



Australian Government

Department of the Environment

Assessment of the Western Tuna and Billfish Fishery

November 2014

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Disclaimer

This document is an assessment carried out by the Department of the Environment of a commercial fishery against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*. It forms part of the advice provided to the Minister for the Environment on the fishery in relation to decisions under Part 13 and Part 13A of the *Environment Protection and Biodiversity Conservation Act 1999*.

The views and opinions expressed do not necessarily reflect those of the Australian Government or the Minister for the Environment.

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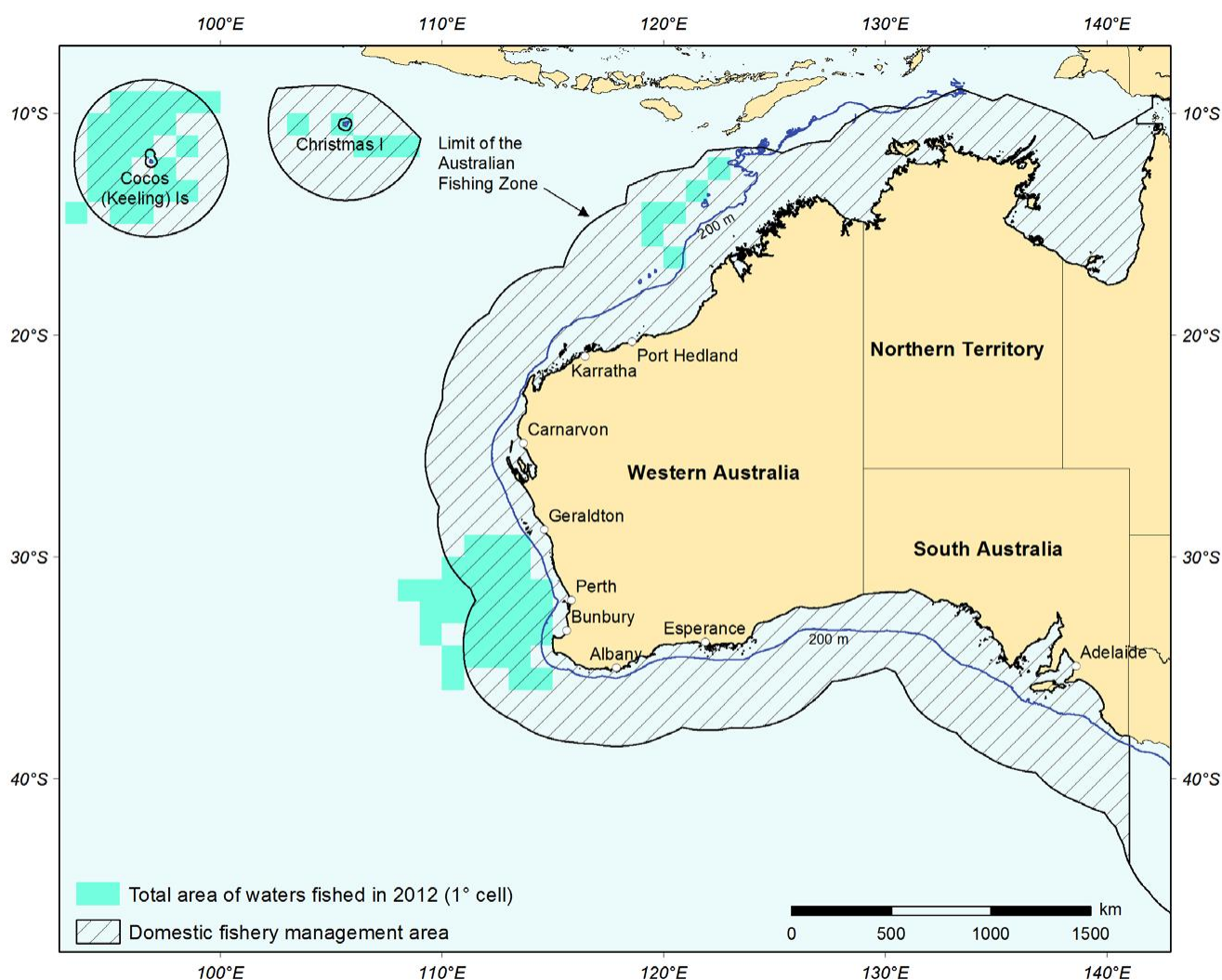
TABLE 1: SUMMARY OF THE WESTERN TUNA AND BILLFISH FISHERY

Description of the Western Tuna and Billfish Fishery	<p>The Western Tuna and Billfish Fishery is primarily a longline fishery targeting highly migratory tuna and billfish fisheries off Australia's west coast. Since 2004-05, on average three vessels have operated in the fishery annually, with the low participation attributed to economic factors.</p> <p>The Indian Ocean Tuna Commission¹ is responsible for the management of tuna and tuna-like species in the Indian Ocean and adjacent seas. The Australian component of the fishery, the Western Tuna and Billfish Fishery, is managed by the Australian Fisheries Management Authority (AFMA) (under an Offshore Constitutional Settlement fisheries agreement, tuna and tuna-like species in both state and Commonwealth waters are managed by the Australian Government).</p> <p>As a member of the commission, Australia is required to implement agreed management measures. These measures are given effect through Commonwealth fisheries management legislation, the Western Tuna and Billfish Fishery Management Plan 2005 and conditions on statutory fishing rights.</p> <p>Since 2010, the Western Tuna and Billfish Fishery has been managed under output controls in the form of individual transferable quotas for the target species.</p>
Publicly available information relevant to the fishery	<ul style="list-style-type: none"> • <i>Fisheries Management Act 1991</i> (Commonwealth) • Fisheries Management Regulations 1992 • Western Tuna and Billfish Fishery Management Plan 2005 • AFMA submission for Reassessment of the Western Tuna and Billfish Fishery 2014 (Australian Fisheries Management Authority) • Western Tuna and Billfish Fishery (WTBF) - Management Arrangements Booklet - 2014 Fishing Season (Australian Fisheries Management Authority) • Australian Tuna and Billfish Fisheries Bycatch and Discarding Workplan 1 July 2014 – 30 June 2016 (Australian Fisheries Management Authority) • Threat Abatement Plan 2014 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (Department of the Environment Australian Antarctic Division) • Australian Tropical Tuna and Billfish Fisheries Five Year Strategic Research Plan 2011 – 2016 (Australian Fisheries Management Authority) • Ecological risk management: report for the Western Tuna and Billfish Fishery—March 2010 (Australian Fisheries Management Authority)

¹ The Indian Ocean Tuna Commission (IOTC) is an intergovernmental organisation established under article XIV of the Food and Agriculture Organisation (FAO) constitution. The IOTC's area of competence covers a large number of countries, and both artisanal and industrial fishing vessels. Membership of the IOTC is open to Indian Ocean coastal countries, and countries or regional economic integration organisations that are members of the United Nations or one of its specialised agencies that actively fish for tunas in the Indian Ocean. The IOTC is responsible for the world's second largest tuna fishery in terms of both volume and value. In 2012, the tuna catch of the fishery was worth more than US\$4 billion and constituted about 34 per cent of the global tuna catch. The Indian Ocean differs from other oceans in that small-scale or artisanal fisheries take around the same quantity of tuna as industrial fisheries (Patterson 2014).

