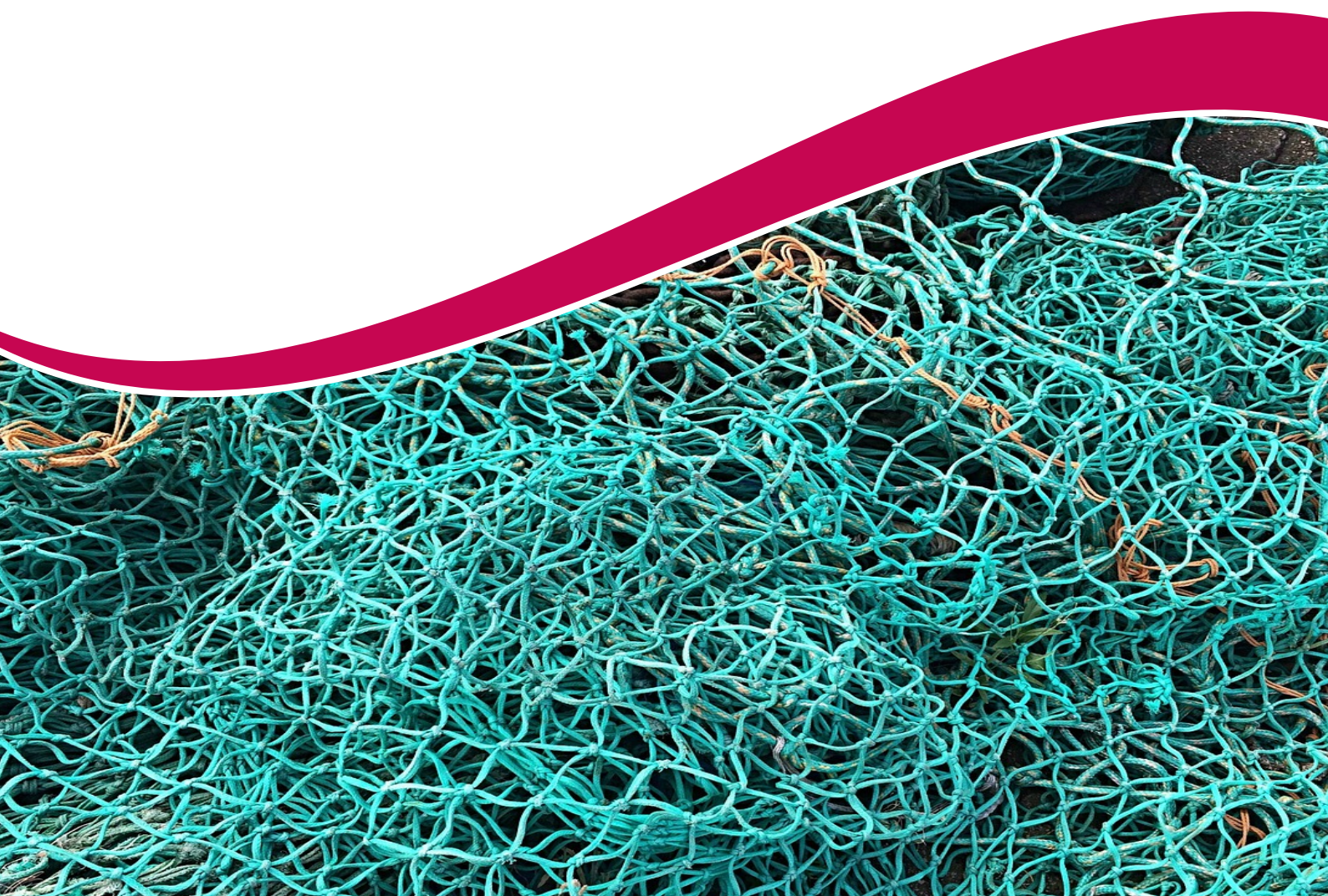




Australian Government

Australian Fisheries Management Authority

**Small Pelagic Fishery
Bycatch and Discard
Workplan 2022-2025**



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Version	Updates	Approver
1.0	2022	SPFRAG and SEMAC

1 Introduction

In carrying out its functions, the Australian Fisheries Management Authority (AFMA) must pursue objectives in the *Fisheries Management Act 1991* (FMA 1991) including having regard to the impact of fishing activities on non-target species and the long term sustainability of the marine environment.

