Northern Prawn Fishery

Strategic Plan 2001 - 2006

NORMAC

AFMA

Northern Prawn Fishery

Strategic Plan 2001 - 2006

Northern Prawn Fishery Advisory Committee
Australian Fisheries Management Authority

MISSION

‘To manage the resources within the NPF on an ecologically sustainable and economically efficient basis’

NPF Management

A Delicate Balancing Act

Published by Northern Prawn Fishery Management Advisory Committee

For the Australian Fisheries Management Authority

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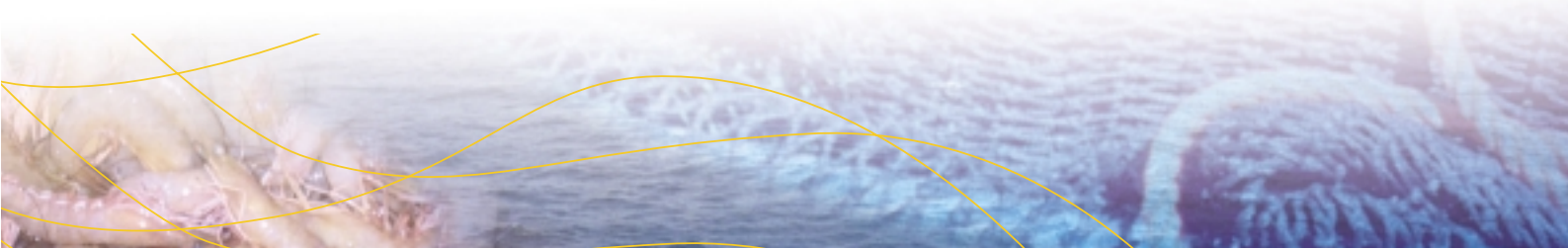
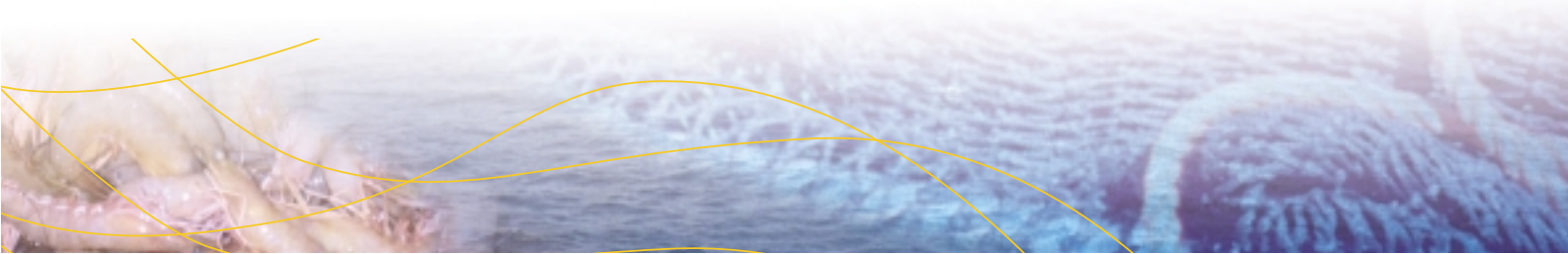


Table of Contents



Introduction

The Northern Prawn Fishery (NPF) is Australia's most valuable Commonwealth fishery, and is regarded as one of the pacesetters in fisheries management in Australia. It is managed by the Australian Fisheries Management Authority (AFMA), with advice from the Northern Prawn Fishery Management Advisory Committee (NORMAC).

The cooperative efforts of the industry, managers, conservationists and researchers involved in the NPF have provided the framework to pursue the ecological and economic sustainability in the fishery. The NPF Strategic Plan 2001-2006 is a culmination of input from these stakeholders through representatives on NORMAC. It outlines the major achievements of the fishery over the last six years, as well as objectives for the future direction of the NPF.

NORMAC has been largely responsible for initiating many of the management strategies, which have been adopted in the NPF, and followed in other Commonwealth fisheries. It has been pro-active in initiating the development and implementation of restructuring programs to overcome problems of effort and capacity to achieve ecological and economic sustainability of the fishery.

NORMAC developed the first Commonwealth Bycatch Action Plan and recommended the introduction of bycatch reduction technology across the fishery. Through its Research and Environment Sub-committee (REC), NORMAC developed the first formal five year research plan for the fishery. It initiated and implemented the NPF Strategic Plan 1996-2001, which was the first strategic plan for a Commonwealth fishery.

NORMAC's NPF Strategic Plan 2001-2006 draws on the experience and management policies which have applied during the 30 year history of the fishery, and recognises the advances that have been made during this time.

NORMAC and AFMA have given high priority to the need to continue to address the impacts of commercial fishing on non-target species and the marine ecosystem in the NPF. It will be an ongoing

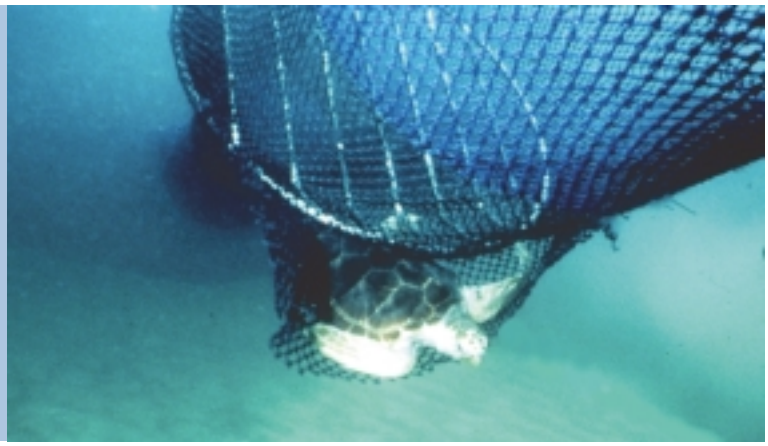
challenge to maintain the ecological and economic sustainability of the fishery and the biodiversity of the marine ecosystem in the face of constant changes in environmental factors and fishing effort. Under this Plan NORMAC will continue to support research and refine initiatives taken in these areas to ensure they become industry best practice.

There will be an ongoing need to review and implement management strategies to control the inevitable increases in effort likely to flow from the introduction of more sophisticated catching technology, which could threaten prawn stocks and erode industry profitability.