Area of the fishery	<p>The area of the Western Tuna and Billfish Fishery includes three areas defined in the Western Tuna and Billfish Fishery Management Plan 2005.</p> <p>The area of the fishery adjacent to the Australian mainland extends around the western side of Australia from Cape York Peninsula to the South Australia–Victoria border and includes Commonwealth and state/Northern Territory waters (Figure 1). The fishery also includes:</p> <ul style="list-style-type: none"> • waters within the Australian Fishing Zone outside 12 nm of Christmas Island and the Cocos (Keeling) Islands • high seas in the Indian Ocean — defined as those parts of the high seas west of 141° E (the South Australian - New South Wales border) that are within the area of competence of the Indian Ocean Tuna Commission. <p>The areas commonly fished are Commonwealth and high seas waters off the Western Australian coast between Geraldton and Albany, Commonwealth waters off the west Kimberley coast and around the Cocos (Keeling) Islands and Christmas Island (Patterson and Stephan 2014).</p>
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Figure 1. Area of the Western Tuna and Billfish Fishery (Source: Patterson and Stephan (2014))



Target species	<p>Schedule 2 of the Western Tuna and Billfish Fishery Management Plan 2005 defines primary and secondary species for management purposes. The plan further defines four key species which make up the majority of the catch from the fishery. The main target species is broadbill swordfish. Bigeye tuna and yellowfin tuna are also valuable target species, although Patterson and Stephan (2014) report that catches of those species have never been as high as swordfish and have been more variable.</p> <p>The target species are highly migratory and are managed on an international basis in the Indian Ocean by the Indian Ocean Tuna Commission. Each of these species is considered to consist of a single Indian Ocean Stock (Patterson and Stephan, <i>ibid.</i>). In the Western Tuna and Billfish Fishery these species are currently managed under individual transferrable quotas and are sometimes referred to as quota species.</p> <p>Under the Indian Ocean Tuna Commission, Australia claims entitlement to 5 per cent of the sustainable take of tuna and billfish in the commission area. The total allowable catches for the key species in the Western Tuna and Billfish Fishery were derived from commission estimates of the level of take in the commission area that would support maximum sustainable yield. At these relatively small proportions of broader, internationally managed ocean-wide stocks, catch from the Western Tuna and Billfish Fishery would be expected to have minimal impact on the biomass of the stocks.</p>
Stock status	<p>The stock status of the key species is based on Indian Ocean Tuna Commission regional stock assessments which are conducted on the broader Indian Ocean stocks. Patterson and Stephan (2014) discuss the stock status of each species and provide the following classification of the stock status of the key species:</p> <ul style="list-style-type: none"> • bigeye tuna – not overfished, not subject to overfishing • broadbill swordfish – not overfished, not subject to overfishing • striped marlin – overfished and subject to overfishing (see below) • yellowfin tuna – not overfished, not subject to overfishing. <p><i>Striped marlin</i></p> <p>The first Indian Ocean Tuna Commission stock assessments for striped marlin were published in 2013, based on the most recently available set of catch data from 2011. The biomass of the striped marlin stock was estimated to be 18 per cent of unfished biomass and fishing mortality was estimated to be well above the level that would result in maximum sustainable yield (IOTC 2013). Hence, Patterson and Stephan (<i>ibid.</i>) classify the stock as overfished and subject to overfishing.</p> <p>Catches of striped marlin in the Western Tuna and Billfish Fishery have always been relatively low—less than 60 t since the mid-1980s and very low in recent years, with only 2 t taken in each of 2012 and 2013. The total allowable commercial catch for striped marlin in the Western Tuna and Billfish Fishery of 125 t is less than 5 per cent of the Indian Ocean maximum sustainable yield.</p>

Byproduct Species	<p>AFMA considers important byproduct species to be albacore, longtail tuna, escolar, rudderfish, Ray's bream and moonfish. The dominant byproduct species landed in 2011 and 2012 was albacore, with smaller amounts of Ray's bream, escolar, mahi mahi and rudderfish. As highly migratory species, albacore and longtail tuna are managed internationally by the Indian Ocean Tuna Commission.</p> <p><i>Albacore</i></p> <p>Albacore in the broader Indian Ocean is considered not overfished, but subject to overfishing. Patterson and Stephan (2014) report that based on 2012 Indian Ocean wide stock assessments, the total fishing mortality of albacore in the Indian Ocean Tuna Commission area was estimated to be well above the level that that would maintain catches at maximum sustainable yield. The average Indian Ocean catches from 2007 to 2011 were around 25 per cent higher than the maximum sustainable yield. This high fishing mortality is considered likely to be related to piracy activities that have displaced longline effort to traditional albacore areas in the southern and eastern Indian Ocean.</p> <p>Both the current and highest historical catches of albacore in the Western Tuna and Billfish Fishery are less than .05 per cent of the level of total Indian Ocean Tuna Commission area catch that would support maximum sustainable yield.</p> <p><i>Sharks</i></p> <p>A number of pelagic shark species have historically been taken as byproduct in the Western Tuna and Billfish Fishery. Although no shark species were identified as being at high risk from fishing, based on the level of effort in the fishery at the time the assessment was undertaken, an increase in effort could potentially move some species to a higher risk category. A priority action identified in the ecological risk management report for the fishery is to monitor the catch and level of interaction with sharks. Management of shark interactions in this fishery will be reviewed if the landed amount of any one shark species exceeds 50 t within a year (AFMA 2010). There is a limit of 20 sharks per trip when operating within the Australian Fishing Zone.</p> <p><i>Bait</i></p> <p>Western Tuna and Billfish Fishery pelagic longline operators may fish for bait for their own use.</p> <p><i>Southern bluefin tuna</i></p> <p>The area of the Western Tuna and Billfish Fishery overlaps with the area of the Commonwealth Southern Bluefin Tuna Fishery. Take of southern bluefin tuna is not allowed under the Western Tuna and Billfish Fishery Management Plan 2010. Some operators fishing in the Western Tuna and Billfish Fishery also take southern bluefin tuna in accordance with the Southern Bluefin Tuna Fishery Management Plan 1995. All catch of southern bluefin tuna that are not released in an alive and vigorous state has to be covered by quota under the Southern Bluefin Tuna Fishery Management Plan 1995.</p> <p style="text-align: right;"><i>...cont.</i></p>
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Byproduct Species <i>(cont.)</i>	<p>Harvest strategy</p> <p>AFMA intends to develop indicators and reference points for byproduct species as part of further development of the Australian Tuna and Billfish Fishery Harvest Strategy Framework and is supporting research to develop byproduct indicators and reference points.</p>
Gear	The Western Tuna and Billfish Fishery Management Plan 2005 sets out the permitted fishing gear — pelagic longline, minor line or purse seine equipment.
Season	The fishing season runs for 12 months commencing on 1 February and ending on 31 January the following year.
Commercial harvest 2013	<ul style="list-style-type: none"> • bigeye tuna – 91 t • broadbill swordfish – 204 t • striped marlin – 2 t • yellowfin tuna – 40 t • albacore – 14 t
Value of commercial harvest 2013	The value of catch is not reported due to the small numbers of vessel operating in the fishery.
Take by other sectors	<p>Other commercial fisheries</p> <p>Catches of tuna in other fisheries operating in the area of the Western Tuna and Billfish Fishery are generally low and restricted by small trip limits. The Eastern Tuna and Billfish Fishery operates in waters adjacent to the Western Tuna and Billfish Fishery but genetic studies have found differences between target species stocks in the Pacific Ocean compared to the Indian Ocean.</p> <p>The Western Skipjack Tuna Fishery operates in the area of the Western Tuna and Billfish Fishery. Incidental take of Western Tuna and Billfish Fishery quota species in the Western Skipjack Tuna Fishery must be covered by quota allocated under the Western Tuna and Billfish Fishery Management Plan 2010. No vessels have operated in the Western Skipjack Tuna Fishery since 2011.</p> <p>A number of Western Tuna and Billfish Fishery byproduct species which are also taken in state and Northern Territory managed fisheries are subject to trip limits set in conjunction with the relevant state fisheries management agencies.</p> <p>Recreational and charter fishing</p> <p>Recreational and game fishers also target tuna, marlin and sharks in the area of the Western Tuna and Billfish Fishery. Longtail tuna is a popular species with recreational fishers in Australia, as are marlin species. Operators in the Western Tuna and Billfish Fishery are prohibited from retaining blue marlin and black marlin and catch limits apply to the harvest of longtail tuna, in recognition of the importance of these species to recreational and charter fishing.</p> <p>The Western Tuna and Billfish Fishery Management Plan 2005 requires the take of tuna and billfish species by other users of the fishery, such as recreational fishers, to be taken into account when setting total allowable commercial catches.</p>