AFMA is responsible for implementing the [Commonwealth Bycatch Policy 2018](#) (the Bycatch Policy) through its operational policies and supporting fisheries management strategies (bycatch strategies). Consistent with the requirements of the Bycatch Policy, and as required under the [Small Pelagic Fishery Management Plan 2009](#) (the Management Plan), AFMA implements Bycatch and Discard Workplans for each fishery to ensure that:

- information is gathered about the impact of the fishery on bycatch species;
- all reasonable steps are taken to minimise incidental interactions with seabirds, marine reptiles, marine mammals and fish of a kind mentioned in sections 15 and 15A of the *Fisheries Management Act 1991*;
- the ecological impacts of fishing operations on habitats in the area of the fishery are minimised and kept at an acceptable level; and

bycatch is reduced to, or kept at, a minimum and below a level that might threaten bycatch species. Under the [Guide to AFMA's Ecological Risk Management \(ERM\) 2017](#), for all commercial and bycatch (including protected) species, the primary ecological sustainability objective that AFMA pursues via ERM is “to ensure that fishing (by Commonwealth commercial fisheries) does not reduce any species populations to/below a level at which the risk of recruitment failure is unacceptably high. Where such impacts have occurred, recover populations to above that level”.

There are five guiding principles that AFMA uses to identify issues and to minimise and avoid bycatch of protected and general species. These are outlined in the [AFMA Bycatch Strategy 2017-22](#):

- Principle 1. Management responses are proportionate to the conservation status of bycatch species and Ecological Risk Assessment results.
- Principle 2. Consistency with Government Policy and legislative objectives (including to avoid and minimise) and existing national protected species management strategies such as the threat abatement plan and national plans of action.
- Principle 3. Incentives should encourage industry-led solutions to minimise bycatch of protected species utilising an individual accountability approach.
- Principle 4. Accounting for cumulative impact of Commonwealth Fisheries on protected species when making management decisions on mitigation.
- Principle 5. Appropriate and consistent monitoring and reporting arrangements across fisheries.

As articulated in the Bycatch Policy, the primary objective for bycatch management is to minimise fishing-related impacts on bycatch species in a manner consistent with the principles of ecologically sustainable development (ESD) and with regard to the structure, productivity, function and biological diversity of the

ecosystem. In delivering on this objective for Commonwealth fisheries, the Bycatch Policy requires AFMA to:

- draw on best-practice approaches to avoid or minimise all bycatch, and minimise the mortality of bycatch that cannot be avoided;
- manage fishing-related impacts on general bycatch species to ensure that populations (that is, discrete biological units, commonly referred to as stocks in the [Commonwealth Harvest Strategy Policy](#)) are not depleted below a level where the risk of recruitment impairment is regarded as unacceptably high; and
- where fishing-related impacts have caused a bycatch population to fall below the level described, implement management arrangements to support those populations rebuilding to biomass levels above that level.

The objectives of the Small Pelagic Fishery Bycatch and Discard Workplan (the Workplan), which support those in the Bycatch Policy, are to:

- minimise fishing-related impacts on general bycatch species in a manner consistent with the principles of ecologically sustainable development and with regard to the structure, productivity, function and biological diversity of the ecosystem;
- reduce the number of high-risk species assessed through AFMA's Ecological Risk Assessment process; and
- avoid interactions with species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

This Workplan should be read in conjunction with the:

- [Commonwealth Fisheries Bycatch Policy 2018](#)
- [Small Pelagic Fishery Management Plan 2009](#)
- [Ecological risk management strategies for Commonwealth commercial fisheries 2017](#)
- [Commonwealth Fisheries Harvest Strategy Policy and Guidelines 2018](#)
- [AFMA Bycatch Strategy 2017-22](#)

2 Fishery Description

The Small Pelagic Fishery (SPF) operates between southern Queensland and southern Western Australia and includes mid-water trawl and purse-seine fishing vessels. The fishery is divided into two sub areas, east and west of latitude 146°30' S based on stock structure of a number of target species. The fishing methods used in the SPF are mid-water trawl and purse seine fishing gears, however minor line and squid jigging are also permitted. Further information on the SPF can be found in the [SPF Management Arrangements Booklet](#).