Currency fluctuations, market trends and rising fuel prices have the potential to affect the economic viability of the fishery. This will require the industry to continue to maximise its returns through value adding, post harvest activity and better marketing. NORMAC can address these issues by supporting research projects in these areas and taking the results into account when providing management advice to AFMA.

The Northern Prawn Fishery Management Plan 1995 contains a clear commitment by NORMAC, AFMA and the NPF industry to manage the fishery's resources and marine environment within the NPF on an ecologically sustainable basis, and to utilise its fishery's resources in the most efficient way. NORMAC's commitment to consulting with other interest groups and the broader community on NPF issues is in accordance with the provisions of the *Fisheries Management Act 1991* which requires extensive public consultation prior to the implementation of management decisions through the *Northern Prawn Fishery Management Plan 1995*.

This Strategic Plan for 2001-2006 identifies five objectives which are the key goals that NORMAC intends to pursue in the next five years. These objectives build on the achievements of NORMAC from 1996-2001. The Strategic Plan lists the strategies that will be pursued to meet the objectives; and defines performance measures against which NORMAC will determine its success in meeting these objectives. These performance measures will be reported in NORMAC's annual report to AFMA, SFR holders and other stakeholders in the fishery. Finally, the plan summarises the key initiatives that NORMAC will pursue for 2001-2006.



Objectives for 2001-2006

The objectives under this Strategic Plan for the years 2001-2006 are derived from those contained in the *Fisheries Management Act 1991, the Fisheries Administration Act 1991* and the *Northern Prawn Fishery Management Plan 1995*. Strategies for achieving these objectives and performance measures against which NORMAC's success in meeting the objectives can be measured are outlined from pages 9 to 18.

NPF Strategic Plan

Objectives for 2001-2006

Objective 1 Ensure the utilisation of the fishery resources within the Northern Prawn Fishery is consistent with the principles of ecologically sustainable development and the exercise of the precautionary principle

Objective 2 Maximise economic efficiency in the utilisation of the fisheries resources within the Northern Prawn Fishery

Objective 3 Implement efficient and cost effective management of the Fishery

Objective 4 Effectively communicate and consult with AFMA, the fishing industry, other marine resource users and the broader community

Objective 5 Ensure that the incidental catch of non-target commercial and other species in the NPF is reduced to a minimum

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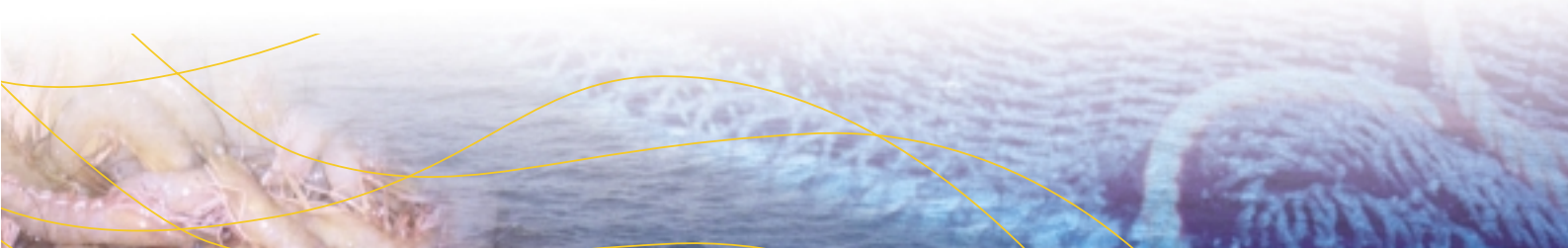


Major Achievements (1996 to 2001)

NORMAC's current strategic plan builds on the achievements of the NPF Strategic Plan 1996-2001. Under this earlier plan NORMAC and AFMA have overseen a number of major achievements in the management of the Northern Prawn Fishery in four broad categories: management, environmental issues, research and consultation. Achievements include:

Management

- The final pay out by industry of the NPF restructuring loan and interest payments of approximately $31 million, which contributed to the removal of approximately 20,000 Class A units between 1990 and 1993;
- Implementation of gear unit management to provide a more flexible, responsive and cost effective management system for the fishery;
- A reduction of approximately 15% in allowable gear towed in 2000 to reduce fishing effort;
- A further reduction in trawler Statutory Fishing Rights (Class B) from 132 to 125;
- Implementation of Vessel Monitoring Systems and improved fishery information across the fleet resulting in a more efficient, better targeted compliance program;
- Introduction of operational and cost efficient measures in the compliance program through changes to the seasonal opening and closure arrangements for the banana prawn fishery.

Environmental Issues

- An amendment to the NPF Management Plan in 1999 to specifically include the objective to reduce bycatch to a minimum;
- Development of the first NPF Bycatch Action Plan containing strategies for reducing bycatch;
- Participation in the development and implementation of the Commonwealth's Turtle Recovery Plan;
- Introduction of the compulsory use of Turtle Excluder Devices (TEDs) and Bycatch Reduction Devices (BRDs);
- Certification of the NPF by the US government as "turtle-safe", which has allowed the export of prawns to the US market;

- International recognition of environmental initiatives in the NPF as a result of a presentation to the IUCN Second Conservation World Congress in Amman, Jordan in 2000;

- Participation in the development of the proposed criteria for Strategic Assessments under the new *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) including the use of the NPF management regime as a case study in developing the criteria;

- Review of existing area and seasonal closures resulting in additional areas being closed to trawling to further protect juvenile prawns and marine habitats;

- Review of processes for identifying candidate Marine Protected Areas for the NPF.