Commercial licences issued 2013	<p>95 boat statutory fishing rights have been issued for the Western Tuna and Billfish Fishery. Only four vessels operated in the fishery in 2013, similar to the number of participants over the past 10 years.</p>
Management	<p>The Western Tuna and Billfish Fishery is managed by AFMA under the <i>Fisheries Management Act 1991</i>, Fisheries Management Regulations 1992 and the Western Tuna and Billfish Fishery Management Plan 2005 (and associated directions, determinations and temporary orders). Specific management measures are largely implemented through conditions, as provided for under section 22(5) of the <i>Fisheries Management Act 1991</i>, on boat or gear statutory fishing rights issued according to the management plan.</p> <p>The management arrangements are described in detail in the <i>Western Tuna and Billfish Fishery (WBF) - Management Arrangements Booklet – 2014</i>.</p> <p>Management measures include:</p> <ul style="list-style-type: none"> • limited entry (a requirement to hold statutory fishing rights and quota for one or more species, nominated to an Australian vessel) • a quota management system for key target species • byproduct catch limits, generally in the form of trip limits, for a range of byproduct species (size limits also apply to school shark and gummy shark) • prohibition of the take of certain species • reporting obligations including logbooks, carriage of observers and independently verified catch disposal records. <p>The Western Tuna and Billfish Fishery Management Plan 2010 requires AFMA to establish a reviewable bycatch action plan for the fishery, which must require action to ensure that:</p> <ul style="list-style-type: none"> • information is gathered about the impact of the fishery on bycatch species • all reasonable steps are taken to minimise interactions with seabirds, marine reptiles, marine mammals and species designated as no-take species under the <i>Fisheries Management Act 1991</i> • the ecological impacts of fishing operations on habitats in the area of the fishery are minimised and kept at an acceptable level • bycatch is reduced to, or kept at, a minimum, and below a level that might threaten bycatch species. <p>The <i>Australian Tuna and Billfish Fisheries Bycatch and Discarding Workplan 1 July 2014 – 30 June 2016</i> has a focus on the bycatch of seabirds and sharks, based on the outcomes of previous ecological risk assessment processes.</p> <p>Sharks</p> <p>To reduce the impact of fishing on sharks, AFMA has:</p> <ul style="list-style-type: none"> • banned the use of wire leaders or ‘traces’ on longline branchlines in the Western Tuna and Billfish Fishery. This is intended to reduce shark mortality, as sharks are more likely to bite through synthetic fibre leaders and escape • required each vessel to carry line cutters and de-hookers to assist in releasing live sharks without harm

Management (cont.)	<ul style="list-style-type: none"> • banned the practice of finning sharks at sea. This prohibits the possession or landing of fins separate from carcasses • implemented trip limits for shark species.
Export	Catch is sold on the domestic market and exported to Japan and the USA (Patterson and Stephan 2014).
Bycatch	<p>The bycatch of species such as sharks, black and blue marlin, seabirds and marine turtles is an issue in the management of longline fisheries. Species historically recorded as bycatch from the Western Tuna and Billfish Fishery include sharks, rays, various other fish, seabirds and occasionally marine turtles and marine mammals.</p> <p>Current measures to address bycatch and discarding include:</p> <ul style="list-style-type: none"> • measures to minimise shark and seabird bycatch (see Management, above) • no-take species, and catch limits for species that are managed by state and Northern Territory fishery management agencies • research projects: <ul style="list-style-type: none"> - for example, the AFMA Research Committee (ARC) 2014 call for research included research to further develop and evaluate the harvest strategies adopted in the tropical tuna and billfish fisheries, in particular the identification of fishery indicators and reference points for byproduct and bycatch species.
Interaction with Protected Species²	<p>There is potential for fishing operations in the Western Tuna and Billfish Fishery to interact with a number of protected species, including seabirds, cetaceans, sharks and marine turtles.</p> <p>The Western Tuna and Billfish Fishery Management Plan 2005 requires that AFMA, in developing a bycatch action plan, take into account EPBC Act protected species requirements.</p> <p>As noted above, the <i>Australian Tuna and Billfish Fisheries Bycatch and Discarding Workplan 1 July 2014 – 30 June 2016</i> focuses on seabirds and sharks and a number of existing management measures act to prevent or mitigate interactions with protected species (see also Table 3). The bycatch and discarding workplan is reviewed annually and a new plan prepared every two years.</p> <p>Seabirds</p> <p>Oceanic longline fishing, the primary fishing method in the Western Tuna and Billfish Fishery, is recognised internationally as a threat to seabirds and has been listed as a key threatening process under the EPBC Act. An initial threat abatement plan was released in 1998 and has since been revised twice.</p> <p style="text-align: right;">.../cont.</p>

² 'Protected species' means all species protected under Part 13 of the EPBC Act, including whales and other cetaceans and listed threatened, listed marine and listed migratory species.

Interaction with Protected Species <i>(cont.)</i>	<p>The <i>Threat Abatement Plan 2014 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations</i> (Seabird TAP) was released in mid 2014. Section 269(1) of the EPBC Act requires that the Commonwealth must implement a threat abatement plan which applies in a Commonwealth area, for example in the Western Tuna and Billfish Fishery. The mitigation and monitoring requirements of the Seabird TAP to minimise the impact of fishing on seabirds are given effect in the Western Tuna and Billfish Fishery through conditions on longline boat statutory fishing rights.</p> <p>Specific management measures which act to minimise the threats to seabirds from longline fishing include the requirement to use tori lines, weighted lines and thawed baits and a ban on offal discharge from all vessels operating south of 20 degrees south of the Equator. No seabird interactions have been reported from the fishery since the Department's 2009 assessment of the fishery. Further information on the Seabird TAP is available from the Department's website at: http://www.antarctica.gov.au/science/southern-ocean-ecosystems-environmental-change-and-conservation/southern-ocean-fisheries/seabird-bycatch/threat-abatement-plan-seabirds.</p> <p><i>Sharks</i></p> <p>Interactions with white sharks, which are listed as threatened under the EPBC Act, are rare in the Western Tuna and Billfish Fishery.</p> <p>On 20 January 2010, longfin and shortfin mako sharks and porbeagle sharks were listed as migratory under the EPBC Act. Fishers are still permitted to retain these sharks as byproduct if brought up to the boat dead, within the total trip limits for sharks. Live caught specimens of these shark species need to be released.</p> <p><i>Marine turtles</i></p> <p>Four of the world's seven marine turtle species are known to inhabit the area of the Western Tuna and Billfish Fishery. All are listed threatened species under the EPBC Act. A number of management measures act to minimise the impact of fishing operations on marine turtles (see Table 3). Two turtles were captured during the 2012 fishing year, with both released alive.</p> <p>All interactions with protected species must be reported by fishers in their logbooks and reports submitted to AFMA. AFMA publishes quarterly reports of interactions on its website and, under a Memorandum of Understanding, provides quarterly reports of all interactions to the Department of the Environment.</p>
Ecosystem Impacts	<p>The nature of potential impacts on the ecosystem by the Western Tuna and Billfish Fishery is mainly in relation to the take of key and byproduct species and impacts on bycatch species, discussed above. No habitats were identified as high risk from the effects of pelagic longline fishing in the ecological risk assessment process.</p>

TABLE 2: PROGRESS IN IMPLEMENTATION OF RECOMMENDATIONS MADE IN THE 2009 ASSESSMENT OF THE WESTERN TUNA AND BILLFISH FISHERY

Recommendation	Progress	Recommended Action
1. Operation of the Western Tuna and Billfish Fishery (WTBF) will be carried out in accordance with the <i>Western Tuna and Billfish Fishery Management Plan 2005</i> in force under the <i>Commonwealth Fisheries Management Act 1991</i> .	The Australian Fisheries Management Authority (AFMA) has advised that the Western Tuna and Billfish Fishery has been managed under the Western Tuna and Billfish Fishery Management Plan 2005 consistent with the <i>Fisheries Management Act 1991</i> .	The Department of the Environment considers that this recommendation has been met. The Department considers that this action be continued (see Recommendation1, Table 4).
2. AFMA to inform DEWHA of any intended amendments to the Western Tuna and Billfish Fishery management arrangements that may affect the assessment of the fishery against the criteria on which EPBC Act decisions are based.	AFMA has informed the Department of Environment of changes to management arrangements in the Western Tuna and Billfish Fishery.	The Department considers that this recommendation has been met. The Department considers that this action be continued (see Recommendation2, Table 4).
3. AFMA to produce and present reports to DEWHA annually as per Appendix B to the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i> .	Annual reports have been provided to the Department.	The Department considers that this recommendation has been met. The Department considers that this action be continued (see Recommendation3, Table 4).

