



Australian Government
Australian Fisheries Management Authority

North West Slope Trawl Fishery

 BYCATCH AND DISCARDING
 WORK PLAN

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TABLE OF CONTENTS

Introduction.....	3
Fishery Snapshot.....	3
Bycatch and the OCS Agreement	4
Characterisation of Bycatch.....	4
Overview.....	4
Ecological Risk Assessment Processes.....	4
Characterisation of Discarding	5
Status of Monitoring	5
Monitoring Program.....	5
Proposed Monitoring Program.....	5
Existing Bycatch Reduction Efforts.....	6
Bycatch Reduction Work Plan.....	6
Summary	7
Appendix 1	8

NORTH WEST SLOPE TRAWL FISHERY

BYCATCH WORK PLAN 2010 - 2012

Introduction

The objective of the North West Slope Trawl Fishery (NWSTF) Bycatch and Discarding Work Plan is to develop strategies that will:

- Respond to high ecological risks assessed through AFMA's Ecological Risk Assessment for the Effects of Fishing (ERAEF);
- Avoid interactions with species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act);
- Reduce discarding of target species to as close to zero as practically possible; and
- Minimise overall bycatch in the fishery over the long-term.

All Commonwealth fisheries are committed under the Australian Government's *Commonwealth Policy on Fisheries Bycatch* to minimise bycatch. "Bycatch" is defined as any "part of the fisher's catch which is returned to the sea either because it has no commercial value or because regulations preclude it being retained and any part of the catch that does not reach the deck of the fishing vessel but is affected by interactions with the fishing gear."

The NWSTF work plan will focus on developing management measures to reduce and monitor interactions with high risk and protected species and discarding of key target species. This work plan should be read in conjunction with the *Commonwealth Policy on Fisheries Bycatch* and *AFMA's program for addressing bycatch and discarding in Commonwealth fisheries: an implementation strategy*. Work plans should be reviewed annually to assess any specified milestones, incorporation of new bycatch information or need for new research. They must be formally reviewed every 12 months to assess the effectiveness of mitigation measures and renewed every 2 years.

Fishery Snapshot

The NWSTF extends from 114°E to about 125°E off the Western Australian coast between the 200m isobath and the outer limit of the Australian Fishing Zone, but taking into account Australian-Indonesian maritime boundaries. Fishing is conducted with demersal crustacean trawls during the day and night along bathometric contours depending upon the target species sought.

Most operators in the fishery also fish in the Northern Prawn Fishery (NPF) and although the NWSTF is open all year, fishing effort is only normally applied seasonally during closed periods in the NPF. The NWSTF is primarily a scampi fishery.

Bycatch and the OCS Agreement

The Offshore Constitutional Agreement (OCS) between the Commonwealth and WA has given the Commonwealth jurisdiction in waters deeper than 200m for the trawl fishing of crustaceans and finfish. This includes jurisdiction over byproduct and bycatch species taken in the designated area.

Characterisation of Bycatch

Overview

The NWSTF is a low effort fishery. The primary concern for this fishery is the potential for an increase in effort if fishers commence fishing latent permits. There are currently seven permits in the NWSTF. However, in 2007 little fishing took place.

If effort remains low, there may be little concern regarding bycatch and discarding. However, it will also be difficult to instigate any projects to address bycatch and discarding issues that do exist as there is limited data and low GVP to fund research.

Ecological Risk Assessment Processes

A key component in AFMA's move towards Ecosystem Based Fisheries Management (EBFM) has been the undertaking of ecological risk assessments (ERA) for all AFMA-managed fisheries. These were completed mid-2007 and provided a list of high risk species based on their productivity (life-history) and susceptibility to fishing effects. However due to the semi-quantitative nature of the risk assessment, the analysis did not take into account all management measures currently in place in fisheries, resulting in a potential over-estimate of the actual risk for some species. To take account of this constraint *residual risk* was quantified using AFMA developed guidelines with input from CSIRO and stakeholders.

The NWSTF has undergone two ecological risk assessments for the effects of fishing (ERAEF) at both level 1.0 and 2.0 which examined target, by-product and threatened, endangered and protected (TEP) species. Based on the ERA process no interactions with TEP species were detected. One species, the scarlet prawn, was identified as high risk and an additional four target invertebrate species (scampi and prawn) were identified as medium risk.