Research

- The development of the NPF 5 Year Research Plan and instigation of research to address the priorities in the Plan;

- The ongoing annual investment of around $2 million in research focused on issues such as ESD, bycatch reduction and improving stock assessments. Major contributors are industry, CSIRO and the Fisheries Research and Development Corporation;

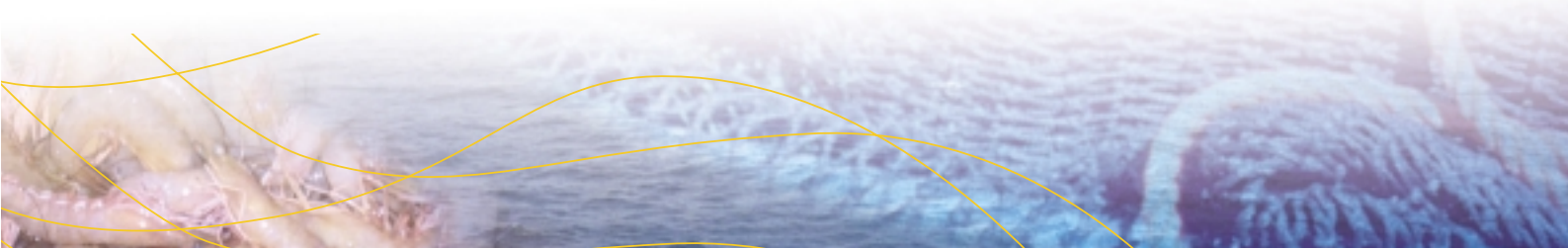
- Improved stock assessment processes incorporating risk assessment techniques and integrating all relevant sources of uncertainty. This has resulted in improved management using sustainability indicators and explicit performance measures;

- A comprehensive description of the bycatch of the NPF and the development of a reliable and generally accepted identification protocol for threatened and endangered bycatch species. The protocol has been applied to the NPF to assist the industry meet its obligations to be ecologically sustainable;

- Production of fine-scale maps of fishing and untrawlable grounds in the NPF, which has never before been achieved for an Australian fishery. The maps provide a better understanding of the impacts of trawling and will assist the development of strategies to maintain an ecologically sustainable fishery;

- Successful development and introduction of TEDs to the fishery and the development of TED/BRD accreditation/certification systems. This is assisting industry develop management strategies to maintain biodiversity and minimise impacts of fishing on marine eco-systems;

- Improved understanding of the biology, ecology, nursery areas and population dynamics of the red-legged banana prawn (*Penaeus indicus*) to identify key ecosystem processes for this species and help development of sustainability indicators.



Consultation

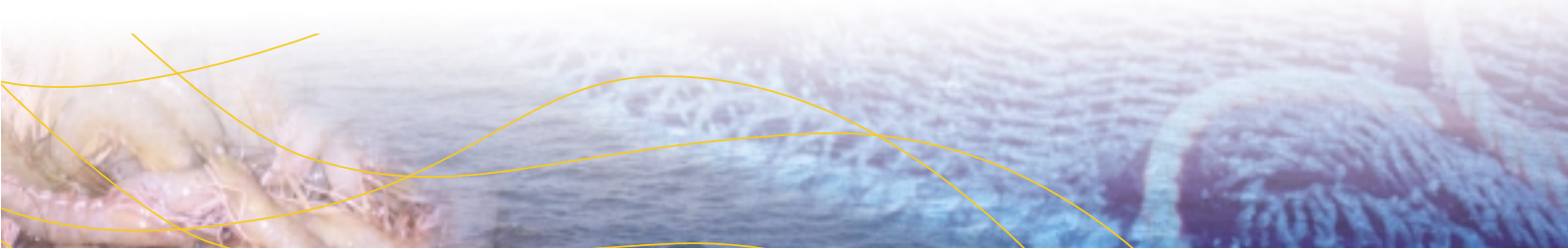
- Improved consultation between stakeholders with an interest in the NPF through:
    - the appointment by AFMA of a conservation member to NORMAC and its sub-committees at NORMAC's request;
    - workshops on gear unit management, bycatch and strategic planning;
    - the development of the NPF web site;
    - discussions with indigenous groups through various land councils and other forums;
    - negotiations with mining interests and port authorities; and
    - membership on the Gulf Consultative Committee for the Multiple Use Strategic Plan for the Southern Gulf of Carpentaria.

Toward 2006 — Meeting the Objectives

The climate in which AFMA and NORMAC are operating is changing. There is increasing community and Federal government interest in ocean and fisheries issues, particularly regarding the impacts of fishing on marine ecosystems including non-target species, and the need to manage fisheries in an ecologically sustainable manner. This requires developing an eco-system approach to managing fisheries.

To address these concerns and the objectives of this Plan, NORMAC will pursue a range of strategies over the next five years. The following table outlines these strategies, and performance measures against which NORMAC's success in meeting its objectives will be assessed.

NORMAC will continue to proactively address day to day management issues including the setting of annual NPF management budgets and levies, identifying research priorities, fisheries statistics and financial surveys in relation to the NPF.



Strategies for Achieving the Objectives Outlined in this Plan, and Performance Measures

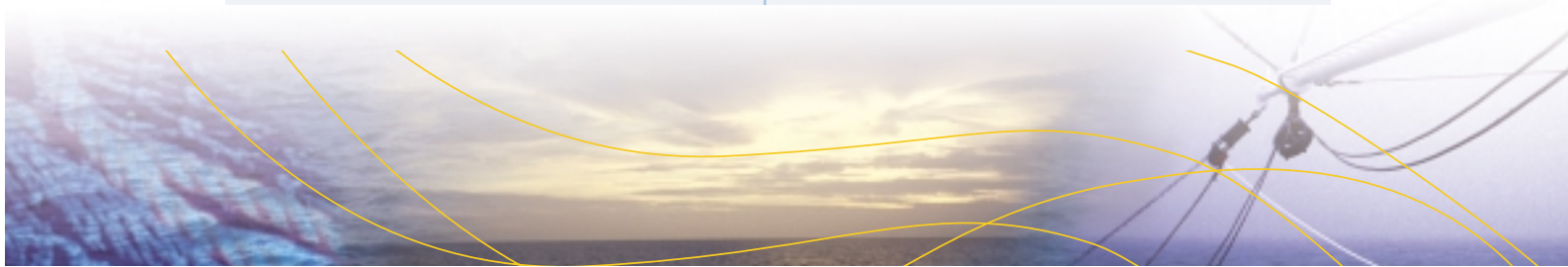
Objective 1	Ensure the utilisation of the fishery resources within the Northern Prawn Fishery is consistent with the principles of ecologically sustainable development and the exercise of the precautionary principle.

