

NORTHERN TERRITORY SPANISH MACKEREL FISHERY

Export Exemption Submission

RE-ASSESSMENT REPORT

NOVEMBER 2007

**A report prepared for the Department of Environment and
Water Resources (DEW) as required for assessment under
Part 13 and 13 A of the *Environment Protection and
Biodiversity Conservation Act*.**

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Introduction

The Northern Territory Government's Department of Primary Industry, Fisheries and Mines (DPIFM) submitted a document to the Department of Environment and Water Resources (DEW) previously known as Department of Environment and Heritage, for assessment of the NT Spanish Mackerel Fishery (SMF) under Parts 13 and 13 A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in May 2002. The assessment resulted in the fishery being declared exempt from the export provisions of the EPBC Act for a period of 5 years, beginning February 2004.

Following the initial assessment of the SMF, a substantial level of information is now publicly available regarding the environmental performance of the fishery. In order to focus limited resources on continuous improvement within the fishery and to build on the findings from the initial assessment, the submission requirements were streamlined (by the regulating authority) to align with annual reporting requirements for the fishery.

As part of this new process, Guidelines for the Ecologically Sustainable Management of Fisheries (the Guidelines) were developed, along with accompanying terms of reference. The terms of reference require the preparation of a draft assessment report that assesses all impacts of the fishery on the environment. The draft assessment report is then used to determine if the fishery is ecologically sustainable.

The SMF is now due for reassessment against the Guidelines. DPIFM has prepared an assessment report that includes this document, the annual Fishery Status Reports published since the initial assessment in 2004, and the SMF annual reports submitted to DEW. In compiling the report, DPIFM has addressed the Guidelines and where necessary, responded to each of the issues outlined.

As a result of the initial assessment of the fishery in 2002, a series of recommendations were agreed to between DEW and DPIFM. These agreed recommendations were focused on ensuring the continuation and enhancement of current sustainable management practices. This document specifically addresses these recommendations and provides a response to each.

The document should be read in conjunction with the Annual Fishery Status Reports, and the initial assessment document that was provided to DEW in 2002. For a comprehensive understanding of the legislative arrangements in place for the SMF please refer to the *Spanish Mackerel Fishery Management Plan* available for download at

www.nt.gov.au/dpifm/Fisheries/index.cfm?header=Legislation

Copies of the NT Annual Fishery Status Reports are available to download at www.nt.gov.au/dpifm/Fisheries.

Please note that for all management decisions, NT Fisheries uses the most current data available provided through a desktop system linked with the compulsory logbook data program. Such data are summarised for public access, where appropriate, in the Annual Fishery Status Reports and are

published after all data for the calendar year have been compiled, validated and thoroughly analysed. A copy of the 2006 Fishery Status Report is expected to be released and available for download shortly.

DPIFM will ensure conditions recommended by DEW in the assessment process will be addressed in the 2007 and subsequent Annual Fishery Status Reports.

Current Management

On 1 January 2005 the Northern Territory Spanish Mackerel Fishery Management Plan came into effect. This framework, along with additional management arrangements detailed in the annual Fishery Status Reports, outline the necessary input controls designed to limit overall harvest capacity, and complement the catch sharing arrangement with other user groups which include commercial, recreational, fishing tour operator and Indigenous stakeholders.

The management framework seeks to maintain all landings of Spanish mackerel at or below 450 tonnes per annum. Catch shares have been established for all sectors in ensuring the optimal utilisation of Spanish mackerel resources.

Table 1: Sector allocations in the Spanish Mackerel Fishery

Sector	Sector allocation	Tonnes
Spanish mackerel licensees	76%	342
Amateur fishers	16	72
Offshore Net & Line licensees	3	13.5
Fishing tour operator licensees	3	13.5
Finfish trawl licensees	1	4.5
Indigenous fishers	1	4.5
Total	100	450

Recommendations

The following progress has been made by DPIFM in implementing the DEW recommendations:

DEH Recommendation 1

“Inform Department of the Environment and Water Resources of any future amendment to the management regime for the Spanish Mackerel Fishery.”