Recommendation	Progress	Recommended Action
<p>4. AFMA to provide final copies of the Ecological Risk Assessment (ERA) and Ecological Risk Management (ERM) reports for the WTBF by 1 December 2010, including a catch or effort level trigger within the ERM, above which the ERA is reassessed.</p>	<p>AFMA has published the sustainability assessment for fishing effects (SAFE) report (Zhou et al 2009) and the ecological risk management report for the Western Tuna and Billfish Fishery (AFMA 2010) and provided copies to the Department.</p> <p>The ecological risk management report indicates that the ecological risk assessment process for the fishery will be reviewed if effort in the fishery reaches 2 million hooks per annum, representing around 30 per cent of the peak historical effort in the fishery. This compares to a level of effort of around 200,000 to 400,000 hooks per annum in the years immediately preceding the 2010 report.</p>	<p>The Department considers that this recommendation has been met.</p>
<p>5. AFMA to continue to implement appropriate management responses to address and mitigate risks and impacts identified in the ERA and review the effectiveness of management responses at appropriate intervals, with a particular focus on chondrichthyan mortality.</p>	<p>The outcomes of the SAFE risk assessment indicated that no species were at high risk from fishing at current fishing levels. As above, the ecological risk assessment will be reviewed if effort in the fishery reaches designated trigger levels.</p> <p>Measures to reduce the impact of the fishery on sharks, summarised in Table 1, are implemented through conditions on statutory fishing rights. Following the listing of shortfin mako, longfin mako and porbeagle shark as migratory species under the EPBC Act in 2010, AFMA conducted extensive skipper education in 2011 and 2012 regarding new management arrangements for these species (retaining and trading these species is only permitted if they are already dead when brought up to the boat. Live individuals are required to be released.) Key objectives of the <i>Australian Tuna and Billfish Fisheries Bycatch and Discarding Workplan 1 July 2014 – 30 June 2016</i> include:</p> <ul style="list-style-type: none"> • improving post capture survival of chondrichthyan species • improving the understanding of catch composition in relation to chondrichthyan species. 	<p>The Department considers that this recommendation has been met.</p> <p>Given the potential impact of tuna longline fisheries on highly migratory shark species and in light of the potential for longline effort in the Western Tuna and Billfish Fishery to increase, the Department recommends that the management focus on sharks in the fishery be maintained—see Recommendation 5, Table 4.</p>

Recommendation	Progress	Recommended Action
<p>6. AFMA to:</p> <p>a. provide the results of the formal two-year review of the Bycatch and Discarding Workplan to DEWHA by 1 April 2011;</p> <p>b. by 1 December 2010, outline a new Workplan to reduce bycatch and discards in the WTBF.</p>	<p>The review of the <i>Australian Tuna and Billfish Longline Fishery Bycatch and Discarding Workplan</i> 2008-2010 culminated in the publication of a new two year workplan. The <i>Australian Tuna and Billfish Longline Fisheries Bycatch and Discarding Workplan</i> 2011-2013 was also reviewed at the end of its life and a new workplan published. The <i>Australian Tuna and Billfish Fisheries Bycatch and Discarding Workplan</i> 1 July 2014 – 30 June 2016 sets out the review process for the workplan. AFMA will:</p> <ul style="list-style-type: none"> • review the workplan after six months to check that the progress of actions is on track • review the workplan after 12 months • conduct and publish a full evaluation of the workplan after two years to assess the overall effectiveness of the workplan actions in addressing the associated bycatch risks. <p>It is intended that at the end of the two year period, the risk profile of the fisheries will also be reviewed and a new workplan developed and implemented.</p>	<p>The Department considers that this recommendation has been met.</p>

Recommendation	Progress	Recommended Action
<p>7. By 1 December 2010, AFMA to revise and implement the WTBF harvest strategy, to include:</p> <ul style="list-style-type: none"> a. an appropriate catch or effort level trigger, above which the current WTBF harvest strategy decision rules are applied; and b. a risk-based justification of the management approach in force before this trigger is reached. <p>AFMA should provide the results of the harvest strategy to the Department of Agriculture, Fisheries and Forestry (DAFF) so they can be used for the development of the whole of government approach in any negotiations of Australia's national allocation at the IOTC.</p>	<p>The 2009 Australian Government assessment of the Western Tuna and Billfish Fishery noted the low level of effort in the fishery and identified that the fishery's harvest strategy lacked information on how AFMA's risk assessment process would be applied when there was insufficient catch and effort data to apply the harvest strategy rules.</p> <p>Since that time:</p> <ul style="list-style-type: none"> • AFMA has completed the ecological risk management report for the fishery, which found that at the low effort levels at the time, no species were at high risk from fishing (AFMA 2010). The report indicates that the ecological risk assessment process for the fishery, including the need for any additional management responses, will be reviewed if effort in the fishery reaches a predetermined level—see Recommendation 4 and Recommendation 5 above • AFMA has implemented output controls for the fishery's key species. As noted in Table 1, the key species are part of much wider Indian Ocean stocks which are managed internationally by the Indian Ocean Tuna Commission. As a member of the commission, Australia claims entitlement to 5 per cent of the sustainable take of tuna and billfish in the commission area. The total allowable catches for the key species in the Western Tuna and Billfish Fishery were derived from commission estimates of the level of take in the commission area that would support maximum sustainable yield. <p>AFMA advises that the Western Tuna and Billfish Fishery uses the same harvest strategy framework as the Eastern Tuna and Billfish Fishery—the Australian Tuna and Billfish Fishery Harvest Strategy Framework. The framework was most recently reviewed between 2010 and 2012. AFMA has advised that it has commenced a further review of the framework to include the assessment and management of byproduct species and has called for research proposals to develop indicators and reference points for byproduct species.</p>	<p>The Department considers that this recommendation has been partially met.</p> <p>The Department notes that development of a formal framework for byproduct species in Australia's tropical tuna fisheries is underway and supports the Australian Fisheries Management Authority's approach to this work—see Recommendation 4, Table 4.</p>

Recommendation	Progress	Recommended Action
	<p style="text-align: right;">.../cont.</p> <p>The Department of Agriculture takes into account domestic fishery management arrangements such as the harvest strategy framework in developing Australia's whole of government position in the Indian Ocean Tuna Commission (see Recommendation 8 below).</p>	
<p>Recommendation 8: DAFF, in consultation with relevant agencies, to:</p> <ul style="list-style-type: none"> a. continue to engage in the IOTC with the aim of improving the effectiveness of the organisation in managing and conserving target, byproduct and bycatch species in the WTBF, in the pursuit of EBFM. b. consider the WTBF Harvest Strategy in developing the whole of government position for negotiations related to the WTBF in the IOTC, and to advocate the Commonwealth Fisheries Harvest Strategy Policy as an example of best practice in setting sustainable catch levels. 	<ul style="list-style-type: none"> a. Australia continues to participate in annual meetings of the Indian Ocean Tuna Commission and its subcommittees and continues to promote sustainable management of target, byproduct and bycatch species under the competence of the commission. b. Australia's whole of government position in the Indian Ocean Tuna Commission is developed in consultation with AFMA and other relevant agencies and is consistent with domestic management arrangements for the Western Tuna and Billfish Fishery and with the <i>Commonwealth Fisheries Harvest Strategy Policy and Guidelines</i>. Within the commission, Australia continues to advocate for and improve the capacity of the commission to adopt a best practice harvest strategy consistent with the harvest strategy policy. 	<p>The Department considers that this recommendation has been met.</p>

TABLE 3: THE DEPARTMENT OF THE ENVIRONMENT’S ASSESSMENT OF THE WESTERN TUNA AND BILLFISH FISHERY AGAINST THE REQUIREMENTS OF THE EPBC ACT RELATED TO DECISIONS MADE UNDER PART 13 AND PART 13A

Please Note – the table below is not a complete or exact representation of the EPBC Act. It is intended as a summary of relevant sections and components of the EPBC Act to provide advice on the fishery in relation to decisions under Part 13 and Part 13A. A complete version of the EPBC Act can be found at <http://www.comlaw.gov.au/>.