Strategies	Performance Measures
Develop an Environmental Management Plan (EMP) which will include, but not be limited to:	Management and research programs in place in accordance with EMP
• an environmental risk audit that identifies the impacts of fishing and other activities on the sustainable management of the fishery;	Environmental risk audit completed by June 2003 Strategies developed to offset impacts of risks by June 2005
• a revised Bycatch Action Plan (see also Objective 5);	Management strategies including ecosystem level approaches developed and evaluated
• a revised Five Year Research Plan;	Strategies in place and targets of Bycatch Action Plan achieved (see also Objective 5)
• identification and implementation of Marine Protected Areas to protect juvenile prawns and the marine habitat within the fishery;	Candidate MPAs to be based on pre-determined criteria that will achieve a comprehensive, adequate, representative system of the *Marine Protected Areas* in the NPF
• develop cost-effective indicators to assess the performance of MPAs and other conservation measures; and	
• independent certification of the fishery.	Independent certification of trawling pursued
Obtain information on target and byproduct species to determine key biological parameters, such as abundance and reproductive rates, for these species and therefore their vulnerability to trawling	Fisheries Assessment Group reports include estimates of key biological parameters and biological reference points, which indicate the level at, or above which, a fish stock should be maintained

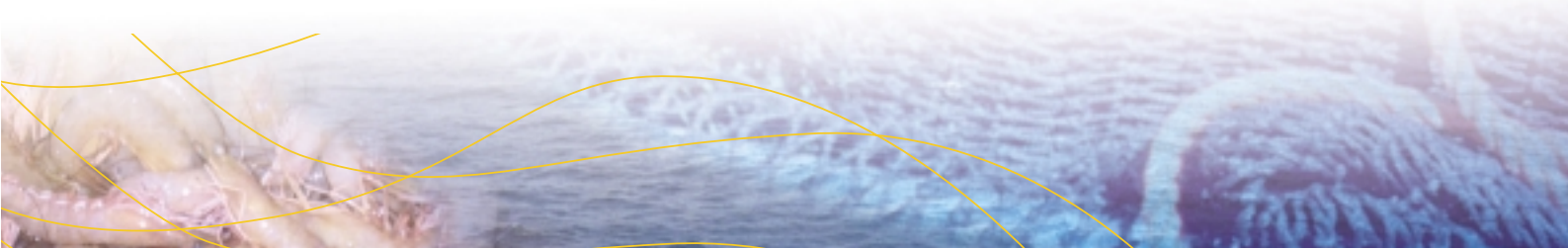
Strategies	Performance Measures
	These biological reference points objectively tested and incorporated into the NPF Management Plan
Reduce the information gaps that lead to uncertainties in stock assessments of key species to enable sustainable management parameters to be set	Research undertaken to reduce the information gaps that lead to key uncertainties in stock assessments. Improved and more robust stock assessment for key species
Use the precautionary approach in developing targets for fishing effort and capacity	Five year research strategy for the NPF reviewed in light of new information and technological developments
Develop a stock assessment model for key species to capture the uncertainties and source of uncertainties;	Stock assessment models published and peer reviewed; results from more than a single model approach tested
	Model output is stochastic[1], forward looking and provides a tool for evaluations of alternative management strategies
Provide management advice on the gear unit system and allow evaluation of alternative management strategies if required	Alternative management strategies take into consideration appropriate limit and target reference points established for the resource
	Effort Creep scenarios regularly reviewed
Monitor the effectiveness of the gear unit system to ensure that the plan can deliver the long-term sustainability of the fishery	Monitoring program developed and implemented
	Effectiveness of gear based management, as assessed against reference points, reported in annual FAG report

[1] Stochastic models include information about risks and uncertainty. Output of these models is a range of answers, which reflect the level of uncertainty in the model. Such an approach gives managers a better understanding of the level of precision in the model and likely risks associated with various courses of action.

Strategies	Performance Measures
Identify research needs and priorities for the fishery	Five Year NPF Research Plan published Strategies developed and implemented in accordance with Five Year Research Plan to meet the fisheries research priorities, the Bycatch Action Plan and the Environmental Management Strategy Highly innovative industry that readily adopts new technologies and rapidly responds to issues affecting the fishery
Continue to protect nursery grounds, seagrass beds and marine habitats within the NPF from fishing activities through closure regimes that ensure stock recruitment and breeding grounds are not jeopardised	Critical fishery habitats identified and protected
Monitor the impact of fishing practices in the NPF on non-target species and marine ecosystems	Research programs aimed at minimising the impact of fishing on bycatch and the marine ecosystems initiated and supported by NORMAC Evaluation of research reports on Ecologically Sustainable Development related issues, measuring and monitoring bycatch and the effectiveness of bycatch reduction strategies Bycatch monitoring incorporated in NPF logbook program Critical marine habitats, sea grass beds and prawn nursery ground within the NPF identified and protected from trawling activities
Put in place management measures to ensure that key target and by-product species do not fall below agreed reference limit points (the level at or above which a fish stock should be maintained) for sustainability. Monitor the impact of fishing practices in the NPF on non-target species and marine ecosystems	Effort and capacity control measures implemented through NPF Management Plan and AFMA Directions as required Excess capacity removed through appropriate restructuring mechanisms



Strategies	Performance Measures
Ecologically sustainable resource base through use of scientific resource assessments, mitigation strategies and the addition of sustainability indicators and performance measures into management plans.	Risk assessment techniques and all relevant sources of uncertainty incorporated into fishery assessments. Use of sustainability indicators and explicit performance measures in the management of the fishery
Participate in the Federal Government's development of Regional Marine Plans for northern Australia	Key stakeholders are confident that marine biodiversity and ecosystem integrity is being adequately managed in the NPF jurisdiction
Undertake a strategic assessment to meet the requirements of the *Environmental Protection and Biodiversity Conservation Act 1999*, and instigate the recommendations of the assessment to further improve the management of the fishery	NPF meets requirements under *Environment Protection and Biodiversity Conservation Act 1999* and Schedule 4 of the *Wildlife Protection (Regulation of Export and Imports) Act 1982* NPF implements any appropriate recommendations of the assessment
Increase the opportunities for research funding in the fishery to support sustainable development	Confidence that investment in research is adequate for the long-term interests of the NPF Research funding maintained or increased above historical levels in real terms
Continue to promote anti-pollution measures in the NPF, such as the retention by fishing vessels of plastics, used oil, oil filters and fishing gear	NPF meets its requirements under *Environment Protection and Biodiversity Conservation Act 1999* Fishing practices recognised by all stakeholders as achieving world's best practice



Objective 2	Maximise economic efficiency in the utilisation of the fisheries resources within the Northern Prawn Fishery

