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Australia's regional fisheries engagement

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Photo of the *Southern Champion*, Austral Fisheries 87.19 metres trawler, in heavy seas surrounding Heard Island. Photo courtesy Austral Fisheries.

EXECUTIVE SUMMARY AND RECOMMENDATIONS

There's a need for a whole-of-government approach to Australia's external fisheries policy that recognises clear linkages between fisheries and foreign, trade, and strategic policy.

Our future fisheries engagement requires adequate resourcing, both financially and in the human resources necessary for its implementation.

Extending and complementing current stakeholder engagement practices is the key to this approach.

Regional fishery management organisations (RFMOs) and arrangements allow Australia to promote a strong approach on sustainable and responsible fishing practices and develop regional instruments to protect our fish stocks and wider regional interests.

Australia should commit to improving the RFMOs: we need to maintain our seat at the table and use it to assert our interests.

Australia has useful assets, especially fisheries science and management arrangements, to pursue our regional fisheries interests, and we should make better use of various levers to pursue those interests.

The Pacific

The importance of fisheries as a key economic driver in the Pacific region continues to grow. The offshore tuna sector provides around US\$350 million in direct revenues and makes an equally significant contribution to GDP, employment and investment. For the small island states in particular, the sector is critical and a potential economic 'game-changer'. As a result of more effective management, and arising from the Pacific island countries' implementation of the vessel day-scheme through the Parties to the Nauru Agreement, revenues have increased by as much as 500% over the past five years.

Ensuring the sustainability of the stocks is now a key focus for all regional stakeholders. Work to put in place a framework that ensures fish stocks are managed sustainably is challenged by overfishing and the capacity of modern fleets.

Maintaining access to export markets and depressed tuna prices are enduring issues. Inshore fisheries are threatened by population growth, overexploitation, climate change and environmental factors. The sector struggles to secure adequate recognition and funding from the broader donor community and from Pacific island governments.

While fisheries are now one of our six top aid areas, we should make the Pacific our key regional fisheries priority: fisheries in this region are in many ways at a tipping point, and the next few years will be critical.

Australia's regional fisheries engagement, as it relates to both near-shore coastal fisheries that contribute directly to food security and large offshore fisheries that mainly generate foreign exchange and involve non-national investment, should be viewed as a whole-of-government exercise. This is about informing Australia's strategic policy for economic, diplomatic and regional security investments.

We're well placed to help in capacity building, fisheries science and maritime surveillance and enforcement (boosted by the new phase of the Pacific Patrol Boat Program) and in facilitating regional strategic discussions about sustainable returns from fisheries for the Pacific islands.

We should reinvigorate our historical position as a respected and valued influence in regional fisheries affairs.

Indian Ocean

Australia can play a key role in building confidence between Indian Ocean Tuna Commission members and the organisation. Our expertise in monitoring, control and surveillance offers opportunities to build regional capacity.

Our membership of the Indian Ocean Rim Association provides opportunities to advance our fisheries and broader political interests in Indian Ocean cooperation.

We need to continue a sustained dialogue with the Commission for the Conservation of Southern Bluefin Tuna members to ensure that our position and strategy for the southern bluefin tuna fishery are understood.

Bilateral fisheries linkages with Indonesia and India are important. Australia should engage with India and Indonesia to build on shared interests in eastern Indian Ocean fisheries to strengthen regional management.

We should include fisheries issues on the agenda of our annual high-level bilateral strategic dialogue with China, and use this to strengthen links with China in the Indo-Pacific.

Southern Ocean

Australia has longstanding strategic interests in the Southern Ocean, linked to our sovereign interests in the sub-Antarctic and the Australian Antarctic Territory.

Our fishing industry operates a small number of large vessels fishing for valuable Patagonian toothfish and mackerel icefish off the Heard Island and McDonald Islands Territory and Macquarie Island. Recently Australian vessels have fished in other parts of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) area, such as the Ross Sea region for Antarctic toothfish.

Australian industry has high standards of compliance with international measures and national regulations, with strong third-party assessments on the sustainability of its operations. This contributes to our reputation as a responsible fishing nation and supports our position in the CCAMLR.

Cross-cutting themes and future considerations

Australia's regional fisheries engagement provides an opportunity to use our expertise in fisheries science and management to help address regional management questions. It's an important means by which we advance our broader foreign and security policy objectives in the Indo-Pacific region.

Environmental issues, such as the fishing impacts on vulnerable marine ecosystems, should continue to be significant priorities for Australia's engagement in RFMOs. Australia should continue to lead on these issues in RFMOs.

Australia also plays an important role in advocating for, and in some cases leading, efforts to improve data collection, management and reporting.

Our strategic objective guiding engagement with RFMOs is to ensure the sustainable management of shared fisheries resources. We have an important role in supporting responsible fishing, in most cases without having significant fishery interests.