Part 13

Division 1 Listed threatened species Section 208A Minister may accredit plans or regimes	The Department of the Environment’s assessment of the Western Tuna and Billfish Fishery
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <ul style="list-style-type: none"> i. made by a State or self-governing Territory; and ii. in force under a law of the State or self-governing Territory; <p>if satisfied that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed threatened species (other than conservation dependent species) are not killed or injured as a result of the fishing; and</p>	<p>The Western Tuna and Billfish Fishery will be managed under the Western Tuna and Billfish Fishery Management Plan 2005 in force under the <i>Fisheries Management Act 1991</i>.</p> <p>The Western Tuna and Billfish Fishery Management Plan 2005 was most recently accredited under section 208A (Part 13) in February 2010. While there have been amendments to the plan since that time, the Department considers that those amendments do not materially change the requirement for fishers to take steps to ensure that members of listed threatened species are not killed or injured as a result of the fishing.</p> <p>The Western Tuna and Billfish Fishery Management Plan 2005 requires the Australian Fisheries Management Authority (AFMA) to implement a bycatch action plan for the fishery. In developing a bycatch action plan, the management plan requires that the authority take into account the requirements under the EPBC Act for the protection of listed threatened species. The <i>Australian Tuna and Billfish Fisheries Bycatch and Discarding Workplan 1 July 2014 – 30 June 2016</i> outlines bycatch action priorities for Australia’s tropical tuna fisheries, including for protected species, and is reviewed regularly on a pre-determined basis.</p>

<p>Division 1 Listed threatened species</p> <p>Section 208A Minister may accredit plans or regimes</p>	<p>The Department of the Environment's assessment of the Western Tuna and Billfish Fishery</p>
	<p>The management plan also provides for:</p> <ul style="list-style-type: none"> • limited entry to the fishery, thereby constraining total fishing effort — fishers must hold statutory fishing rights issued under the management plan and must hold quota for those target species they wish to retain • ecological risk assessments and risk management reports • catch limits for key target species and a number of incidentally caught species. <p>The Fisheries Management Regulations 1992 require that Commonwealth fishing concession holders must ensure that, as far as practicable, there is no interaction with a protected species during a fishing trip and that all interactions with EPBC Act protected species are reported in relevant logbooks. The regulations also make provision for observer monitoring of fishing activities.</p> <p>Conditions applied under section 22(5) of the <i>Fisheries Management Act 1991</i> on statutory fishing rights issued under the management plan implement specific management measures which act to reduce the likelihood of capture and mortality of listed threatened species — for example:</p> <ul style="list-style-type: none"> • compulsory carriage of line cutters and de-hookers to assist in releasing turtles and sharks in the water • the prohibition of the use of wire traces with longline gear, to allow sharks to bite free • prohibition of shark finning • the requirements of the <i>Threat Abatement Plan 2014 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations</i> (Seabird TAP) (see Table 1). <p>The Department considers that the Western Tuna and Billfish Fishery Management Plan 2005 as administered by AFMA requires persons engaged in fishing under the plan to take all reasonable steps to ensure that members of listed threatened species are not killed or injured as a result of the fishing.</p>

<p>Division 1 Listed threatened species</p> <p>Section 208A Minister may accredit plans or regimes</p>	<p>The Department of the Environment's assessment of the Western Tuna and Billfish Fishery</p>
<p>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the survival or recovery in nature of the species</p>	<p>Taking into account the management measures in place (summarised above and in Table 1), the most recent ecological risk management report for the fishery found no listed threatened species at high risk from the effects of fishing (AFMA 2010). Given the conclusions of the ecological risk management report and that the number of reported and observed interactions with listed threatened species in the fishery is low, the Department considers that the current operation of the Western Tuna and Billfish Fishery is not likely to adversely affect the survival or recovery in nature of any listed threatened species.</p>

Part 13 (cont.)

<p>Division 2 Migratory species</p> <p>Section 222A Minister may accredit plans or regimes</p>	<p>The Department of the Environment's assessment of the Western Tuna and Billfish Fishery</p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(a) a plan of management within the meaning of section 17 of the <i>Fisheries Management Act 1991</i>;</p> <p>if satisfied that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing; and</p>	<p>The Western Tuna and Billfish Fishery will be managed under the Western Tuna and Billfish Fishery Management Plan 2005 in force under the <i>Fisheries Management Act 1991</i>.</p> <p>The Western Tuna and Billfish Fishery Management Plan 2005 was most recently accredited under section 222A (Part 13) in February 2010. While there have been amendments to the plan since that time, the Department considers that those amendments do not materially change the requirement for fishers to take steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing.</p> <p>The Western Tuna and Billfish Fishery Management Plan 2005 requires AFMA to implement a bycatch action plan for the fishery. In developing a bycatch action plan, the management plan requires that the authority take into account the requirements under the EPBC Act for the protection of listed migratory species. The <i>Australian Tuna and Billfish Fisheries Bycatch and Discarding Workplan 1 July 2014 – 30 June 2016</i> outlines bycatch action priorities for Australia's tropical tuna fisheries, including for protected species, and is reviewed regularly on a pre-determined basis.</p> <p>The management plan also provides for:</p> <ul style="list-style-type: none"> • limited entry to the fishery, thereby constraining total fishing effort — fishers must hold statutory fishing rights issued under the management plan and must hold quota for those target species they wish to retain • ecological risk assessments and risk management reports • catch limits for key target species and a number of incidentally caught species.

Division 2 Migratory species Section 222A Minister may accredit plans or regimes	The Department of the Environment's assessment of the Western Tuna and Billfish Fishery
	<p>The Fisheries Management Regulations 1992 require that Commonwealth fishing concession holders must ensure that, as far as practicable, there is no interaction with a protected species during a fishing trip and that all interactions with EPBC Act protected species are reported in relevant logbooks. The regulations also make provision for observer monitoring of fishing activities.</p> <p>Conditions applied under section 22(5) of the <i>Fisheries Management Act 1991</i> on statutory fishing rights issued under the management plan implement specific management measures which act to reduce the likelihood of capture and mortality of listed migratory species — for example:</p> <ul style="list-style-type: none"> • compulsory carriage of line cutters and de-hookers to assist in releasing turtles and sharks in the water • the prohibition of the use of wire traces with longline gear, to allow sharks to bite free • prohibition of shark finning • the requirements of the Seabird TAP (see Table 1). <p>The Department considers that the Western Tuna and Billfish Fishery Management Plan 2005 as administered by AFMA requires persons engaged in fishing under the plan to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing.</p>
<p>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the conservation status of a listed migratory species or a population of that species.</p>	<p>Given the requirements of the Seabird TAP and the implementation of management measures which act to minimise the capture and mortality of marine turtles and sharks (see above and Table 1), the Department considers that the current operation of the Western Tuna and Billfish Fishery is not likely to adversely affect the conservation status of a listed migratory species or a population of that species.</p>

Part 13 (cont.)

<p>Division 3 Whales and other cetaceans</p> <p>Section 245 Minister may accredit plans or regimes</p>	<p>The Department of the Environment's assessment of the Western Tuna and Billfish Fishery</p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(a) a plan of management within the meaning of section 17 of the <i>Fisheries Management Act 1991</i>;</p> <p>if satisfied that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing; and</p>	<p>The Western Tuna and Billfish Fishery will be managed under the Western Tuna and Billfish Fishery Management Plan 2005 in force under the <i>Fisheries Management Act 1991</i>.</p> <p>The Western Tuna and Billfish Fishery Management Plan 2005 was most recently accredited under section 245 (Part 13) in February 2010. While there have been amendments to the plan since that time, the Department considers that those amendments do not materially change the requirement for fishers to take steps to ensure that whales and other cetaceans are not killed or injured as a result of the fishing.</p> <p>The Western Tuna and Billfish Fishery Management Plan 2005 requires AFMA to implement a bycatch action plan for the fishery. In developing a bycatch action plan, the management plan requires that the authority take into account the protection given to whales and other cetaceans under Division 3 of Part 13 of the EPBC Act. The <i>Australian Tuna and Billfish Fisheries Bycatch and Discarding Workplan 1 July 2014 – 30 June 2016</i> outlines bycatch action priorities for Australia's tropical tuna fisheries, including for protected species, and is reviewed regularly on a pre-determined basis.</p> <p>The management plan also provides for:</p> <ul style="list-style-type: none"> • limited entry to the fishery, thereby constraining total fishing effort — fishers must hold statutory fishing rights issued under the management plan and must hold quota for those target species they wish to retain • ecological risk assessments and risk management reports • catch limits for key target species and a number of incidentally caught species.