Strategies	Performance Measures
Develop appropriate economic efficiency indicators and assess performance of the fishery against those indicators	Economic indicators developed and published in annual Fisheries Assessment Report. The fishery is performing well against the economic indicators
Develop and implement effective programs to adjust capacity as and when required	Excess effort and capacity regularly assessed by NORMAC and relevant sub-committees against agreed economic parameters Adjustment programs meet set targets

Objective 3 Implement efficient and cost effective management of the Fishery

Strategies	Performance Measures
Amendment of the NPF Management Plan to increase the efficiency and cost effectiveness of administrative and management arrangements	Broad agreement by stakeholders on type of amendments required Amendments completed by December 2001
Review an annual budget of costs associated with managing NPF including setting levies in relation to the NPF	Budget approved by NORMAC and AFMA Board
Regular review of efficiency and cost effectiveness of management services	All elements of NPF budget reviewed and tested for efficiency and cost effectiveness progressively over the five year period Where more efficient and cost effective services are identified, alternative service providers are recommended to AFMA
Refine the compliance program for the NPF to ensure the cost-effectiveness of the arrangements and compliance with the NPF management arrangements	Approval by NORMAC of AFMA Compliance Operational Plan High level of compliance with management arrangements Regular evaluation of effectiveness and efficiency of NPF compliance program Increased level of electronic tools used to improve surveillance

Objective 4	Effectively communicate and consult with AFMA, the fishing industry, other marine resource users and the broader community.

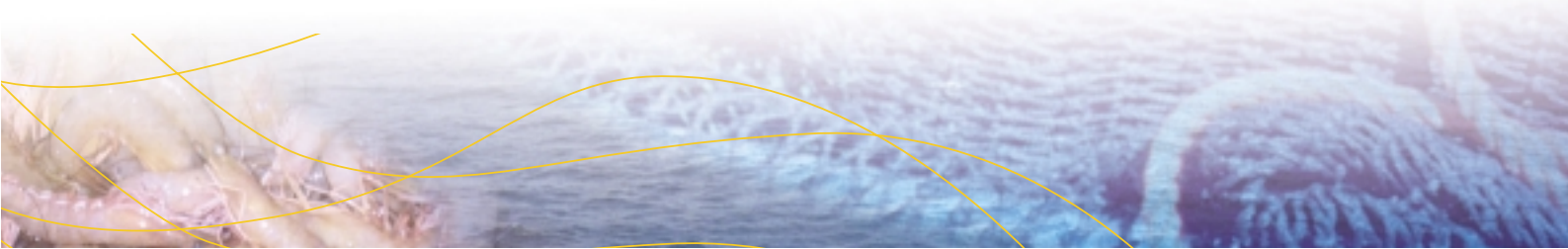
Strategies	Performance Measures
Improve the level of consultation with relevant interest groups on fisheries resource and management issues within the NPF	Acceptance by AFMA and the Minister of amendments to the NPF Management Plans Annual Public meetings of NORMAC Breadth of attendance at, and feedback from, the public meetings Appropriate and ongoing consultative processes in place Membership of NORMAC and/or NORMAC sub-committees to include representatives from other interest groups as appropriate Attendance of other interest groups at NORMAC or sub-committee meetings as appropriate Training programs in place for MAC members, advisers and sub-committee members Processes/programs in place to minimise collective impacts on marine ecosystems
Develop a communications strategy, including increased public relations and promotional activities and improvements to the NPF website to achieve:	Target audiences identified Promotional material on the NPF developed and disseminated NPF website expanded Government funding available for communication identified and obtained Extension program to communicate achievements and promote NPF as fishery leader in pursuing ecological sustainability in place

Strategies	Performance Measures
	Links with relevant organisations such as Seanet established
• increased understanding by industry of management, research and environmental matters relating to the fishery;	Industry education process in place to ensure industry understanding of stock assessment and the need for precautionary approach High level of industry understanding of management, research and environmental issues relating to the NPF
• increased community awareness and understanding of the value of the NPF to the Australian economy; and recognition by legislators, conservation groups and the community that the NPF industry is responsible and environmentally conscious and has developed sustainable management arrangements and an Environmental Management Strategy for the fishery.	High level of community awareness of value of NPF, the health benefits of eating seafood and the importance of commercial fishing to regional communities Recognition by the community that NPF fishers are environmentally conscious and responsible in their approach to the fishery
• maintain interaction with mining and development companies to minimise the impact of their activities on the marine ecosystem	Regular communication between NORMAC, AFMA and relevant companies Agreed strategies in place to minimise impact of mining operations on the NPF
Disseminate material on NORMAC activities, NPF management and NPF fisheries resources	Decisions of NORMAC disseminated to AFMA Chairman following NORMAC meetings and conferences Outcomes of NORMAC, workshops and NPF conferences disseminated to NPF stakeholders following meetings through newsletters and the NPF website

Strategies	Performance Measures
	Public meeting and annual report on NORMAC activities and NPF management provided to Statutory Fishing Right holders, AFMA and interested parties annually Fishery news disseminated to Statutory Fishing Right holders and community groups through NORMAC Chairman's report, NPF website, AFMA News and specific media releases in accordance with the communications strategy Promotional material on the NPF provided to appropriate media in accordance with the communications strategy
Conduct workshops, seminars and conferences on NPF management, research and environmental issues	High attendance of industry, managers, researchers and interest groups involved in the NPF Feedback received from target audience Research and management initiatives subsequently implemented

Objective 5	To reduce the incidental catch of non-target commercial and other species in the NPF to a minimum

Strategies	Performance Measures
Develop and implement an Environmental Management Strategy	Management measures and research programs in place in accordance with environmental management strategy
Develop and implement a revised Bycatch Action Plan for the NPF	Strategies in place and targets of Bycatch Action Plan achieved
Monitor the impact of fishing practices in the NPF on marine ecosystems	Research programs aimed at minimising the impact of fishing on bycatch and the marine ecosystem initiated and supported by NORMAC
	Bycatch monitoring incorporated in NPF log book program
	New environmental issues included in the Environmental Management Strategy
Develop and implement programs to reduce the impact of fishing practices on marine ecosystems, including measures and techniques to reduce bycatch and fish discards such as TEDs and BRDs	TEDs/BRDs used across the fishery which are efficient in reducing bycatch with limited prawn loss
	Compliance with the turtle recovery program
	Bycatch reduction targets incorporated in NPF Bycatch Action Plan; targets met
	Marine Protected Areas (including no-take zone) identified and in place



APPENDIX A

BACKGROUND TO THE NORTHERN PRAWN FISHERY

AFMA

The Australian Fisheries Management Authority (AFMA) is the Commonwealth statutory authority responsible for ensuring the sustainable use of Commonwealth fishery resources. AFMA is established under the *Fisheries Administration Act 1991* and manages Commonwealth fisheries under the *Fisheries Management Act 1991.*

NORMAC

In performing its functions AFMA employs a partnership approach which actively involves interested parties in the process of developing and implementing fisheries management arrangements. This approach includes the establishment of statutory Management Advisory Committees (MACs) for each of its major fisheries.