Building linkages with like-minded states is important. While our engagement with RFMOs is critical, a range of bilateral relationships, particularly those with China and Indonesia, are also important to advance stronger regional fisheries management.

There are benefits to Australia in taking on a larger role in supporting education and training for fisheries managers in the Indo-Pacific.

Recommendations

1. Produce an Australian Government policy statement on the nation's regional fisheries objectives and strategies, highlighting in particular capacity building through providing scientific and technical expertise in stock management, reporting, data management and ecosystem management.
2. Establish an interdepartmental committee for officials with responsibilities for regional fisheries engagement matters, including an annual review of emerging issues.
3. Appoint an Ambassador for Fisheries to make the most of the political and economic opportunities from fisheries for the region by providing high-level diplomacy, leadership and advocacy. Fisheries attachés could be appointed in key posts, such as Jakarta and Tokyo, to support the Ambassador's work.
4. Ensure that adequate technical expertise is present to advise Australian delegations to key regional fisheries meetings, and wherever possible maintain continuity of Australian personnel at those meetings.
5. Maintain our current support for key fisheries organisations, agreements and secretariats in the Indian, Pacific and Southern oceans.
6. Go to Pacific Islands Forum leaders' meetings with a strong fisheries agenda and ensure that fisheries are covered appropriately in forum communiqués and forum leaders' statements.
7. Maintain our current support for key Pacific fisheries bodies and continue to support sustainable fisheries management to ensure economic and socially viable returns to Pacific island states.
8. Engage China in a fisheries dialogue on the need for management conservation measures, assist China on fisheries data collection systems and develop a better understanding of the current system of subsidies.
9. Support Australian universities to link elements of their undergraduate and postgraduate fisheries work to Pacific island fisheries priorities and support Pacific islander fisheries scholarships and intern programs at Australian institutions.
10. Strengthen research and capacity-building programs in Indo-Pacific fisheries management, including stock assessments and the development of harvest strategies.
11. Fund a Women in Fisheries Development Program to empower women in fisheries work in the Pacific region.
12. Continue to provide technical support and training to parties to the Regional Plan of Action to Promote Responsible Fishing Practices, leveraging Australia's technical expertise in monitoring, control and surveillance.
13. Continue to support and advance the fisheries work program of the Indian Ocean Rim Association.
14. Examine the memorandum of understanding on traditional Indonesian fishing in Australian waters, in particular stock management and potential marine use conflicts between the traditional fishing sector and the offshore oil and gas industry, from a whole-of-government perspective and thereafter with Indonesia as a matter of priority.
15. Continue to support environmentally responsible fishing practices in the Southern Ocean, and work with Australian industry and regional fishing bodies to achieve high levels of compliance with relevant requirements.
16. Where possible, seek to initiate and engage in discussions within RFMOs on how to incorporate considerations of climate change impacts on marine living resources in the decision-making processes of regional fisheries bodies.

CHAPTER 1

Australia's external fisheries policy context

This report on Australia's regional fisheries interests focuses on key drivers and issues affecting the management of fisheries in the Indian, Pacific and Southern oceans and identifies priorities for Australian engagement.

The report highlights those issues that will assist Australia's engagement with regional fisheries management organisations (RFMOs) and arrangements and how that engagement contributes to the pursuit of sustainable fisheries management and economic growth in the region.

The report addresses challenges arising from the different interests of coastal states and distant-water fishing nations; access and allocation; capacity and coordination issues affecting the effectiveness of RFMOs; problems in resource sustainability and food security; and areas where Australian expertise can be effectively leveraged for regional fisheries management and broader regional strategic goals.

Central to the strategies in this report is the need for a whole-of-government approach to external fisheries policy that recognises clear linkages between fisheries and foreign, trade and strategic policy. This approach builds on existing practices, but calls for the establishment of an interdepartmental committee on regional fisheries engagement matters—focusing not just on specific RFMOs or issues, such as illegal, unregulated and unreported (IUU) fishing—to provide a coordinating function between those agencies with interests in Australian regional fisheries policy.

The committee would also be a clearing house for addressing emergent issues, helping to coordinate responses to those issues, and supporting the development of key objectives and strategies. It would support the development of an Australian Government policy statement on regional fisheries engagement.

Many of the recommendations set out here relate to a whole-of-government approach to our regional fisheries engagement. While this won't be entirely cost free, there are likely to be wider political and in some cases economic and regional security costs if we pull back from that engagement. The recommendations are largely interdependent, so the presentation of the suggested measures isn't meant to imply any priority order.

Australia's external fisheries objectives over the next five to ten years should be geared towards advancing our regional interests, consolidating and developing our presence in key fisheries and leveraging the benefits of fisheries for our broader regional engagement.

This involves:

- maintaining long-term and commercially viable access to regional migratory and straddling¹ fish stocks for the Australian fishing industry
- promoting a regionally competitive fishing industry
- promoting sustainable fisheries management practices in RFMOs

- focusing on arrangements that cover all adjacent waters and neighbouring countries where we have existing commercial interests or the realistic prospect of developing such interests, and effective forums that deal with fisheries issues.