Division 3 Whales and other cetaceans Section 245 Minister may accredit plans or regimes	The Department of the Environment's assessment of the Western Tuna and Billfish Fishery
	<p>The Fisheries Management Regulations 1992 require that Commonwealth fishing concession holders must ensure that, as far as practicable, there is no interaction with a protected species during a fishing trip and that all interactions with EPBC Act protected species are reported in relevant logbooks. The regulations also make provision for observer monitoring of fishing activities.</p> <p>Mandatory management measures, specified as conditions on boat statutory fishing rights, which reduce the likelihood of impact on marine mammal species generally, including cetaceans, include carrying line cutters and de-hookers on board all fishing vessels to assist in the release of marine mammals in a healthy state when they have been brought up to the boat.</p> <p>The Department considers that the Western Tuna and Billfish Fishery Management Plan 2005 as administered by AFMA requires persons engaged in fishing under the plan to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing.</p>
<p>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the conservation status of a species of cetacean or a population of that species.</p>	<p>Taking into account the management measures in place, the most recent ecological risk management report for the fishery (AFMA 2012) found no cetacean species at high risk from the effects of fishing. Accordingly, the Department considers that the current operation of the Western Tuna and Billfish Fishery is not likely to adversely affect the conservation status of a species of cetacean or a population of that species.</p>

Part 13 (cont.)

<p>Division 4 Listed marine species</p> <p>Section 265 Minister may accredit plans or regimes</p>	<p>The Department of the Environment's assessment of the Western Tuna and Billfish Fishery</p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(a) a plan of management within the meaning of section 17 of the <i>Fisheries Management Act 1991</i>;</p> <p>if satisfied that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing; and</p>	<p>The Western Tuna and Billfish Fishery will be managed under the Western Tuna and Billfish Fishery Management Plan 2005 in force under the <i>Fisheries Management Act 1991</i>.</p> <p>Listed marine species of seabirds and marine turtles are known to inhabit the area of the Western Tuna and Billfish Fishery and there is potential for pelagic longline fishing gear to interact with these species groups.</p> <p>The Western Tuna and Billfish Fishery Management Plan 2005 was most recently accredited under section 265 (Part 13) in February 2010. While there have been amendments to the plan since that time, the Department considers that those amendments do not materially change the requirement for fishers to take steps to ensure that members of listed marine species are not killed or injured as a result of the fishing.</p> <p>The Western Tuna and Billfish Fishery Management Plan 2005 requires AFMA to implement a bycatch action plan for the fishery. In developing a bycatch action plan, the management plan requires that the authority take into account the requirements under the EPBC Act for the protection of listed marine species. The <i>Australian Tuna and Billfish Fisheries Bycatch and Discarding Workplan 1 July 2014 – 30 June 2016</i> outlines bycatch action priorities for Australia's tropical tuna fisheries, including for protected species, and is reviewed regularly on a pre-determined basis.</p> <p>The management plan also provides for:</p> <ul style="list-style-type: none"> • limited entry to the fishery, thereby constraining total fishing effort — fishers must hold statutory fishing rights issued under the management plan and must hold quota for those target species they wish to retain

Division 4 Listed marine species Section 265 Minister may accredit plans or regimes	The Department of the Environment's assessment of the Western Tuna and Billfish Fishery
	<ul style="list-style-type: none"> • ecological risk assessments and risk management reports • catch limits for key target species and a number of incidentally caught species. <p>The Fisheries Management Regulations 1992 require that Commonwealth fishing concession holders must ensure that, as far as practicable, there is no interaction with a protected species during a fishing trip and that all interactions with EPBC Act protected species are reported in relevant logbooks. The regulations also make provision for observer monitoring of fishing activities.</p> <p>Statutory fishing right conditions implement specific management measures which act to reduce the likelihood of capture and mortality of listed marine species - for example:</p> <ul style="list-style-type: none"> • compulsory carriage of line cutters and de-hookers to assist in releasing turtles • the requirement to use circle hooks on shallow sets to reduce longline capture of marine turtles and improve the chances of survival of any turtles caught • the requirements of the Seabird TAP (see Table 1). <p>The Department considers that the Western Tuna and Billfish Fishery Management Plan 2005 as administered by AFMA requires persons engaged in fishing under the plan to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing.</p>
<p>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the conservation status of a listed marine species or a population of that species.</p>	<p>Given the mitigation measures employed in the fishery (see above and Table 1), the Department considers that the current operation of the Western Tuna and Billfish Fishery is not likely to adversely affect the conservation status of a listed marine species or a population of that species.</p>

Part 13 (cont.)

Section 303AA Conditions relating to accreditation of plans, regimes and policies	The Department of the Environment's assessment of the Western Tuna and Billfish Fishery
(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.	The Department recommends that the management regime for the Western Tuna and Billfish Fishery be accredited under sections 208A, 222A, 245 and 265.
(2) The Minister may accredit a plan, regime or policy under that section even though he or she considers that the plan, regime or policy should be accredited only: (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. In such a case, the instrument of accreditation is to specify the period, circumstances or condition.	The Department considers that no conditions are required for the accreditation of the management regime for the Western Tuna and Billfish Fishery under Part 13.
(7) The Minister must, in writing, revoke an accreditation if he or she is satisfied that a condition of the accreditation has been contravened.	

Part 13A

Section 303BA Objects of Part 13A

(1) The objects of this Part are as follows:

- (a) to ensure that Australia complies with its obligations under CITES³ and the Biodiversity Convention;
- (b) to protect wildlife that may be adversely affected by trade;
- (c) to promote the conservation of biodiversity in Australia and other countries;
- (d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way;
- (e) to promote the humane treatment of wildlife;
- (f) to ensure ethical conduct during any research associated with the utilisation of wildlife; and
- (h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife.

³ Convention on International Trade in Endangered Species of Wild Fauna and Flora

Part 13A (cont.)

Section 303DC Minister may amend list	The Department of the Environment's assessment of the Western Tuna and Billfish Fishery
<p>(1) Minister may, by instrument published in the Gazette, amend the list referred to in section 303DB (list of exempt native specimens) by:</p> <ul style="list-style-type: none"> (a) including items in the list; (b) deleting items from the list; or (c) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; or (d) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or (e) correcting an inaccuracy or updating the name of a species. 	<p>The Department recommends that specimens derived from species harvested in the Western Tuna and Billfish Fishery, other than:</p> <ul style="list-style-type: none"> • specimens that belong to taxa listed under Part 13 of the EPBC Act, and • specimens that belong to taxa listed under section 303CA of the EPBC Act (Australia's CITES list) <p>be included in the list of exempt native specimens for a period of five years, until 28 November 2019.</p>
<p>(1A) In deciding whether to amend the list referred to in section 303DB (list of exempt native specimens) to include a specimen derived from a commercial fishery, the Minister must rely primarily on the outcomes of any assessment in relation to the fishery carried out for the purposes of Division 1 or 2 of Part 10.</p>	<p>The impact of actions under the proposed Western Tuna and Billfish Fishery Management Plan 2005 were assessed under Part 10 of the EPBC Act in December 2004. As a result of that assessment, the Department considered that actions taken in accordance with the fishery's management plan would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area.</p>

Section 303DC Minister may amend list	The Department of the Environment's assessment of the Western Tuna and Billfish Fishery
<p>(1C) The above does not limit the matters that may be taken into account in deciding whether to amend the list referred to in section 303DB (list of exempt native specimens) to include a specimen derived from a commercial fishery.</p>	<p>It is not possible to list exhaustively the factors that you may take into account in amending the list of exempt native specimens. The objects of Part 13A, which are set out above this table, provide general guidance in determining factors that might be taken into account. A matter that is relevant to determining whether an amendment to the list is consistent with those objects is likely to be a relevant factor.</p> <p>The Department considers that the amendment of the list of exempt native specimens to include product taken in the Western Tuna and Billfish Fishery (excluding specimens of protected species and specimens of CITES listed species) would be consistent with the provisions of Part 13A as:</p> <ul style="list-style-type: none"> • there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1) • any CITES listed species which may be captured in the fishery are excluded from the inclusion in the list of exempt native specimens • the operation of the fishery during the period of the recommended inclusion (five years) is unlikely to be unsustainable and threaten biodiversity • the Environment Protection and Biodiversity Conservation Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.

