S	S	S	S
		V			V	V
Inland Fisheries	S	S	S	S	S	S
	V	V	V	V	V	V
Aquaculture	NA			S	S	S
	NA			V	V	V
Blue crab	S	S		S	S	S
Prawn	S	S			S	S
Pelagic Ecology					S	S

Organisational need

Need to develop skills - skills weak

NA - not applicable

Need to retain skills / skills strong

Need access to skills / skills moderate to weak

Blank - no capability

# Lead, Participate, Link Concept

- **Lead** - State will take a lead national role with significant R&D effort
- **Participate** - State will undertake R&D but others will provide major effort
- **Link** - State will undertake little/no R&D but will access information from elsewhere