It means ensuring that external fisheries policy doesn't become compartmentalised and remains flexible enough to identify linkages to foreign and trade policy, development cooperation and security goals.

An integrated policy framework will accommodate all of Australia's interests. In some instances, those interests will be confined to narrow concerns over fisheries allocations. But more often it will be important to integrate our security, economic and political interests with efforts to advance the interests of our fishing industry, building on the long history of involvement and support from Australian industry in key tuna and Southern Ocean fisheries.

This approach includes communication and consultation among Australian stakeholders. They include state governments that have considerable assets in research, ports and other infrastructure.

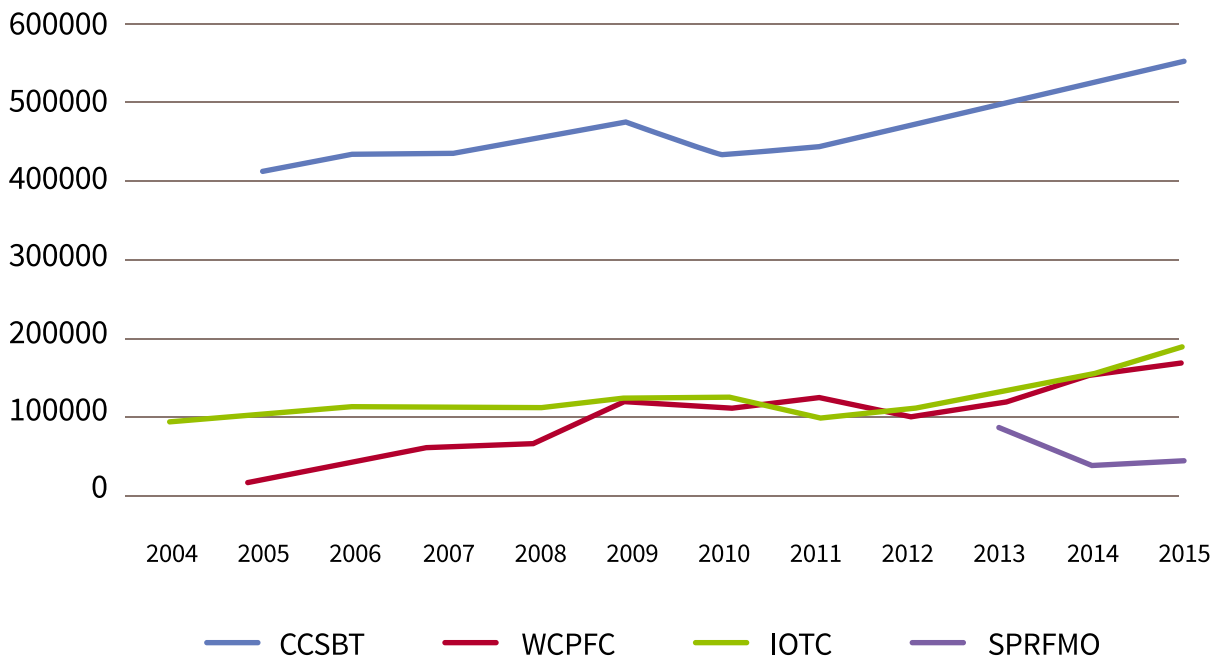
A whole-of-government approach should be used to progress Australia's interests. While this work involves a number of agencies, individuals play critical roles. Australia has benefited considerably from the skills of key people who have given us significant standing in the regional fisheries community.

Recommendation: Produce an Australian Government policy statement on the nation's regional fisheries objectives and strategies, highlighting in particular capacity building through providing scientific and technical expertise in stock management, reporting, data management and ecosystem management.

Recommendation: Establish an interdepartmental committee for officials with responsibilities for regional fisheries engagement matters, including an annual review of emerging issues.

While the Australian Government spends a significant amount of money on regional fisheries matters (Figure 1), taking a strategic approach to future fisheries engagement will require further resources—especially human resources.