Section 303DC Minister may amend list	The Department of the Environment's assessment of the Western Tuna and Billfish Fishery
<p>(3) Before amending the list referred to in section 303DB (list of exempt native specimens), the Minister:</p> <ul style="list-style-type: none"> (a) must consult such other Minister or Ministers as the Minister considers appropriate; and (b) must consult such other Minister or Ministers of each State and self-governing Territory as the Minister considers appropriate; and (c) may consult such other persons and organisations as the Minister considers appropriate. 	<p>The Department considers that the consultation requirements have been met.</p> <p>The 2014 application for the Western Tuna and Billfish Fishery received from the Australian Fisheries Management Authority (AFMA) was released for public comment from 22 August to 19 September 2014. The public comment period sought comment on:</p> <ul style="list-style-type: none"> • the proposal to amend the list of exempt native specimens to include product derived from the Western Tuna and Billfish Fishery • AFMA's application. <p>One comment was received.</p>
<p>(5) A copy of an instrument made under section 303DC is to be made available for inspection on the Internet.</p>	<p>The instrument amending the list of exempt native specimens derived from the Western Tuna and Billfish Fishery, made under section 303DC, will be gazetted and made available through the Department's website.</p>

Part 12

Section 176 Bioregional Plans	The Department of the Environment's assessment of the Western Tuna and Billfish Fishery
<p>(5) Subject to this Act, the Minister must have regard to a bioregional plan in making any decision under this Act to which the plan is relevant.</p>	<p>The area of the Western Tuna and Billfish Fishery partially overlaps with the South-west Marine Region and the North-west Marine Region. Bycatch associated with commercial and recreational fishing activities is identified as a widespread pressure on the conservation values of these regions. The <i>Marine Bioregional Plan for the North-west Marine Region 2012</i> and the <i>Marine Bioregional Plan for the South-west Marine Region 2012</i> identify a number of regional priorities, some of which are relevant to the Western Tuna and Billfish Fishery. In particular, bycatch from commercial fishing activities has been assessed as <i>of concern</i> for marine turtles, foraging seabirds and several species of whales.</p> <p>Management measures are in place and, through the <i>Australian Tuna and Billfish Fisheries Bycatch and Discarding Workplan 1 July 2014 – 30 June 2016</i>, are continuously being reviewed, with the objective of reducing the impact of fishing operations on bycatch species. As discussed in Table 1, AFMA is required to implement the <i>Threat Abatement Plan 2014 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations</i> in Commonwealth waters, including the Western Tuna and Billfish Fishery. The mitigation and monitoring requirements of the threat abatement plan to minimise the impact of fishing on seabirds are given effect in the fishery through conditions on longline boat statutory fishing rights.</p>

Part 16

Section 391 Minister must consider precautionary principle in making decisions	The Department of the Environment's assessment of the Western Tuna and Billfish Fishery
(1) The Minister must take account of the precautionary principle in making a decision under section 303DC and/or section 303FN, to the extent he or she can do so consistently with the other provisions of this Act.	Recognising the risks and uncertainties associated with the operations of the Western Tuna and Billfish Fishery, AFMA has put in place precautionary management arrangements for the fishery, summarised in Table 1. The utilisation of ecological risk assessments, harvest strategies containing harvest control rules, a bycatch and discarding workplan and the implementation of the <i>Threat Abatement Plan 2014 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations</i> is considered to provide a means by which damage to the environment could be avoided.
(2) The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.	

THE DEPARTMENT OF THE ENVIRONMENT'S FINAL RECOMMENDATIONS TO THE AUSTRALIAN FISHERIES MANAGEMENT AUTHORITY FOR THE WESTERN TUNA AND BILLFISH FISHERY

The material submitted by the Australian Fisheries Management Authority (AFMA) indicates that the Western Tuna and Billfish Fishery operates in accordance with the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*.

Stock Status and Recovery

Output controls in the form of quota statutory fishing rights for the fishery's key species were introduced in the fishery in 2010. Trip limits and other measures to limit take (see Table 1) apply to many species caught incidentally while targeting the key species. The Australian Fisheries Management Authority intends to develop indicators and reference points for byproduct species as part of further development of the harvest strategy framework for Australia's tropical tuna fisheries.

The Department considers that the management measures in place in the Western Tuna and Billfish Fishery are sufficient to ensure that the fishery is conducted in a manner that does not lead to overfishing. While some species in the wider Indian Ocean region are likely to be classified as overfished and/or subject to overfishing from time to time, the Department is satisfied that fishing within the total allowable catches in the Western Tuna and Billfish Fishery would not be detrimental to recovery of the stocks (see Table 1).

Ecosystem Impacts

Taking into account:

- the 2010 ecological risk management report for the fishery
- the management measures applying to retained and incidentally caught species
- designated no-take species
- a bycatch and discarding workplan, reviewed annually
- the implementation of the *Threat Abatement Plan 2014 for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations*

the Department considers that fishing operations are managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.

Conclusion

Given the management measures in place, the Department considers that product taken in the Western Tuna and Billfish Fishery should be included in the list of exempt native specimens under Part 13A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for five years, until 28 November 2019. To ensure that the decisions for the Western Tuna and Billfish Fishery under the EPBC Act continue to be valid, and to contain and minimise the risks in the longer term, the recommendations listed in Table 4 have been made.

TABLE 4: WESTERN TUNA AND BILLFISH FISHERY ASSESSMENT – SUMMARY OF ISSUES AND RECOMMENDATIONS, NOVEMBER 2014

Issue	Recommendation
<p>General Management</p> <p>Export decisions relate to the arrangements in force at the time of the decision. To ensure that these decisions remain valid and export approval continues uninterrupted, the Department of the Environment needs to be advised of any changes that are made to the management regime and make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision. This includes operational and legislated amendments that may affect sustainability of the target species or negatively impact on byproduct, bycatch, protected species or the ecosystem.</p>	<p>Recommendation 1: Operation of the Western Tuna and Billfish Fishery will be carried out in accordance with the management regime for the fishery made under the <i>Fisheries Management Act 1991</i>, Fisheries Management Regulations 1992 and the Western Tuna and Billfish Fishery Management Plan 2005.</p> <p>Recommendation 2: The Australian Fisheries Management Authority to inform the Department of the Environment of any intended amendments to the Western Tuna and Billfish Fishery management arrangements that may affect the assessment of the fishery against the criteria on which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are based.</p>
<p>Annual Reporting</p> <p>It is important that reports be produced and presented to the Department annually for the performance of the fishery and progress in implementing the recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration. Annual reports should follow Appendix B to the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i> and include a description of the fishery, management arrangements in place, research and monitoring outcomes, recent catch data for all sectors of the fishery, status of target stock, interactions with protected species, impacts of the fishery on the ecosystem in which it operates and progress in implementing recommendations. Electronic copies of the guidelines are available from the Department's website at http://www.environment.gov.au/resource/guidelines-ecologically-sustainable-management-fisheries.</p>	<p>Recommendation 3: The Australian Fisheries Management Authority to produce and present reports to the Department of the Environment annually as per Appendix B to the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>

