

**Strategic Plan
for
Northern Territory
Fisheries
Research and Development**

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F I S H E R I E S
R E S E A R C H &
D E V E L O P M E N T
C O R P O R A T I O N



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STRATEGIC PLAN FOR NORTHERN TERRITORY FISHERIES RESEARCH AND DEVELOPMENT

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1. NON-TECHNICAL SUMMARY

1997/150

Strategic Plan for Northern Territory Fisheries Research and Development

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OBJECTIVES

To develop a long term fisheries research and development strategic plan that will provide clear research priorities for the effective and appropriate development and management of Northern Territory fishery and aquatic life resources for the next 5 years.

NON-TECHNICAL SUMMARY

The Northern Territory Fisheries Research Advisory Board (FRAB) addresses the priority, coordination and direction of future fisheries research and development to provide information for management the NT aquatic resources. Although it has considered and made recommendations to FRDC on funding applications since 1993, it had not addressed a strategic plan for research and development. This project addresses this deficiency.

The Plan takes account of the 1995 Northern Territory Future Directions document and of the future principal outcomes identified for the Fisheries Division in their annual business plans. These outcomes are:

- SUSTAINABLE HARVESTING OF FISH AND OTHER AQUATIC RESOURCES
- CONSERVATION OF AQUATIC BIODIVERSITY AND IMPLEMENTATION OF ECOSYSTEM MANAGEMENT OF AQUATIC RESOURCES
- OPTIMUM UTILISATION OF FISH AND AQUATIC RESOURCES
- GROWTH OF THE AQUACULTURE INDUSTRY.

Due to the diversity of stakeholders and interest groups, it was found that there are different and often conflicting, policies and directions that the Government needs to consider when deciding its strategic directions for managing the conservation and utilisation of aquatic resources. It was evident that fisheries research and development must provide the managing agency with information on which to ensure that the natural resources involved are not over-fished, that conflict between stakeholders is minimised and that the resources are optimally utilised.

The eight major NT fisheries client groups were consulted as widely as possible to determine their differing issues and needs. Apart from talks with individuals, consultation was through the Fishery Advisory Committees (FAC's), and through formal consultative mechanisms including:

- The Ministerial Advisory Committee on Recreational Fishing (MACRF),
- The Professional Seafood Producers Consultative Committee (PSPCC),
- The Territory Aquaculture Development Advisory Committee (TADAC)
- The Pearl Industry Advisory Committee (PIAC), and
- The network of Aboriginal Consultative Committees (eg the Anindilyakwa Consultative Committee and the Tiwi Coastal Waters Committee).

The 1999 to 2003 research and development program for each major fishery or fisheries activity addressed these outcomes and were represented diagrammatically in tabular form on a single page. The information in the columns included:

Column 1. The **fishery or activity** involved, its general category (eg, wild harvest, aquaculture, technology, etc); where appropriate, the principal species involved; and the degree of **stakeholder utilisation** for each.

Column 2. The identified **principal outcomes**, ie, Sustainable Harvesting of Fish and other Aquatic Resources; Conservation of Aquatic Biodiversity and Implementation of Aquatic Ecosystem Management; and Optimum Utilisation of Fish and other Aquatic Resources. The outcomes for Growth of the Aquaculture Industry relate to the actual and potential industries and have been represented under each.

Column 3. The **Specific R&D Outputs** - these were identified under each principal outcome and, where possible, were standardised across the fisheries or activities considered. For example, a specific output under principal outcomes for all fisheries is economic viability; by-catch is considered under conservation of biodiversity, etc.

Column 4. The research and development **programs and projects** identified for each Principal Outcome.

Column 5. **Funding sources.**

Column 6. **Timetable** for each program and project from 1999 to 2003.

STRATEGIC PLAN FOR NORTHERN TERRITORY FISHERIES RESEARCH AND DEVELOPMENT

2. BACKGROUND OF PROJECT

The Northern Territory Fisheries Research Advisory Board (FRAB) arose from the Northern Territory Research and Development Advisory Committee (NTFRDAC). The NTFRDAC was set up in 1993 to consider and make recommendations on project applications under the FRDC proactive trust fund. A further principal function was to advise the NT Minister for Primary Industry and Fisheries and his Department on establishing research and development needs and priorities in the catching, post-harvest and aquaculture sectors of the fishing industry. It also addressed the priority, coordination and direction of future fisheries research and development programs and projects to provide information for management the NT aquatic resources.