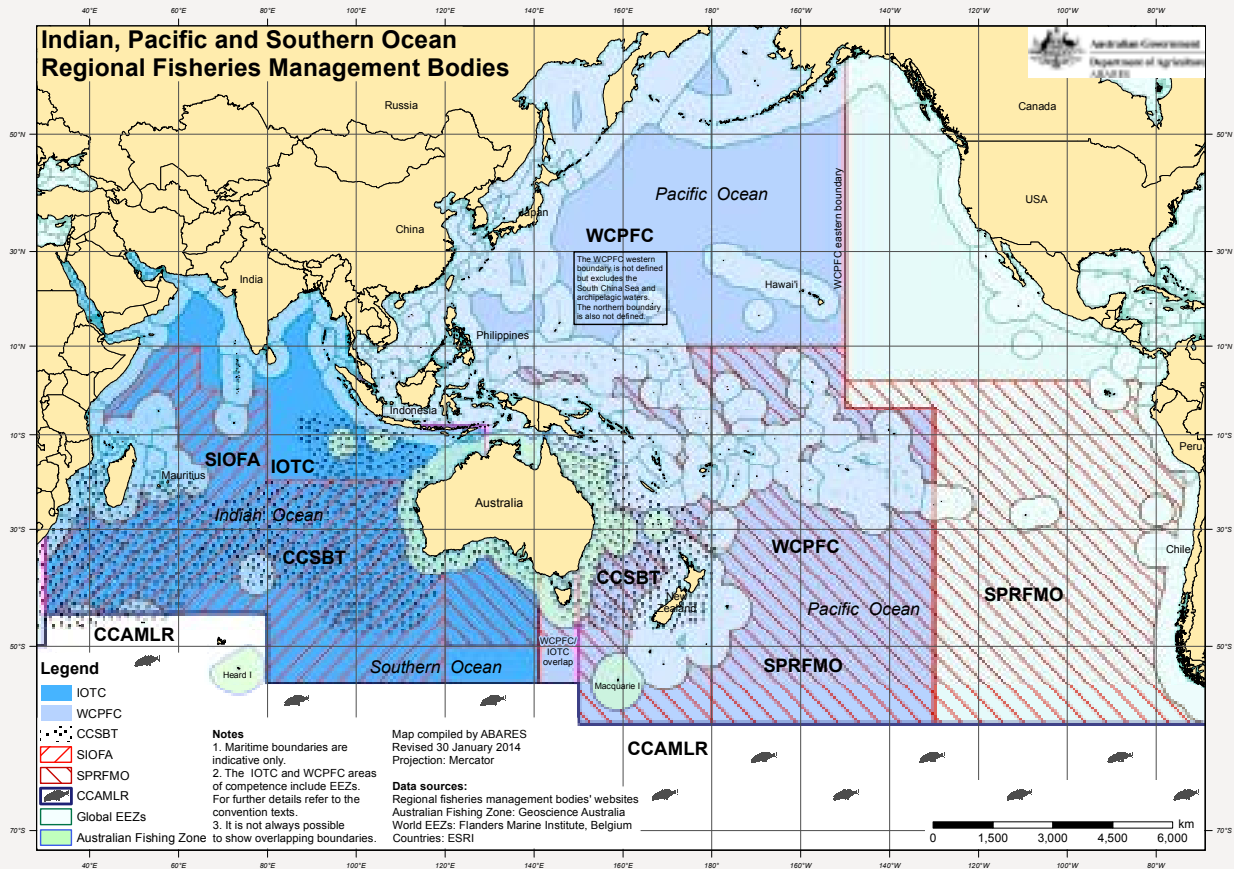
Figure 1: Australian expenditure on regional fisheries engagement, by organisation, 2004 to 2015



Note: CCSBT = Commission for the Conservation of Southern Bluefin Tuna; WCPFC = Western and Central Pacific Fisheries Commission; IOTC = Indian Ocean Tuna Commission; SPRFMO = South Pacific Regional Fisheries Management Organisation

Key regional fisheries bodies and agreements

- Commission for the Conservation of Southern Bluefin Tuna
- Western and Central Pacific Fisheries Commission
- Commission for the Conservation of Antarctic Marine Living Resources
- Indian Ocean Tuna Commission
- South Pacific Regional Fisheries Management Organisation
- South Indian Ocean Fisheries Agreement
- Pacific Islands Forum Fisheries Agency
- South Pacific Community



Source: Reproduced with permission of ABARES

In the period from 2004 to 2015, Australia contributed around \$9 million in membership contributions and associated payments to key RFMOs—the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the Western and Central Pacific Fisheries Commission (WCPFC), the Indian Ocean Tuna Commission and the South Pacific Regional Fisheries Management Organisation.

In addition to these contributions, the Department of Agriculture and Water Resources (DAWR²) has, from time to time, made ad hoc contributions to fisheries organisations.

Australia also provides considerable funding for scientific work that underpins the operations of RFMOs. This can take the form of research and development that contributes to the work plans of scientific committees or (in the case of the CCSBT) Australian funding for key fisheries surveys. These amounts have not been included here but have been a substantial contribution to the operation of these organisations.

The DAWR regularly draws upon funding available through the Department of Foreign Affairs and Trade (DFAT) to progress work in relation to international fisheries engagement. Over the past four years, for example, the DAWR has facilitated meetings of coastal states in the Indian Ocean region to build capacity and encourage cohesive engagement in the Indian Ocean Tuna Commission. The department has recently received funding for a three-year project to advance efforts on monitoring, control and surveillance in the Pacific, which it will deliver in partnership with the Australian Fisheries Management Authority (AFMA³) and the Attorney-General's Department.