Issue	Recommendation
<p><i>Sustainable management of non-quota species (including bycatch)</i></p> <p>To ensure that catch levels are sustainable, target species in Commonwealth fisheries (excluding highly migratory species for which the Australian catch is a relatively small proportion of the stock—see Table 1, Table 2) are managed under a harvest strategy framework that utilises performance measures and decision rules to determine recommended biological catches which inform the setting of total allowable commercial catches. At present, there is no comparable framework that ensures that the fishing-related mortality of byproduct and bycatch species is sustainable.</p> <p>Catches of non-quota species from the Western Tuna and Billfish Fishery in recent years include:</p> <ul style="list-style-type: none"> • albacore – approximately 15 t per annum • other fin fish such as mahi mahi and rudderfish (see Table 1) <ul style="list-style-type: none"> – less than 10 t per annum combined • sharks – less than 1 t per annum - predominantly: <ul style="list-style-type: none"> - shortfin mako shark (<i>Isurus oxyrinchus</i>) - blue shark (<i>Prionace glauca</i>) - crocodile shark (<i>Pseudocarcharias kamoharai</i>). <p>The current volumes of bycatch and discarding of quota species also appear to be low.</p> <p>Catches of quota species in the fishery from the past four years are at levels less than approximately 10 per cent of historical highest catches of yellowfin tuna, broadbill swordfish and striped marlin and between 0.5 per cent and 10 per cent of the annual total allowable catches for all quota species⁴. Should the utilisation of quota increase, it will be important that the fishery management framework ensures that the fishing-related mortality of byproduct and bycatch species in the Western Tuna and Billfish fishery is sustainable.</p> <p>Since the 2009 EPBC Act assessment of the fishery, AFMA has commenced a review of the Australian Tuna and Billfish Harvest Strategy Framework, including to incorporate the assessment and management of key byproduct and bycatch species. .../cont.</p>	<p>Recommendation 4: The Australian Fisheries Management Authority, in accordance with the reviews of the harvest strategy policy for Commonwealth fisheries and the Commonwealth Policy on Fisheries Bycatch, to continue to develop and implement a formal framework applicable to the Western Tuna and Billfish Fishery to guide the management of non-quota and bycatch species, to include objectives, performance measures, management responses and information requirements as appropriate.</p>

⁴ See Table 1 for a description of the TACC setting process.

Issue	Recommendation
<p>The Department recommends that the revised harvest strategy framework be completed, taking into account the results of relevant reviews and any relevant research outcomes relating to the assessment and management of non-quota and bycatch species. Ideally, the framework would clearly communicate how elements of the framework would be activated should catch or effort increase above risk based thresholds.</p>	

Issue	Recommendation
<p><i>Sustainable management of sharks</i></p> <p>Australia has a high diversity of shark species, which has generated national and international interest in the conservation and long term management of Australian sharks. Sharks worldwide are generally considered more vulnerable to fisheries impacts than bony fish, due to their slow growth, late maturation and lower reproductive output. A number of shark (and ray) species have been included on international threatened species lists in recent years, such as the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals—CMS) and the Convention on International Trade in Endangered Species of Fauna and Flora (CITES), and this trend appears likely to continue.</p> <p>Less than 1 t of shark was harvested from the Western Tuna and Billfish Fishery in the 2011 and 2012 fishing seasons, representing less than one per cent of the total catch. The predominant species caught were shortfin mako shark and blue shark. Various ray species have also been recorded historically as bycatch.</p> <p>The 2009 EPBC Act assessment noted that the catch of sharks in the years preceding the assessment was high relative to effort, particularly for blue shark (byproduct and discarded), crocodile shark (bycatch) and shortfin mako shark (byproduct and discarded).</p> <p>The ecological risk assessment for the Western Tuna and Billfish Fishery identified three shark species as being at high risk in the fishery—dusky shark (<i>Carcharhinus obscurus</i>), porbeagle shark (<i>Lamna nasus</i>) and white shark (<i>Carcharodon carcharius</i>) (Webb et al. 2007). However, taking into account the low level of effort in the fishery at the time, the Sustainability Assessment for Fishing Effects (SAFE) assessment of the fishery found no species at high risk (Zhou et al. 2009). The ecological risk management report for the fishery provides for the ecological risk assessment to be repeated if the level of effort exceeds a precautionary trigger (AFMA 2010).</p> <p>Within Australian waters, a number of Western Tuna and Billfish Fishery shark species are also caught in Western Australian and other Commonwealth managed fisheries. Should increase in effort result in increasing overlap of Western Tuna and Billfish Fishery fishing with other fisheries, the cumulative impact of all fishing related mortality becomes increasingly important in the sustainability of susceptible species (see also Recommendation 4).</p> <p style="text-align: right;">.../cont.</p>	<p><i>Recommendation 5:</i></p> <p>The Australian Fisheries Management Authority to:</p> <ol style="list-style-type: none"> a. continue to determine the extent of the impact of fishing in the Western Tuna and Billfish Fishery on shark species, including to: <ol style="list-style-type: none"> i. identify the species impacted ii. develop, document and implement appropriate management measures to mitigate impacts on shark species identified through ecological risk assessments, protected species listing and/or other processes b. continue and encourage further co-operation with relevant jurisdictions to pursue increased knowledge and complementary management of shark species identified through the above processes across fisheries and across jurisdictions.

Issue	Recommendation
<p>Sharks are a significant byproduct in many Indian Ocean Tuna Commission (IOTC) longline tuna fisheries, the key species being:</p> <ul style="list-style-type: none"> • blue shark • shortfin mako shark • scalloped hammerhead shark (<i>Sphyrna lewini</i>) • silky shark (<i>Carcharhinus falciformis</i>) • bigeye thresher shark (<i>Alopias superciliosus</i>) • pelagic thresher shark (<i>Alopias pelagicus</i>). <p>In 2012, Australia articulated its priorities for actions to improve shark management through Shark-Plan 2, the <i>National Plan of Action for Shark Conservation and Management 2012</i>. Consistent with Shark-Plan 2, to assist with international efforts to manage globally threatened shark stocks, the Department recommends that the species of sharks caught in the Western Tuna and Billfish Fishery continue to be accurately recorded, to enable the extent of impact to be determined. This should inform the implementation of appropriate management measures for shark species identified through research and protected species listing, CITES non-detriment finding and ecological risk assessment processes. Improved information and management of these species will contribute to mitigating the impact on Australian populations of shark species that are potentially at risk internationally.</p> <p>The Department considers that a formal framework for managing sharks and rays taken as byproduct is likely to provide improved mechanisms for ensuring the sustainability of the catch of these species (see also Recommendation 4).</p>	

REFERENCES

- AFMA (Australian Fisheries Management Authority) (2010) *Ecological risk management: report for the Western Tuna and Billfish Fishery—March 2010*. AFMA. Canberra.
- IOTC (Indian Ocean Tuna Commission) (2013) Status of the Indian Ocean striped marlin (MLS: *Tetrapturus audax*) resource.
- Patterson H (2014) *International fishery management arrangements*. in Georgeson L, Stobutzki I & Curtotti R (eds) (2014) *Fishery status reports 2013–14*. Australian Bureau of Agricultural and Resource Economics and Sciences. Canberra.
- Patterson H and Stephan M (2014) *Western Tuna and Billfish Fishery*. in Georgeson L, Stobutzki I & Curtotti R (eds) (2014) *Fishery status reports 2013–14*. Australian Bureau of Agricultural and Resource Economics and Sciences. Canberra.
- Zhou S, Fuller M and Smith T (2009) *Rapid quantitative risk assessment for fish species in additional seven Commonwealth fisheries*, report to AFMA, Canberra.

ACRONYMS

AFMA	Australian Fisheries Management Authority
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DEWHA	Department of the Environment, Water, Heritage and the Arts
DAFF	Department of Agriculture, Fisheries and Forestry
EBFM	Ecologically based fisheries management
ERA	Ecological risk assessment
ERM	Ecological risk management
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
HSP	Harvest Strategy Policy
IOTC	Indian Ocean Tuna Commission
SAFE	Sustainability assessment for fishing effects
WTBF	Western Tuna and Billfish Fishery