The NTFRDAC has considered and made recommendations to FRDC on all funding applications since that time. As well it has provided assessments of relevant projects submitted to FRDC in the normal annual funding cycle.

Although the Committee has provided this research and development advice on an annual basis, it had not addressed a strategic plan for research and development. This project addresses this deficiency.

The roles of the FRABs outlined in the FRDC Strategic Plan were taken into account during the development of the NT Research and Development Strategic Plan. FRDC saw these roles to be:

- setting R&D priorities;
- commissioning R&D applications based on these priorities;
- identifying appropriate funding sources (including FRDC); and
- advising FRDC on the priority and appropriateness of applications that distributed benefits to their related fishery or industry sector.

The Fisheries Division completed a detailed review of its programs, strategies and operations in early 1999 (Fisheries Division, 1998). This review was used as a basis for the NT strategic R&D directions. This Plan now provides a policy and priority framework for fisheries research and development in the Northern Territory for the next 5 years. It is consistent with the NT Government fisheries policy and incorporates the priorities and directions of the Northern Territory Management Advisory Committee (MAC) for each fishery. Also, where appropriate, it incorporates elements of the FRDC publication "Investing for Tomorrow's Catch: FRDC's Research and Development Plan, 1996-2001".

The annual value of the Territory based commercial fisheries is between \$15M and \$20M for the wildcatch sector, the portion of the NPF located off the Territory coast is about \$50M and aquaculture \$50M to \$55M (Fisheries Division, pers. Comm., ABARE, 1998).

The overall annual expenditure on recreational fishing in the NT is conservatively estimated to be at least \$30M per year (Coleman, 1998). The value of recreational fishing to the Territory is difficult to estimate as it contains qualitative social and cultural elements as well as quantitative commercial outcomes through Fishing Tour Operators (FTOs). Improved ways of measuring the value of recreational fishing are currently being sought, for example, through the FRDC project 1998/165 ("Framework for valuing fisheries resource use") by Hudloe *et al* (1998).

3. NEED

The Northern Territory has always adopted a conservative approach to the management of its fish and fishery resources. However, there has been increasing interest in developing un-utilised and under-utilised resources. Over-exploitation of shared stocks in localised areas has occurred and conservation policy relating to ESD and Biodiversity has changed. These pressures have generated an urgent need to provide a forward plan for the management of the resources involved and the essential research to support this management. In addition, changing economic conditions make it necessary for both industry and Government to assess the effectiveness, efficiency and appropriateness of its research and management programs. The production of a strategic plan for fisheries research is an important factor in this assessment. Also, importantly, FRDC required a benchmark for judging NT applications for research and development projects.

These fisheries management, research and development priorities must be set in close consultation with the stakeholders in the various fisheries and aquatic resources involved.

4. OBJECTIVE OF THE PROJECT

To develop a fisheries research [and development] strategic plan that will provide clear priorities for obtaining the information needed to effectively develop and manage the Northern Territory fishery and aquatic life resources over the next 5 years.

5. METHODS

The Plan was based on the 1995 document outlining "Future Directions for Fisheries in the Northern Territory" (anon, 1995) and on the principal future outcomes that have been identified by the Fisheries Division in their annual business plans. These outcomes were:

- SUSTAINABLE HARVESTING OF FISH AND OTHER AQUATIC RESOURCES
- CONSERVATION OF AQUATIC BIODIVERSITY AND IMPLEMENTATION OF ECOSYSTEM MANAGEMENT OF AQUATIC RESOURCES
- OPTIMUM UTILISATION OF FISH AND AQUATIC RESOURCES

- **GROWTH OF THE AQUACULTURE INDUSTRY.**

Priorities to achieve these outcomes were set in close consultation with the stakeholders in the various fisheries, aquatic activities and resources.

The fisheries and activities considered included:

FISHERIES

Barramundi Fishery
Mud Crab Fishery
Shark Fishery
Timor Reef Fishery
Demersal Fishery/Finfish Trawl Fishery
Spanish Mackerel Fishery
Coastal Line/
Coastal Net Fishery

FISHERIES ACTIVITY

Recreational Fishing R&D
Seafood Industry Development

AQUACULTURE

Mollusc Aquaculture
Fish Aquaculture
Crustacean Aquaculture
Aquaculture Industry Support

OTHER ACTIVITIES

Habitat and Environment
Aboriginal Fisheries Development - Commercial and Subsistence

Current funding arrangements for NT fisheries research and development were also listed.