The Regional Fisheries and Treaties Section of the DAWR:

- leads Australian participation in five RFMOs, coordinating government priorities across portfolios and stakeholder interests
- provides advice and coordination on fisheries issues involving neighbouring countries
- convenes and hosts RFMO and subsidiary body meetings as required
- works to secure cooperation from countries with which we share resources to improve standards of fisheries management in those countries
- develops conservation measures, such as bottom fishing measures, conservation measures for seabirds, whale sharks and sharks, and harvest strategies for implementation in RFMOs
- seeks to influence the standard of regional fisheries management through participation in relevant fisheries management organisations and other bodies
- consults with industry and other stakeholders on Australia's engagement in RFMOs.

AFMA's Fisheries Branch focuses on the management of Australia's domestic fisheries and international fishery treaty obligations through:

- the development and implementation of fisheries management plans and arrangements covering target and non-target species
- assessments of bycatch and broader marine ecosystem impacts
- international consultation and liaison, including with RFMOs and for the management of high-seas stocks
- analysis, forecasting and research on individual fishery performance
- stakeholder liaison and consultation
- the development of ecological sustainability tools and management approaches to minimise the impacts of fishing on the marine environment
- work on monitoring, control and surveillance (see box).

DFAT works to elevate the profile of fisheries within regional and international development processes. It delivers capacity-building initiatives to strengthen fisheries management in the Indo-Pacific. In particular, it contributes aid resources to RFMOs to ensure the sustainable exploitation of regional fisheries resources.

The importance of regional fisheries was recently set out in DFAT's *Strategy for Australia's aid investments in agriculture, fisheries and water* (see box). In November 2015 Australia co-sponsored a statement at the East Asia Summit in Kuala Lumpur, the 'EAS Statement on Enhancing Regional Maritime Cooperation'. This important EAS document emphasises blue economy issues, including fisheries. (EAS, 2015)

Monitoring, control and surveillance capacity building

Australia's program to combat IUU fishing includes on-the-water enforcement, regional cooperation, diplomatic representations and in-country measures such as capacity building, education and outreach programs designed to improve technical knowledge and facilitate information exchanges.

Under the Regional Plan of Action to Promote Responsible Fishing Practices including Combating IUU Fishing, Australia cooperates with 10 like-minded countries across the Southeast Asian region to combat IUU fishing.

AFMA runs a program of regional engagement activities aimed at developing the capacity of Indo-Pacific countries in monitoring, control and surveillance.

The program includes taking action to address IUU fishing by promoting cooperation, including for information sharing and surveillance activity, between Australia and regional neighbours.

Aid and fisheries in the Pacific

Agriculture, fisheries and water are, together, one of the six priority areas under Australia's new development policy.

In February 2015, DFAT released the *Strategy for Australia's aid investments in agriculture, fisheries and water*, which covers this priority area. The strategy addresses threats to food security as they relate to inshore fisheries and the promotion of aquaculture and community-based fisheries management.

In the Pacific, we'll strengthen our engagement with the Forum Fisheries Agency and the Secretariat of the Pacific Community's Fisheries, Aquaculture and Marine Ecosystems Division.

We'll also deepen our engagement in Southeast Asia and the Indian Ocean rim countries, and promote measures to address IUU fishing.

Australia will continue to advocate for the implementation of effective fisheries harvest strategies.

Regional solidarity among island countries and territories will remain central to taking advantage of opportunities to derive market-based and sustainable returns from the region's fisheries.

We'll pursue development objectives through strong engagement with Pacific regional fisheries organisations and effective private and other non-government sector engagement, and by supporting stronger fisheries training institutions and managers.

Australia will also look to incorporate greater opportunities to empower women in fisheries.