A MAC is AFMA's main point of contact with each fishery and provides a forum where issues relating to a fishery are discussed. MACs are expertise based and advisory in nature, making recommendations to the AFMA Board about management arrangements in a particular fishery.

The Northern Prawn Fishery Management Advisory Committee (NORMAC) was originally formed when the Commonwealth assumed responsibility for the management of the NPF in 1988 under the Offshore Constitution Agreement. NORMAC is established as a statutory MAC under the *Fisheries Administration Act 1991* to assist AFMA in its management of the Northern Prawn Fishery.

The primary function of NORMAC is to act as a liaison body between AFMA and those with an interest in the fishery. NORMAC also has the responsibility for providing advice to AFMA on a variety of issues including fisheries management arrangements, scientific, environmental and economic research, compliance, monitoring and budgeting.

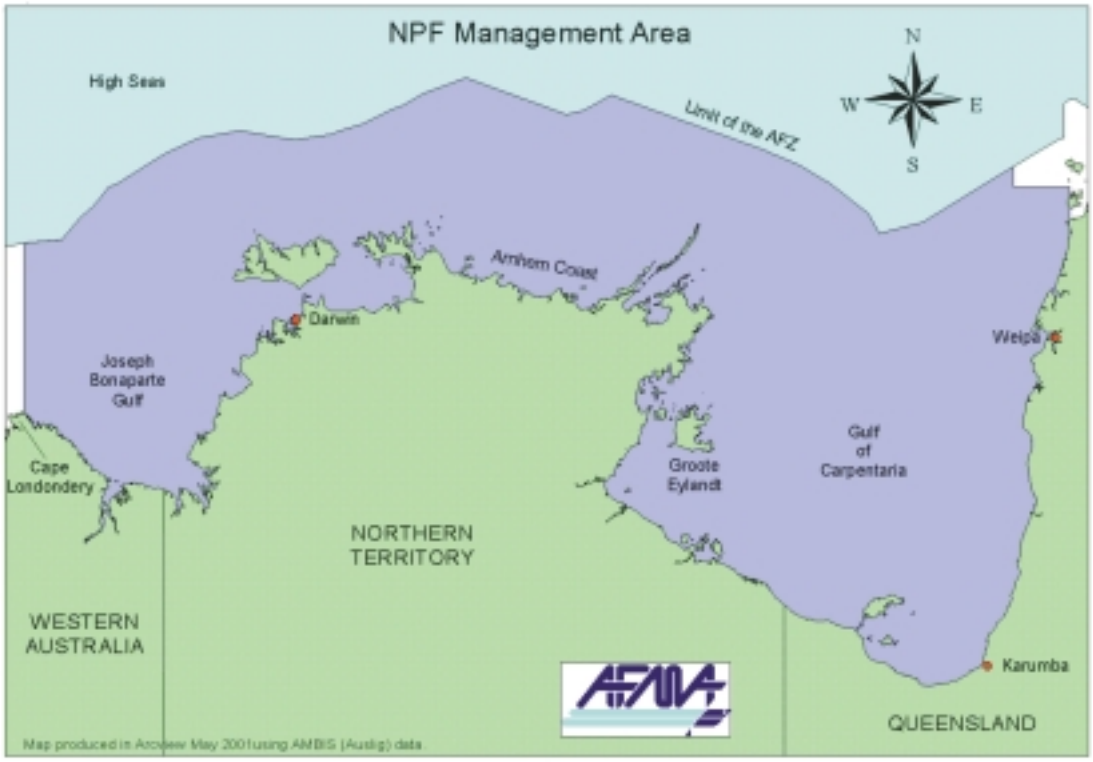
NORMAC currently interacts with other relevant government and industry bodies such as the Australian Seafood Industry Council (ASIC) which is declared under legislation as the peak industry body for Commonwealth fisheries, CSIRO, ABARE, BRS, FRDC, Environment Australia, indigenous groups and other resource users.

NORMAC currently has nine members, comprising an independent chairperson, five industry members, an AFMA member, a scientific member, a conservation organisation member and a permanent observer representing the State and Territory governments. The five industry members are selected for their expertise and knowledge of the fishery. A list of the current members of

NORMAC is on page 23. NORMAC employs an executive officer whose role is to liaise between AFMA, the members of NORMAC, stakeholders and wider interest groups.

The Fishery

The Northern Prawn Fishery (NPF) is one of Australia's largest and most valuable fisheries. It covers an area of approximately 771,000 square kilometres between Cape York in Queensland and Cape Londonderry in Western Australia.



Species

NPF Statutory Fishing Right holders are entitled to fish by trawl for penaeid prawns, scampi, bugs, scallops and squid in the NPF.

The main species of prawns taken are banana prawns and brown and grooved tiger prawns. Some species of king and endeavour prawns are taken in lesser quantities. There are currently 124 fishing concessions in the fishery however only 116 trawlers fished in 2001. A mix of independent single boat owners, small fleet owners and corporate operators with between 9 and 12 vessels each owns the fleet.

Brief history of the fishery

Commercial stocks of prawns were identified by exploratory surveys by CSIRO in the Gulf of Carpentaria in the 1960s. Because of infrastructure problems such as the lack of suitable ports, refuelling and repair facilities and the remoteness of the prawning grounds, it wasn't until the 1970s that the NPF developed as a commercial fishery. Once these problems were overcome, the fishery grew rapidly and by 1977 when entry was limited, 302 trawlers had entitlements to fish in the NPF.