3 Workplan Development

The Workplan is intended to address risks identified through the ERA process and to address impacts on the broader ecosystem, including to minimise interactions with species listed under the EPBC Act. The Workplan also builds upon the progress made under the *SPF Bycatch and Discard Workplan 2014-2016* (the Previous Workplan).

The action items at Table 3 were developed in consultation with the SPF Resource Assessment Group (SPFRAG) and South East Management Advisory Committee (SEMAC).

4 Ecological Risk Management

AFMA conducts Ecological Risk Assessments (ERAs) to identify risks posed by fishing to the ecological sustainability of the species, habitats and communities with which Commonwealth fisheries interact. ERAs involve a hierarchy of risk assessment methodologies progressing from a comprehensive, largely qualitative analysis at Level 1, through a Level 2 Productivity Susceptibility Assessment (PSA) or more quantitative Sustainability Assessment for the Effects of Fishing (SAFE). This approach is a means of screening out low impact activities and low risk species and focusing more intensive and quantitative analyses on those species assessed as being of higher potential risk from the impact of fisheries. For the detailed methodology please see the [AFMA website](#).

Ecological Risk Management (ERM) strategies are developed to respond to the outcomes of the ERA (which identifies high risk species) and may be identified at any level of assessment, to address general bycatch and discard issues in the fishery. Under the revised Bycatch Policy, ERM strategies have been replaced by Fisheries Management Strategies (FMS), which are made up of key documents such as Harvest Strategies, Bycatch and Discard Workplans, Data Strategies and other species-specific strategies. The development of an FMS for the SPF has been delayed.

4.1 Mid-water Trawl Sector

An ERA was last undertaken for the [Mid-water Trawl Sector \(MWTS\)](#) of the SPF in 2017. All ecological risks for the SPF MWTS were eliminated at Level 1. Direct impacts of fishing on protected species wasn't

assessed to be of concern during the assessment period of relatively light effort, but increasing effort might result in a higher interaction rate and consequently greater risk.

4.2 Purse Seine Sector

In the Purse Seine Sector (PSS) of the SPF, an [ERA was last undertaken in 2007](#); with an [ERM developed for this sector in 2010](#). The ERA identified 29 high risk species, which are listed in Table 1 below.

Due to the low levels of effort, the PSS of the SPF has not been listed as a high priority for an updated ERA. Unless a high priority issue, requiring immediate action is addressed, the PSS sector will not be reassessed until after December 2021.

Table 1: High risk species identified from the SPF Level 2 Productivity Susceptibility Analysis Residual Risk Assessment for the PSS.

Common Name	Scientific Name
Andrew's Beaked Whale	<i>Mesoplodon bowdoini</i>
Australian Fur Seal	<i>Arctocephalus pusillus doriferus</i>
Blainville's Beaked Whale	<i>Mesoplodon densirostris</i>
Bottlenose Dolphin	<i>Tursiops truncatus</i>
Cuvier's Beaked Whale	<i>Ziphius cavirostris</i>
Dwarf Sperm Whale	<i>Kogia simus</i>
Elephant Seal	<i>Mirounga leonina</i>
False Killer Whale	<i>Pseudorca crassidens</i>
Fraser's Dolphin	<i>Lagenodelphis hosei</i>
Ginkgo Beaked Whale	<i>Mesoplodon ginkgodens</i>
Gray's Beaked Whale	<i>Mesoplodon grayi</i>
Hector's Beaked Whale	<i>Mesoplodon hectori</i>
Hourglass dolphin	<i>Lagenorhynchus cruciger</i>
Humpback Whale	<i>Megaptera novaeangliae</i>
Indian Ocean bottlenose dolphin	<i>Tursiops aduncus</i>
Indo-Pacific Humpback Dolphin	<i>Sousa chinensis</i>
Killer Whale	<i>Orcinus orca</i>
Leopard Seal	<i>Hydrurga leptonyx</i>
Long-finned Pilot Whale	<i>Globicephala melas</i>
Minke Whale	<i>Balaenoptera acutorostrata</i>
Pygmy Killer Whale	<i>Feresa attenuata</i>