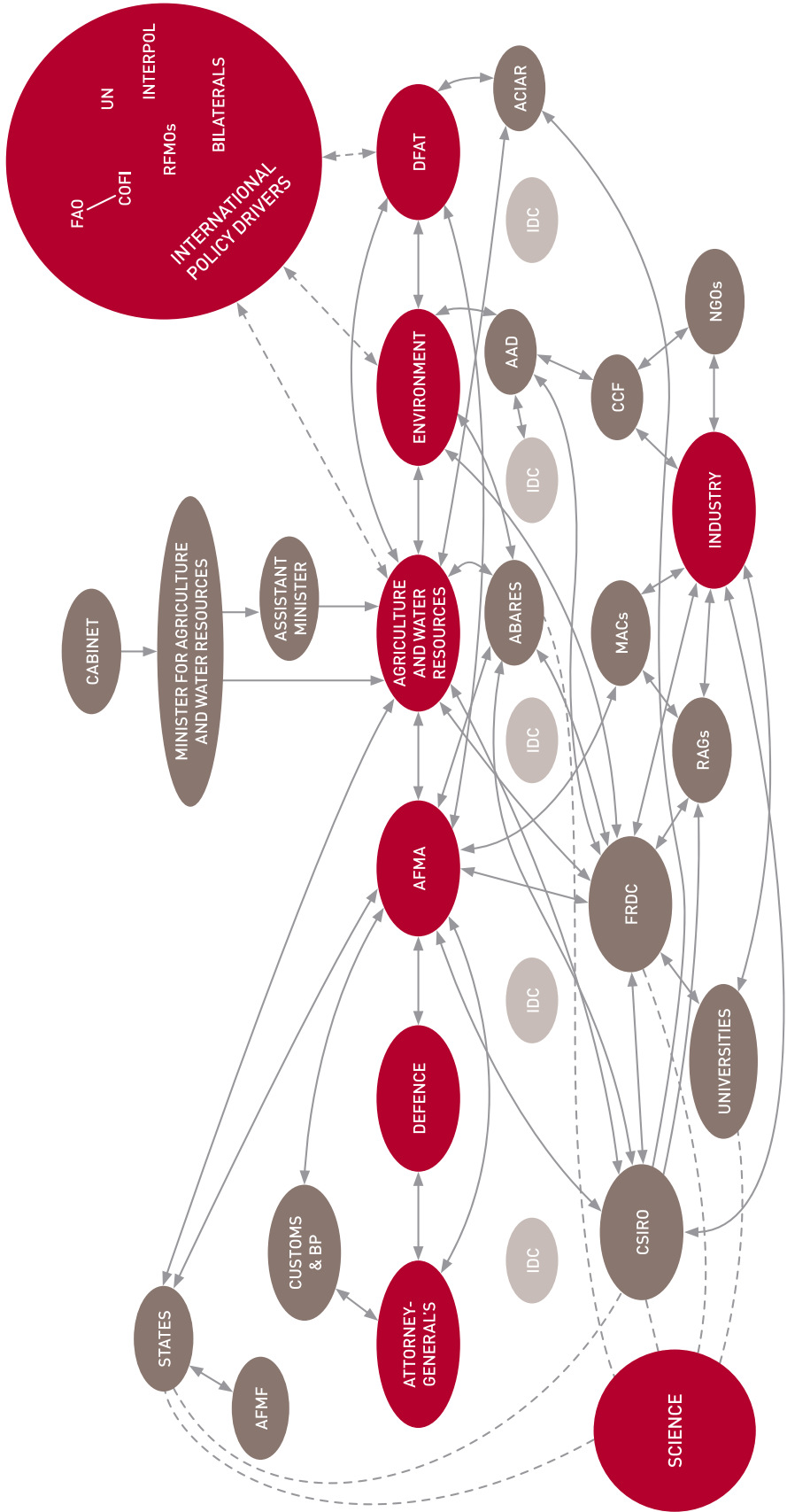
The Department of the Environment has significant interests in the sustainability of Australian fisheries and has direct responsibility, through the Australian Antarctic Division, for Australian policy for the Southern Ocean.

As part of this, the Australian Antarctic Division leads Australian's engagement in CCAMLR, undertakes stock assessments and associated work for the Heard Island and McDonald Islands fisheries, and provides all of Australia's scientific input to other CCAMLR fisheries.

Environmental issues, such as impacts on shark species, seabirds and vulnerable marine ecosystems, continue to be significant priorities for Australia's engagement in RFMOs.

Australia is seen as a world leader in ameliorating the impacts of fisheries on the marine environment, and other countries continue to look to Australia to lead on these issues in RFMOs. Through AFMA, we have strengths in bycatch and ecosystem impact management that can be shared internationally.

Figure 2: Australian, international and regional fisheries stakeholders



Glossary

AAD	Australian Antarctic Division	AFMF	Australian Fisheries Management Forum	FAO	United Nations Food and Agriculture Organization	RAGs	Resource Assessment Groups
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences	CCF	CCAMLR Consultative Forum	FRDC	Fisheries Research and Development Corporation	RFMOs	Regional Fisheries Management Organisations
ACIAR	Australian Centre for International Agricultural Research	COFI	United Nations Food and Agriculture Organization Committee on Fisheries	IDC	Interdepartmental Committee	UN	United Nations
AFMA	Australian Fisheries Management Authority	Customs and BP	Australian Customs and Border Protection Service	MACs	Management Advisory Committees		
		DFAT	Department of Foreign Affairs and Trade	NGOs	Non-Governmental Organisations		

Australia also plays an important role in advocating for, and in some cases leading, efforts to improve data collection, management and reporting.

Links between our strategic policy interests and fisheries are made clear in the communiqués from several recent Australia–US Ministerial (AUSMIN) meetings, which are the highest level regular strategic dialogues between Australian and the US (see box).

Australia has been active in the development of a regional fisheries management framework. For example, we've helped to establish new bodies in the Indo-Pacific, including the Southern Indian Ocean Fisheries Agreement and the South Pacific Regional Fisheries Management Organisation.