6. STAKEHOLDER CONSULTATION

Due to the diversity of stakeholders and interest groups, there were different and often conflicting, policies and directions that the Government needed to consider when deciding its strategic directions for managing the conservation and utilisation of aquatic resources. For example, the values of recreational fishing on a resource needed to be balanced against its use for commercial fishing; the differing requirements of Aboriginal communities for aquatic resources in their ceremonial, recreational and commercial needs; and the potential conflicts between stakeholders in the same fishery. Fisheries research and development must provide the managing agency with information on which to ensure that the natural resources involved are not over-fished, that conflict between stakeholders is minimised and that the resources are optimally utilised.

The fisheries stakeholders in the NT include the following major groups:

- Aquaculture
- Seafood Harvesters

- Seafood Processors and Marketers
- Seafood consumers
- Fishing Tour Operators
- Recreational Fishers and Divers
- Indigenous Users
- The Territory and Australian communities.

Each of these eight client groups were consulted as widely as possible on their differing issues and needs.

Apart from talks with individuals, consultation was also through the NT Fishing Industry Council (now the NT Seafood Council), Fishery Advisory Committees (FAC's), and through formal consultative mechanisms, including:

- The Ministerial Advisory Committee on Recreational Fishing (MACRF),
- The Professional Seafood Producers Consultative Committee (PSPCC),
- The Territory Aquaculture Development Advisory Committee (TADAC)
- The Pearl Industry Advisory Committee (PIAC), and
- The network of Aboriginal Consultative Committees (eg the Anindilyakwa Consultative Committee and the Tiwi Coastal Waters Committee).

After this consultation was completed and before R&D strategic priorities could be set, the NT Government objectives for the management and/or development of utilisation and conservation of the aquatic resources involved were clarified.

7. RESULTS

The 1999 to 2003 research and development program for each major fishery or fisheries activity took into account the four strategic outcomes outlined above. The program to address these outcomes for each fishery and activity were represented diagrammatically in tables. The information shown in each column of these tables was:

COLUMN 1 THE FISHERY OR ACTIVITY involved and its general category of (eg, wild harvest, aquaculture, technology, etc); where appropriate, the principal species; and the degree to which stakeholders utilise it.

COLUMN 2. PRINCIPAL OUTCOMES - these were the principal outcomes identified, ie, Sustainable Harvesting of Fish and other Aquatic Resources; Conservation of Aquatic Biodiversity and Implementation of Aquatic Ecosystem Management; and Optimum Utilisation of Fish and other Aquatic Resources. The outcomes for Growth of the Aquaculture Industry relate to the actual and potential industries and have been represented under each.

COLUMN 3. SPECIFIC R&D OUTPUTS - these were identified under each principal outcome and, where possible, were standardised across the fisheries or activities considered. For example, a specific output under principal outcomes for all fisheries is economic viability; by-catch is considered under conservation of biodiversity, etc.

COLUMN 4. PROJECTS - the research and development programs and projects identified were listed in priority order for each Principal Outcome.

COLUMN 5. FUNDING SOURCE - three categories of funding sources were used:

- NT Government Funded;
- Externally funded (ie. Funded from sources external to the NT Government); and
- Not yet funded.

COLUMN 6. TIMETABLE - this is a graphical representation of the timetable for each program and project from 1999 to 2003.

The first two tables of the set provide a generalised representation of the factors considered under the specific R&D outcomes.

8. BENEFITS

All Northern Territory fisheries stakeholders will benefit from acceptance and implementation of the Strategic Fisheries R&D Plan. It will focus the application of limited financial and human resources on priority needs and problems.

These benefits were forecast in the original application for funding. It will also provide FRDC with a base on which to judge the priority and applicability of funding applications from the Territory.

9. FURTHER DEVELOPMENT

The final strategic plan should be widely disseminated to stakeholder groups in the Northern Territory and interstate.

The Plan must be considered as a dynamic document that is updated each year to take account of changing circumstances in the Territory's fisheries and fisheries stakeholders. A full review of the plan should be carried out in mid 2003.

10. CONCLUSION

The strategic plan provides Northern Territory fisheries stakeholders, FRDC and the Northern Territory Government with clear directions for research and development until the year 2003.

11. REFERENCES

The following references were consulted during the preparation of this plan; only those with an asterisk (*) have references in the text.

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APPENDIX 1 - Intellectual Property

Not applicable.

APPENDIX 2: - STAFF

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