In the early 1980's, in an effort to reduce fishing trawler numbers and to control fishing effort and over-capitalisation, trawlers were 'unitised'. Under this management system each trawler with an entitlement to fish was issued with:

- a Class B unit (now known as a Class B Statutory Fishing Right - SFR) which allowed the boat to operate in the fishery; and
- Class A units (Class A SFRs) calculated on actual hull volume (underdeck tonnage) and engine power. Small trawlers, (those which did not qualify for the Government ship building subsidy in place at the time) were issued a minimum of 375 class A units. The additional units were termed "suspense" units.

A total of 133,269 Class A units were issued. Units were transferable and became the "currency" and the property right in the fishery.

Under the unitisation scheme, an operator required one Class B unit and the appropriate number of Class A units to cover the size of the hull volume and engine power to fish in the fishery (eg a boat with a hull volume of 75 units and engine power of 300 kW would require one Class B Unit and 375 Class A units to fish).

In response to declining stocks in the fishery a "buy-back" scheme was first introduced to remove vessel licences from the fishery in 1985. By the end of 1989, 20,810 Class A units (and 47 trawler units) had been sold to the buy back scheme. Even so, stocks continued to decline and economic conditions remained poor in the fishery. As a result, an accelerated NPF restructuring program began in 1990, comprising both a voluntary buy-back system funded by industry and 30% across the board reduction of units (the measurement of fishing capacity used in the NPF). The accelerated restructuring scheme was a major achievement in the history of the fishery as it reduced the number of vessel licences for the fishery from 216 to 132 over a three-year period.

Following the 1993 fleet restructuring, a number of other input restrictions introduced in 1987 as interim measures to reduce fishing effort, were lifted. These included limits on net sizes.

Another major step forward for the NPF was the implementation in 1995 of a new plan of management and the issue of Statutory Fishing Rights for the NPF under the *Fisheries Management Act 1991*. This provided commercial fishers in the NPF with long term access rights based on their A and B Class units. This required submission to and clearance of the Plan under the *Environmental Protection (Impact of Proposals) Act 1974.*

During 1991, NORMAC commenced a review of the future management options for the fishery. Through a series of meetings and workshops, a proposal to move to a gear-based management regime was developed. The proposal was based on each gear SFR being equal to 10 centimetres of headrope and 11.5 centimetres of footrope length.

NORMAC supported this proposal in 1997. Following an Independent Allocation Panel report on the method of allocating the new gear SFRs, the Minister accepted an amendment to the Management Plan to give effect to the gear-based management in November 1999.

When the amendment was tabled in the Senate it was referred to the Rural and Regional Affairs and Transport Legislation Committee for consideration. In its report the Committee endorsed the implementation of gear-based management in the terms set out in the amendment to the Management Plan, but made a number of suggestions about the future monitoring of the fishery. Monitoring and research programs have been put in place in line with these recommendations.

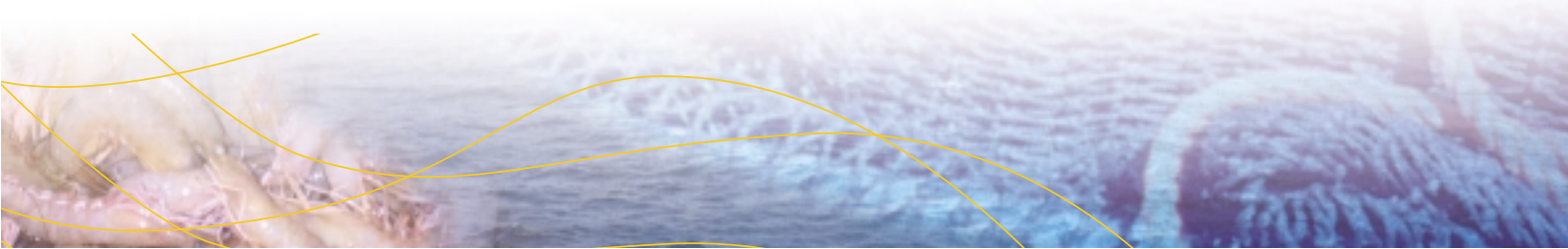
Gear SFRs were issued and came into effect in the NPF on 24 July 2000.

Management method

Catches in the fishery are limited to sustainable levels through the use of input controls. Input controls are limitations on the inputs to the fishery, such as the number of trawlers, the amount of fishing gear and the amount of time spent in the fishery.

A combination of input controls is used in the NPF. Firstly there are seasonal and area closures, which prevent fishing on spawning and juvenile prawns. The number of trawlers in the fishery and the amount of gear that can be employed in the fishery are limited through Statutory Fishing Rights. To operate, each trawler needs a Class B (boat) SFR and Gear SFRs to cover the amount of net that they wish to use. The total number of SFRs is limited to 124 class B SFRs and 53,844 gear SFRs. SFRs are freely tradable and are recognised as the property right in the fishery.

To provide some time for adjustment by the smaller operators, “top up” SFRs have also been granted for a two years period from July 2000. These allow operators to use up to 30 metres of net while adjusting to this new form of management (see section “Brief history of the Fishery”).



Funding

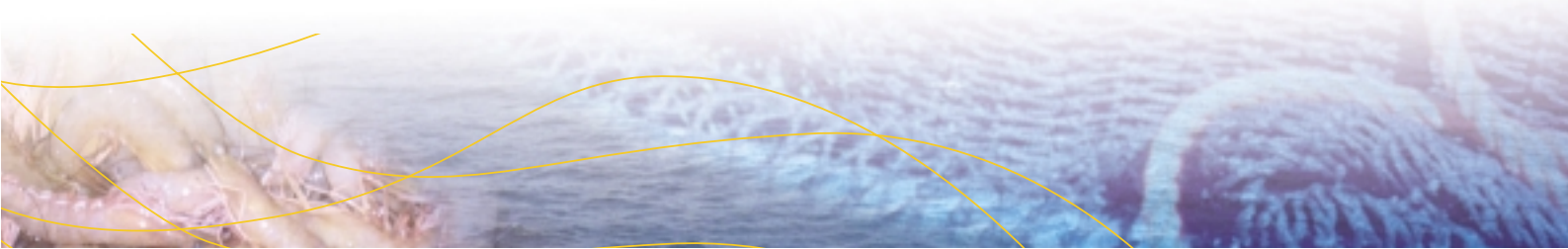
Funding for management and research in the Northern Prawn Fishery comes from several sources: direct appropriations from Consolidated Revenue to AFMA; management levies collected on a full cost recovery basis (100% of attributable costs) from commercial fishers; and contributions from research providers (CSIRO Marine Research and the Fisheries Research and Development Corporation).