DPIFM’s Response

DPIFM has kept the Department of the Environment and Water Resources informed of any future amendments to the management regime for the *Spanish Mackerel Fishery DEW Re-Assessment Report 2007*

Spanish Mackerel Fishery through the publication of the *Current Issues* and *Future Plans* sections in the annual Fishery Status Reports. Additionally, a copy of the Fishery's management objectives, performance indicators, trigger points and management arrangements has been published in the annual Fishery Status Reports. This practice will be continued in future Fishery Status Reports and any changes to the management arrangements for the fishery will be advised to DEW through subsequent annual Fishery Status Reports.

Given the low numbers of operators allowed in the fishery, the vast geographic area and remoteness of the fishery, and that the major target species (Spanish mackerel) is a migratory pelagic fish, DPiFM believes the SMF is presently being managed in a sustainable manner with low risk of localised depletions or overfishing.

DEH Recommendation 2

“Formalise the objectives, performance indicators, trigger points and management actions outlined in Table 1 of the NT submission into the Spanish Mackerel Management plan, where appropriate.”

DPiFM's Response

Objectives, performance indicators, trigger points and management responses have been included, where appropriate, in the *Spanish Mackerel Fishery Management Plan* and were Gazetted on 1 January 2005. These fishery-specific indicators apply to the target species, byproduct, bycatch and the impacts of the fishery on the ecosystem.

The inclusion of these indicators in the *Spanish Mackerel Fishery Management Plan* is available at:
<http://www.nt.gov.au/dpifm/Fisheries/index.cfm?header=Legislation>

DEH Recommendation 3

“Implement the Byproduct Action Plan, for fisheries targeting species other than Spanish mackerel, within the first year.”

DPiFM's Response

In 2004, a Byproduct Action Plan was developed and implemented for the non-target Spanish mackerel fisheries. The plan introduced stringent restrictions for the incidental harvest of Spanish mackerel in the Offshore Net and Line Fishery (ONLF) and the Finfish Trawl Fishery (FTF) and a 'no take' requirement for all other NT fisheries.

In recognition of the incidental catch of Spanish mackerel when targeting grey mackerel in the ONLF, an ONLF licensee is restricted to only 30 trunks or whole Spanish mackerel during a voyage. In addition to the 30 fish, for each tonne of grey mackerel harvested in the ONLF, the licensee may take an

additional 10 trunks or whole Spanish mackerel. Similarly, in the FTF a licensee must not possess more than 50 Spanish mackerel on board.

The Byproduct Action Plan has been successfully incorporated into the *Fisheries Regulations* and relevant fishery management plans.

DEH Recommendation 4

“Report on objectives, performance indicators and triggers in the annual status report.”

DPIFM’s Response

As described in our response to Recommendation 1, a report on the SMF’s progress against the stated objectives, performance indicators, trigger points and management arrangements is provided in the annual Fishery Status Reports. This practice will be continued in future Fishery Status Reports published by DPIFM. A copy of the 2006 Fishery Status Report is expected to be released and available for download shortly.

DEH Recommendation 5

“Conduct a compliance risk assessment for the Spanish Mackerel Fishery.”

DPIFM’s Response

A risk assessment of compliance issues in the SMF was conducted by DPIFM in May 2006. The objective of the assessment was to identify and assess the severity of the compliance risks, and formulate compliance strategies, policies and management to obviate the risks identified.

A copy of the report on the outcomes of the assessment is attached with this submission.

DEH Recommendation 6

“By 2005 formalize guidelines, including clear timeframes for implementation, for undertaking review of the fisheries management arrangements once reference points and triggers are reached.”

DPIFM’s Response

The reference points and triggers have been incorporated into the *Spanish Mackerel Fishery Management Plan*. It is a requirement of the plan that once the trigger points have been reached, the Director of Fisheries must conduct a review of the fishery’s management arrangements.

A trigger point of 450 tonnes of Spanish mackerel was set in the *Spanish Mackerel Fishery Management Plan* as the allowable catch. The combined catch of all sectors in 2005 was 477 tonnes. In 2006 a review of the 2005 *Spanish Mackerel Fishery DEW Re-Assessment Report 2007*

Spanish mackerel catch was conducted by DPIFM with Fisheries' researchers, managers and representatives of the industry.

The review agreed that, while the allowable catch was exceeded, there was no evidence of overfishing and the sustainability of the fishery was not under immediate threat. The review determined that when 2006 catch data was available a formal review of management arrangements, including a meeting of the Spanish Mackerel Fishery Management Advisory Committee (SMFMAC) would be undertaken.