Our engagement with these bodies improves fisheries management in the region and advances our broader national interests. For example, in the Pacific islands region our fisheries, security, aid and foreign policy interests intersect.

Fisheries and AUSMIN

2008

Australia and the US welcomed moves in the Pacific region to enhance regional law enforcement cooperation. This included cooperation on fisheries and maritime law, as reflected in the Pacific Islands Forum Vava'u Declaration and leaders' undertaking to examine new multilateral arrangements for the exchange of fisheries law enforcement data and enforcement cooperation. The US expressed a keen interest in engaging in such discussions.

2010

Both countries viewed maritime law enforcement, particularly the protection of fish stocks, as a major security challenge for the Southwest Pacific. Australia welcomed the US commitment to enhance maritime surveillance and enforcement capacity through its ship rider agreements with Pacific island countries and reaffirmed Australia's active support for negotiations for a multilateral Niue Treaty Subsidiary Agreement on fisheries surveillance cooperation and law enforcement between Forum Fisheries Agency members. Both countries committed to building on these initiatives to strengthen the management of the Southwest Pacific's fisheries resources and deliver equitable and sustainable outcomes for Pacific island countries.

2011

Australia and the US supported the protection of the region's fisheries, enhancing maritime monitoring, control, surveillance and enforcement capacity, and building on existing initiatives to strengthen the management of fisheries resources and to deliver equitable and sustainable outcomes for Pacific island countries.

2012

Both countries continued to support the protection and sustainable management of the Pacific's fisheries and the enhancement of maritime security in order to deliver equitable outcomes for Pacific island countries. They continued to work towards a successful conclusion to negotiations to extend the US Multilateral Treaty on Fisheries.

2014

Australia and the US undertook to continue to work together in pursuit of the sustainable management of oceans and fisheries, which are among the key development challenges in the Pacific and globally. They reaffirmed their commitment to cooperative efforts to address IUU fishing.

2015

Both countries highlighted the need to achieve the sustainable management of oceans and fisheries, and planned to continue efforts to address IUU fishing.

Australia is also supporting sustainable fisheries in the Indian Ocean, but we could do more there. We've given modest support to the Fisheries Support Unit in Oman, which is one of the Indian Ocean Rim Association's flagship projects.

All of this means that Australia's external fisheries policies must be coordinated and consistent with our wider foreign and strategic policy concerns.

In the Southern Ocean, our broad policy interests are coordinated through the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) Strategy, for which effective whole-of-government processes led by the Australian Antarctic Division are in place.

In some instances, our interests will be confined to narrow concerns over fisheries access and allocations. But more often it will be important to integrate Australia's security, economic and political interests with efforts to advance the interests of our fishing industry.

Australia has some very useful assets, especially fisheries science and management arrangements, to deploy in pursuing our regional fisheries interests, and we should make better use of these assets.

Our strategy shouldn't be about leading the regional pack, but about promoting Australia as an indispensable and responsible regional citizen and partner while being true to our own fisheries interests.

There's a long history of involvement and support from Australian industry in the CCSBT and the CCAMLR. Industry involvement in meetings as members of Australian fisheries delegations should be continued.

Non-state actors are also increasingly active on regional fisheries issues. They include environmental NGOs and newer players such as private philanthropic foundations. Accessing technical capacity and existing in-country networks established by NGOs, as well as facilitating their support of government priorities and service delivery, could potentially make our fisheries foreign aid dollars go further and contribute to the effectiveness of our larger suite of investments in sustainable regional fisheries.

Australian fisheries diplomacy

Individuals play critical bargaining roles in fisheries resource regimes. This includes exercising negotiating skills by agenda setting, devising options, popularising solutions, brokering interests, and proposing ideas and systems of thought that influence the way the fisheries issues at stake are understood.

Regional fisheries issues are multilevel 'games' in which our interests in one forum can affect activities in another. Skills in conference diplomacy are therefore important.

It will be important to ensure continuity in our representation at key regional meetings as far as possible. Building on staff skills to deal with future challenges in regional fisheries work will help increase depth and policy capacity.

Recommendation: Appoint an Ambassador for Fisheries to make the most of the political and economic opportunities from fisheries for the region by providing high-level diplomacy, leadership and advocacy. Fisheries attachés could be appointed in key posts, such as Jakarta and Tokyo, to support the Ambassador's work.

Recommendation: Ensure that adequate technical expertise is present to advise Australian delegations to key regional fisheries meetings, and wherever possible maintain continuity of Australian personnel at those meetings.

CHAPTER 2

International drivers

Internationally, fisheries continue to suffer from overcapitalisation, declining productivity, overfishing and declining stocks. Recent international debates on fisheries have focused on food security, the sustainability of catches, traceability and the capacity of regional management.