Common Name	Scientific Name
Risso's Dolphin	<i>Grampus griseus</i>
Rough-toothed Dolphin	<i>Steno bredanensis</i>
Short-finned Pilot Whale	<i>Globicephala macrorhynchus</i>
Southern Bottlenose Whale	<i>Hyperoodon planifrons</i>
Southern Right Whale Dolphin	<i>Lissodelphis peronii</i>
Strap-toothed Beaked Whale	<i>Mesoplodon layardii</i>
Striped Dolphin	<i>Stenella coeruleoalba</i>
True's Beaked Whale	<i>Mesoplodon mirus</i>

4.3 Jigging and Minor Line Sectors

There is currently no effort in jigging or minor line sectors in the SPF and no ERA has been completed for either sector. Consideration should be given to the level in which these two sectors will be included in future Bycatch and Discard Workplans.

5 Existing Measures to Mitigate Risk

5.1 Gear requirements for mid-water trawl

Fishing concession conditions specify minimum gear requirements in the SPF when using mid-water trawl fishing gear. The requirements are:

- A mesh in a net must not be less than 30 millimetres at any part of the net and the net must be measured in the following way:
 - Before a measurement is taken, the part of the net to be measured must be soaked in water for at least 5 minutes;
 - Immediately after the net has been soaked the part of the net to be measured must be suspended vertically. The distance between the inside edge of the knot and the inside edge of the knot in the diagonally opposite corner of the mesh immediately above the first knot must be measured; and
 - The average of the 10 measurements must be taken as the size of the mesh in the net.
- When fishing under this concession using the mid-water trawl method, the holder must use a marine mammal exclusion device approved by AFMA in writing for use on the boat nominated to this concession.

5.2 Management arrangements for protected species

Under the *Fisheries Management Act 1991* (FMA), there is an obligation to have regard to the impact of fishing activities on non-target species and the long term sustainability of the marine environment. Furthermore, under the EPBC Act, there is an obligation to ensure the protection of native species and, in particular, prevent the extinction of, and promote the recovery of, threatened species.

5.2.1 Seabird Management Plans

The holder of a SPF Concession must not use jigging or minor line methods unless a seabird management plan for the boat has been approved by AFMA. The seabird management plan must contain measures:

- to minimise and avoid where possible, the discharge of biological material while fishing gear is in the water to avoid interactions with seabirds; and
- where appropriate, require the holder to use physical mitigation devices in a particular manner to avoid interactions with seabirds.

5.2.2 Small Pelagic Fishery Dolphin Strategy

The Small Pelagic Fishery Dolphin Strategy (the Dolphin Strategy) aims to minimise dolphin interactions in the trawl sector of the SPF by adopting an individual responsibility approach, to create incentives for fishers to innovate and adopt best practices to minimise dolphin interactions. Under the individual responsibility approach fishers are responsible for their actions to minimise interactions and stay within defined performance criteria. This is consistent with the pursuit of AFMA's objectives to ensure that the exploitation of fisheries resources is sustainable with regard to target and non-target species as well as the broader marine environment, and to maximise the net economic returns to the Australian community from the management of Australian fisheries. The Dolphin Strategy implements a framework to minimise dolphin interactions by:

- improving information on the nature of interactions between dolphins and fishing gear, particularly what species are interacted with;
- providing incentives for individual operators to minimise dolphin interactions and implement and develop mitigation measures best suited to their circumstances and location; and
- identifying options and best practice mitigation measures to support fishers in minimising dolphin interactions.