The subsequent 2006 Spanish mackerel total harvest also exceeded the trigger point of 90% of the Allowable Catch for the fishery. The establishment of the SMFMAC is currently in progress and a meeting anticipated for later this year. The Director of Fisheries has formally requested advice from the SMFMAC Chair regarding Spanish mackerel harvest and management options. DEW will be informed of the outcomes of this review once available, through established reporting mechanisms.

DEH Recommendation 7

“Continue to seek out alternative cost effective fishery independent sampling techniques and report outcomes in the annual status report.”

DPIFM's Response

DPIFM are continuing to seek out alternative cost effective fishery independent sampling/monitoring techniques, particularly for target species for the SMF.

A project to develop a new approach for tagging Spanish mackerel commenced in 2001, with funding from the Northern Territory Research and Development Trust Fund. Subsequent to the success of this pilot work, the project *GENETAG: Genetic mark-recapture for real-time harvest rate monitoring. Pilot studies in northern Australia Spanish mackerel fisheries* was commenced, and supported by the Fisheries Research and Development Corporation (FRDC). This project was provided additional funding and is now projected for completion in 2008. The intention of this work is to develop a mark-recapture approach as the basis of monitoring harvest rates and catchability in the fishery.

Due to the shared nature of harvested species with adjoining jurisdictions, many of the research projects on species in the SMF are collaborative. Fisheries researchers and managers from state, territory and Commonwealth jurisdictions meet annually at the North Australian Fisheries Management (NAFM) forum to review current research, set research priorities and decide on management strategies and appropriate controls to ensure that these shared resources are used in a sustainable manner.

The stock structure of Spanish mackerel throughout northern Australia was studied in a joint project between DPIFM, WA Fisheries, Queensland's

Department of Primary Industry and Fisheries (DPI&F) and the University of Queensland. The project used genetic examination, chemical analysis of otoliths and parasite abundances. This work indicated that there was little mixing of Spanish mackerel at the adult stage of the life cycle. There was however sufficient mixing at all life history stages to ensure that there are just three large, separate Spanish mackerel genetic stocks across northern Australia.

Queensland's DPI&F convened a stakeholder workshop in November 2004 to undertake an ecological risk assessment (ERA) of all retained and non-retained species in the Queensland Gulf of Carpentaria fisheries. Harvest levels for Spanish mackerel in the Gulf were determined to be a moderate risk to the species sustainability. Management actions were proposed to ensure the risk was mitigated. The impact on the sustainability on byproduct species was ranked as a negligible risk.

The DPIFM is a signatory to the Northern Australian Operational Plan for the Conservation and Management of Spanish Mackerel. The plan was agreed to in 2005 by all relevant state/NT/commonwealth fisheries agencies. The operational plan helps to better align research and compliance initiatives and direction with management priorities.

DEH Recommendation 8

“Include yearly results of observer surveys (including information on target species, bycatch and protected species interactions) in the annual status report and implement alternative data collection validation techniques if observer trips are no longer feasible.”

DPIFM's Response

The annual Fishery Status Reports provide a summary of the observer trips conducted during the year. A copy of the 2006 Fishery Status Report is expected to be released and available for download shortly.

Observers provide valuable advice regarding target, byproduct and bycatch species harvested during the trip. The SMF observer collects information on age and size information and assesses the implementation progress of the Genetag project.

The observer program, in conjunction with existing data collection programs, such as the logbook program and the Genetag project provide a sufficient multi-faceted understanding of the status of the fishery. Analysis of the information provided by these programs has verified correct correlation between the observed catch compositions and quantities, and the corresponding logbook information regarding catch trends. The additional FRDC funded Genetag project will provide for the development of a mark-recapture based monitoring approach and support further improvement of harvest rate-based management strategies.

DEH Recommendation 9

“Make reporting of all protected species interactions compulsory and implement an education program to ensure industry has the capacity to make accurate reports.”

DPIFM's Response

The observer program indicates the rarity of interactions between the fishery and protected species, as can be expected from a highly specialised line fishery in which there is a single target species. A single instance of the capture of a protected species, a sea snake that was released alive immediately after capture, has been recorded (Fishery Status Reports 2005).