The current level of funding collected from industry to manage the Northern Prawn Fishery is approximately $1 million per annum. The industry also pays approximately $250,000 in levies to the Fisheries Research and Development Corporation for research each year. Fishers also make voluntary contributions to the NPF Research Account for specific research needs in the fishery on an ongoing, as-needs basis.

NORMAC MEMBERSHIP

(As at May 2001)

Chairman:	Mr Brian Jeffriess PO Box 416 Eastwood SA 5063
Members:	Mr David Carter PO Box 280 Mount Hawthorn WA 6016
	Mr Les Lowe PO Box 665E Earlville QLD 4870
	Mr Efrem Gamba PO Box 612 Fremantle WA 6160
	Mr George Raptis PO Box 54 Morningside QLD 4170
	Dr Ian Poiner PO Box 120 Cleveland Qld 4163
	Mr Ron Earle Earlando via Dingo Beach Road Proserpine Qld 4800
	Mr Eddie Hegerl 8 Grevillea Street Redland Bay QLD 4165
	Ms Trysh Stone Box 7051 Canberra Mail Centre ACT 2610
Permanent Observer:	Ms Rosemary Lea GPO Box 46 Brisbane QLD 4001
Executive Officer:	Ms Annie Jarrett 8 Harwood Close Brinsmead Cairns Qld 4870



Appendix B

Glossary

AFMA

Australian Fisheries Management Authority. The Commonwealth government Statutory Authority with responsibility for the management of Commonwealth fisheries resources.

ARF

AFMA Research Fund. One million dollars of Commonwealth funding made available each year by AFMA to support targeted fishery research and assessments.

Benthic

Describes “animals, fish or plants that live on or in the sea floor”.

Biomass

The total weight or volume of a species in a given area.

BRDs

Bycatch Reduction Devices. A range of modifications or devices fitted to trawl nets to allow for the escape of small fish, sea snakes and other animals from the trawl net.

Bycatch

In its broadest sense, bycatch includes all living and non-living material (except for the target species) which is caught while fishing, including by-product, discards and that part of the catch, which doesn’t reach the deck but is affected by interactions with the fishing gear.

In the Commonwealth Bycatch Policy, bycatch is defined more narrowly as discards and that part of the catch, which doesn’t reach the deck but is affected by interactions with the fishing gear.

By product

Any part of the catch, which is kept or sold by the fisher but which, is not the target species.

Cohort

A group of fish spawned during a given period, usually within a year.

CPUE

Catch per unit of effort. The amount of fish caught per unit of effort. Often is used as a measure of relative abundance for a particular fish.

Crustacean

A group of freshwater and saltwater animals having no backbone, with jointed legs and a hard shell made of chitin. Includes prawns, crabs and lobsters.

Demersal

Describes fish and animals that live near the sea bottom.

Discards

Any part of the catch which is returned to the sea, whether dead or alive.

EEZ

Exclusive Economic Zone. Generally all waters out from the coast to a 200 nautical mile boundary.

Effort

The amount of time and fishing power used to harvest the fish.

Elasmobranch

Describes a group of fish without a hard bony skeleton. Includes sharks, skates and rays.

Fecundity

A measurement of the egg-producing ability of a fish. Fecundity may change with age and size.

FMA 91

Fisheries Management Act 1991

FRDC

Fisheries Research and Development Corporation

Incidental Catch

Has the same meaning as “non-target species”.

Input controls

A method of restricting the amount of fish taken in the fishery by limiting the inputs into fishing such as net sizes, boat sizes, fishing seasons etc.

Limited Entry

A method where the ability to access the fishery is limited to only those who hold the appropriate fishing concession.

Non-target Species

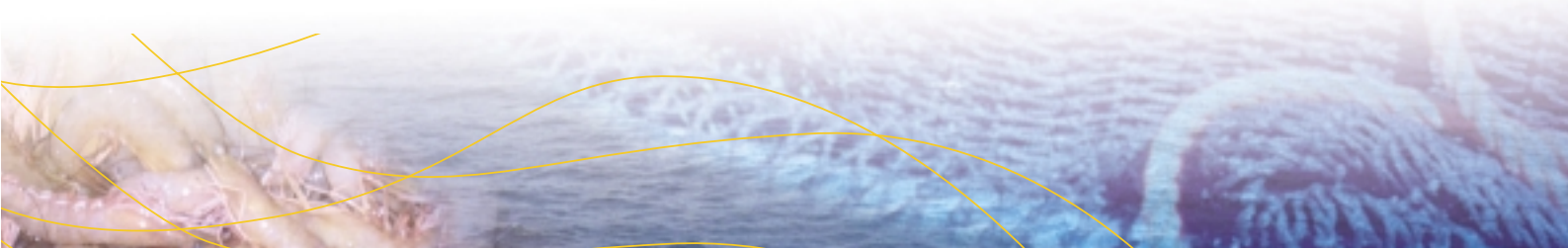
Any part of the catch, except the target species, and including bycatch and by-product.

NORMAC

Northern Prawn Fishery Management Advisory Committee

NPF

Northern Prawn Fishery



NPFAG

Northern Prawn Fishery Assessment Group

Pelagic

Describes fish and animals which live in the open sea away from the sea bottom.

REC

NORMAC Research and Environment Committee

SFR

Statutory Fishing Right

Stakeholders

Those with an interest in the fishery including SFR holders, AFMA, and the State and Territory fisheries agencies, research providers, indigenous and conservation sectors and the community.

TAC

Total Allowable Catch. A term used to describe the amount of fish, which may be sustainably taken from the fishery. Set by Regulation.

Target Species

The most highly sought component of the catch taken by fishers.

TEDs

Turtle Excluder Devices. A device used to avoid capture of turtles and other large animals while fishing. A barrier grid is fitted to the net to deflect large animals such as turtles and sharks through an escape opening and out of the net.

UTC

Coordinated Universal Time is used to define a time that doesn't depend on a position on earth and was formally known as Greenwich Mean Time (GMT).

VAS

Voluntary Adjustment Scheme. An industry funded by back of excess effort in the fishery.

VMS

Vessel Monitoring System. A satellite based system used for monitoring the location of each vessel in the fishery. Accurate to within less than 100 metres.