Dolphin Mitigation Plans

To fish in the SPF, all trawl vessels in the fishery must have an AFMA approved Dolphin Mitigation Plan that outlines what actions are being taken by the fisher to minimise dolphin interactions on that particular vessel. Given that the Dolphin Strategy is based on an individual responsibility approach, AFMA does not prescribe specific mitigation measures that must be included in the Dolphin Mitigation Plan. AFMA will only approve a Dolphin Mitigation Plan where it is satisfied the plan details actions to minimise interactions being taken in the following areas:

- fishing practices (e.g. only setting gear during daylight hours);

- gear setup (e.g. use of net bindings); and
- mitigation devices (e.g. any mitigation or modifications).

5.3 Area Closures

A network of closures is implemented for mid-water trawl fishing methods in the SPF that offer protection to a broad range of species, including bycatch and protected species. The closures are enforced under the [Fisheries Management \(Southern and Eastern Scalefish and Shark Fishery and Small Pelagic Fishery Closures\) Direction 2021](#). Figure 1 shows closures to mid-water trawl fishing methods in the SPF.

SPF operations are also required to adhere to spatial closures implemented under the South-East Commonwealth Marine Reserve Network.

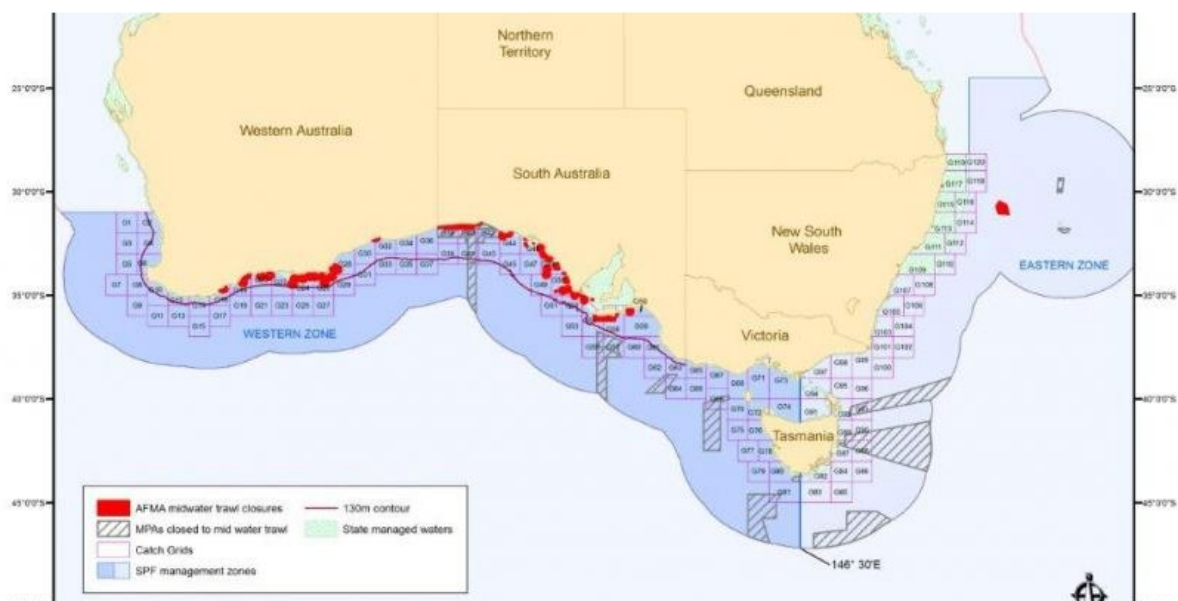


Figure 1. Area closures for mid-water trawl fishing methods in the Small Pelagic Fishery.