Nevertheless, interactions with protected species are possible, and substantial effort has been made by DPIFM and industry to ensure that such interactions are thoroughly accounted for and documented to a more than reasonable degree.

Since the last assessment in 2002, DPIFM has worked closely with both industry and relevant scientific experts to improve the compulsory logbook reporting system. This work has been complemented by the development and enhancement of an identification/education program for fishers.

Specifically, a copy of the Natural Heritage Trust's *Protected Marine Species Identification Guide* has been distributed to all active SMF operators. In addition, industry has developed an Environmental Management System for the fishery which includes identification guides of marine turtles and sawfish. Provision of the guide assists with the correct identification and reporting of turtles, sawfish, sharks and other protected species in order to ensure accurate reporting. The guide builds upon the “one on one” work undertaken by fishery observers with crews during monitoring voyages.

All SMF operators receive regular advice from DPIFM and their own representative council (Northern Territory Seafood Council reiterating the need for correct reporting of catches and sustainable fishing practices. All new entrants to the SMF are interviewed by the SMF Manager to ensure a thorough understanding and appreciation of the sustainable fishing practices.

Logbooks have been amended to expand the existing capacity to record the major target and byproduct specific species. An additional measure to improve the reporting of interactions with threatened, endangered and protected (TEP) species has also been introduced into the fishery since the original submission in 2002. As a result, all commercial fisher log books now include a front cover that outlines their reporting requirements for TEP species under the *EPBC Act*.

DEH Recommendation 10

“Gather information that would support a move to a precautionary biological reference point for Spanish mackerel.”

DPIFM's Response

Given the low numbers of operators allowed in the fishery, the vast geographic area and remoteness of the fishery, and the highly migratory nature of the major target species (Spanish mackerel), DPIFM believes the SMF is presently being managed in a sustainable manner with minimal risk of localised depletions or overfishing.

The fishery's observer program includes collection of samples of the age and size information for the SMF stock. With approaches being developed in the FRDC funded Genetag project, due to be completed in mid-2008, this will provide the basis for monitoring of harvest rates and the development of other alternative performance measures.

Until the Genetag project's results are known, a preliminary and precautionary biological reference point of 450 tonnes has been developed and legislated for the fishery. This point provides a guideline until further information regarding the fishery and stock structure is known.

DEH Recommendation 11

“Monitor the species composition of bycatch and byproduct with a view to undertaking a more rigorous risk analysis, if there is a significant increase in the catch of individual species.”

DPIFM's Response

Byproduct (<0.1% of total catch, 2005) and bycatch (<1% of total catch, 2005) in the SMF is negligible. The fishing gear and species targeting practices limit the take of species other than Spanish mackerel and the main pelagic fish species. SMF fishing methods include the use of troll lines and hand lines, which are always tended during fishing operations. This allows fishers to release any unwanted species alive.

Recreational fisheries have high levels of bycatch due to a growing movement towards the practice of catch and release of fish for sporting reasons, and to comply with regulated fish sizes and species. The fate of fish species discards in the recreational fishery is not known, however survival is likely to be high for average size fish that are not unduly harmed during the capture, handling and release stages.

No data on the level of bycatch in the Indigenous subsistence sector of the fishery are available, although it is thought to be very low.

Reference points and triggers for target, byproduct and bycatch have been incorporated into the *Spanish Mackerel Fishery Management Plan*. It is a requirement of the plan that if the amount of bycatch or byproduct increases in the fishery by more than 10% of the amount of Spanish mackerel taken in the

year then a review of the fishery management arrangements must be conducted.

DEH Recommendation 12

“Monitor the size composition of the commercial catch of Spanish mackerel and introduce additional management measures if the catch composition shifts to pre mature fish.”

DPIFM's Response

Research is being conducted in the SMF that evaluates both the mean and actual size, and sex composition of the fishery's harvest. The logbook returns provide information on the weight of the catch and number of fish which enable the mean size of the catch to be calculated. In addition, observers monitor and measure size, and reproductive state in samples of the Spanish mackerel catches. This provides a valuable tool in the assessment of the catch's age structure and reproductive status.

If research determines significant changes in any aspect of the fishery, a review of the management arrangements is undertaken. The size, sex and maturity information is an essential component to the review of stock status and fishery's management arrangements. The review will examine, as required in the strategic management policy, both the optimal utilisation of the SMF and sustainable yield estimates.