There are a range of reasons why a species may be identified as “high risk” in the ERA. Some species are missing data that may be added later and the species reassessed, while others are susceptible to capture or have low productivity due to their biology. The one species deemed high risk in this fishery is a large prawn that is susceptible to catch based on its size.

Following completion of the residual risk process, scarlet prawn remained in the high risk category and was incorporated into the harvest strategy for the fishery.

Characterisation of Discarding

Discarding, in the context of AFMA's policy, refers to target species, be they quota species or primary species targeted in fisheries, managed only through input controls.

Discarding target species in the NWSTF has historically been negligible, as almost all target species are retained for sale. Some mixed scampi and mixed prawns are occasionally discarded if they are damaged or cannot be sold, however, these discards are small in quantity.

Status of Monitoring

Monitoring Program

Monitoring of bycatch in the NWSTF is accomplished mainly through the use of logbooks, which were established in 1983, with sporadic observer coverage. Overall, the current level of monitoring and fishing effort in the NWSTF has been too low and sporadic to effectively evaluate the levels and nature of bycatch and discarding (52 days of observer coverage over the past several years).

Proposed Monitoring Program

In the future, and with increased funding available, increased observer coverage, planned surveys and further consideration of the monitoring regime in the program should help to enable the fishery to justify the sustainability of operations and address perceived threats. A crew based observer program could be considered for this fishery. This would involve training crew members to collect data on specific target, byproduct and bycatch species. Data collection has also been included as a trigger response for species in the harvest strategy. That is, when the first trigger point for a species is reached, data collection will begin.

Existing Bycatch Reduction Efforts

Although bycatch has been relatively low in the fishery for several years due to low fishing effort, the *Management Arrangements* describe the bycatch reduction measures currently in place in the NWSTF.

Bycatch Reduction Work Plan

Should the level of effort increase in this fishery the work plan would then come into effect and would address the following issues:

- Reduce the level of risk for bycatch identified as high risk through the Ecological Risk Assessment (ERA) process¹;
- Develop and implement cost-effective strategies to pursue continual improvement in bycatch reduction; and
- Assess relative changes in bycatch due to bycatch mitigation and target species management measures.

Table 1. Bycatch work plan 2010 - 2012

Proposed work	Risk to be addressed	Time Frame	Projected Cost	How action will be measured	Responsible
If catch increases to within trigger limits as described in the Harvest Strategy than a review of high risk species will be undertaken.	Scarlet prawns identified as “high risk”.	Dependent on fishing activity	N/A	N/A	AFMA
Utilise fishing effort to maximize observer coverage to improve catch and bycatch information.	General improvement of bycatch data and knowledge which can in turn be used to lower bycatch.	Dependent on fishing activity	Budgeted in fishery overheads	Observer information noted by management and Bycatch & Discarding program	AFMA

¹ High risk species are those identified following the residual risk analysis of the level 2 ERA results.

Summary

WestMAC is of the view that the current bycatch and discard levels in the NWSTF are very low and is supportive of measures to reduce these levels even further. The fishery is limited, however, by the low GVP and effort that limits the amount of observer coverage and research that can be conducted as well as the implementation of monitoring programs. At present bycatch is not an issue in this fishery due to the current level of effort, but there is a significant amount of latent effort in the fishery which, if economic circumstances shift, could result in increased effort. If fishing effort was to dramatically increase, than more observer coverage and monitoring would be required.

Appendix 1. List of species and detail about quantification and biological information for residual risk analysis from the ERAEF Level 2.0.

TAXMONIC_GROUP	SCIENTIFIC_NAME	COMMON_NAME	role	logbook catch (kg) 2001-04	# missing susceptibility attributes	# missing productivity attributes	Productivity (additive) 1 - low risk, 3 - high risk	Susceptibility (multi) 1 - low risk, 3 - high risk	2D risk value (P&S) 1.41 - low risk, 4.24 - high risk	2D P&S risk category
Invertebrate	Aristaeopsis edwardsiana	Scarlet prawn	T	43	1	0	1.43	3	3.58	High