5.4 Purse Seine Code of Practice

The Purse Seine Code of Practice (the Code of Practice) applies to all commercial fishers taking fish by use of purse seine nets in the SPF. The Code of Practice outlines ways in which purse seine fishers in the SPF will minimise their impacts on the environment. These include:

- ensuring nets are manufactured using techniques that minimise the possibility of harm to marine mammals;
- ensuring the presence of TEP species is considered prior to and during purse seine operations; and
- return any captured TEP individual alive, with priority given to safety of the crew.

The Code of Practice can be found [here](#).

6 Bycatch Workplan Action Items

The objective of the revised Workplan is the same as the previous Workplan, that is, to ensure that the impacts of the fishery's bycatch on the ecosystem are sustainable and consistent with legislative requirements.

To meet this objective, the revised Workplan identifies fishery specific issues (risks) and strategies (actions) that should be implemented to mitigate each issue.

Table 3. SPF Bycatch and Discard Workplan Action Items

Action Items	Risk/Issue to be addressed (workplan object.)	Timeframe	Cost \$*	Responsible Parties	Milestone	Performance Indicators
<p>Improve forward barrier net* design and configuration</p> <p>*The forward barrier net comprises of a large square panel of netting that is sewn across the mouth of the trawl net.</p>	Reduce interactions with TEP species	2022-2023	TBC	<p>Industry to promote research</p> <p>AFMA to support research</p>	<p>Research/trials completed</p> <p>Improved barrier nets made available to industry</p>	Improved barrier nets deployed by industry.
Annual report to industry regarding reporting of bycatch and discards in logbooks and CDRs	To monitor and support accurate reporting of bycatch and discards data	Ongoing	Within existing staff time	AFMA to undertake review.	<p>Reporting framework implemented.</p> <p>AFMA to review logbook and CDR data for bycatch and discards.</p> <p>AFMA to report the results of the review to SPFRAG.</p>	Report provided to operators as a part of the season rollover.
Annual report to industry regarding reporting of interactions with TEP and high-risk	To monitor and support accurate reporting of TEP and high-risk ERA	Ongoing	Within existing staff time	AFMA to undertake review.	<p>Reporting framework implemented.</p> <p>AFMA to review logbook and CDR data</p>	Report provided to operators as a part of the season rollover.

SPF Bycatch and Discard Workplan Review

Action Items	Risk/Issue to be addressed (workplan object.)	Timeframe	Cost \$*	Responsible Parties	Milestone	Performance Indicators
ERA species (where relevant)	species interactions				for bycatch and discards. AFMA to report the results of the review to SPFRAG.	
Undertake a review of the Purse Seine Sector Industry Code of Practice	Minimising impact on the environment	2022	Within existing staff time.	AFMA and industry to review of the code of practice.	AFMA and industry to review the Code of Practice in consultation with SPFRAG and SEMAC.	Code of practice updated.
Annual monitoring, reporting and assessment of marine mammal interactions, including effectiveness of mitigation measures.	Reduce interactions with TEP species	2023-24	\$40,000	AFMA to support research	Include in Annual Research Statement 1) Synthesis of existing information on marine mammal interactions in the SPF to examine how operational and environmental factors influence interaction rates. Analysis is contracted.	Development of appropriate reporting protocols for marine mammal interactions, including key operational and environmental factors, for observers and industry to support on-going assessment and reporting of interactions.

7 Review Process

Bycatch and Discarding Workplans are largely output focused. The action items included here are only some of the measures AFMA undertakes as part of the Ecological Risk Management (ERM) Strategy and it is difficult to measure the specific contribution of an action item to the overall objectives of the ERM Strategy.

This Workplan is effective as of March 2022 and will be formally reviewed as described below:

- every 12 months to;
 - ensure actions identified in Table 3 have progressed
 - determine if any further action items are required.
- final review and development of a new workplan after five years, or when the ERA is updated (whichever is sooner) to;
 - ensure that action items identified at each annual review have been completed
 - report against performance indicators
 - determine actions for the subsequent workplan.

Outputs of this Workplan will be reported to the Department of Agriculture, Water and the Environment as part of the WTO annual report.