Sustainability of stocks

The most recent Food and Agriculture Organization *State of world fisheries and aquaculture: opportunities and challenges* report notes:

It's estimated that rebuilding overfished stocks could increase fishery production by 16.5 million tonnes and annual rent by US\$32 billion, which would certainly increase the contribution of marine fisheries to the food security, economies, and well-being of the coastal communities. (FAO 2014:14)

The report noted that 28.8% of fish stocks were overfished, which is considered to be biologically unsustainable. Fully fished stocks accounted for 61.3% and underfished stocks for 9.9%. The situation is more critical for some highly migratory, straddling and other fishery resources that are fished solely or partially in the high seas. Some NGOs argue that the level of overfishing is higher than that presented in the report.

Traceability and certification of fisheries

Because fish continues to be one of the most traded food commodities worldwide, increasing demand, together with reduced supply through constraints on stocks and products underpinning imports, will change the economic drivers of the industry. Fish is worth half the total value of traded commodities for developing countries.

Aquaculture operations are expected to meet some of this demand, and deep-sea operations are likely to become attractive. Notwithstanding such developments, high-seas stocks will be targeted.

Market-based instruments, including certification schemes and eco-labelling, are increasingly being demanded and adopted in developed markets. Traceability in the food supply chain is increasingly becoming a requirement in major fish-importing countries.

Illegal, unreported and unregulated fishing

There's now increased attention to IUU fishing, highlighting the limits or failures of flag states to control or manage the compliance of their vessels.

There's also greater concern over criminal activity associated with unregulated vessels. In June 2014 President Obama released a presidential memorandum titled 'Establishing a comprehensive framework to combat illegal, unreported and unregulated fishing and seafood fraud'.⁴ This US initiative is matched by the increasing engagement of INTERPOL in fisheries-related matters. Australia should continue to support such policing efforts. Our capacity in monitoring, control and surveillance provides strong assets for such international work.

A key to the success of high-seas fisheries is flag state responsibility, which is a perennial issue driving flag-of-convenience vessels involved in IUU fishing. While regional bodies have developed 'blacklists', they depend on responsible flag-state support.

Regional fisheries management organisations

RFMOs currently face challenges in the areas of allocation, stock assessment, constraining catches and fishing capacity.

There's concern over the state of high-seas fisheries and the ability of RFMOs (or, more correctly, the actions of individual state parties of RFMOs) to constrain catches and capacity.

There are severe challenges as a result of a lack of cooperation between states, conflicting interests in resource utilisation and conservation, fragmented responsibilities, lack of political will, lack of enforcement, and perverse economic incentives for 'free riders' to cheat the system. RFMOs will be expected to address issues of transparency and accountability.

Australia is seen as a world leader in ameliorating the impacts of fisheries on the marine environment.

Australia is seen as a world leader in ameliorating the impacts of fisheries on the marine environment. RFMOs will continue to look to us to lead on these issues. Ecosystem impacts should remain high priorities for Australia in RFMOs.

Recommendation: Maintain our current support for key fisheries organisations, agreements and secretariats in the Indian, Pacific and Southern oceans.

Climate change

Changes in climate are leading to temperature and related biophysical changes in the ocean, including ocean acidification, that are projected to lead to a range of impacts, including on fisheries productivity.

Climate change is likely to influence the approaches and tools used to manage such impacts, including climatic effects on distribution and abundance, such as 'range shifting' (Robinson & Bates, n.d.).

RFMOs vary in their responses to climate change: there have been concerns about changes in species distribution and composition and the consequences of ocean acidification.

Recommendation: Where possible, Australia should seek to initiate and engage in discussions within RFMOs on how to incorporate considerations of climate change impacts on marine living resources in the decision-making processes of regional fisheries bodies.

Marine biodiversity conservation

The UN General Assembly's Ad hoc Open Ended Informal Working Group has recommended proceeding with a new legally binding instrument on the conservation and sustainable use of marine life in areas beyond national jurisdictions. This may have implications for existing regional fisheries management arrangements.

Australia and global drivers

RFMOs provide a forum for Australia to promote a strong approach on sustainable and responsible fishing practices and to develop regional instruments that work to protect our fish stocks and wider regional interests.

International developments get played out at the regional level, and regional states often struggle to implement international measures at the national and regional levels.

We need to take care to ensure that we introduce or support only the highest priority new measures...

Introducing new measures at RFMOs while members remain noncompliant with existing measures can be counter-productive: it can make the task of compliance overwhelming. We need to take care to ensure that we introduce or support only the highest priority new measures, and that those measures are implemented by all members.

CHAPTER 3

Pacific Ocean

Fishing is critical to the economies of a number of important Pacific island countries, providing food security, access-related income and employment.

The Western and Central Pacific oceans produce around 2.6 million tonnes of tuna a year (60% of world tuna production). This fishery is one of the world's great natural protein sources, and Australia's a key player in its long-term protection.

Our regional fisheries engagement, as it relates both to near-shore coastal fisheries that contribute directly to food security and to large offshore fisheries, which mainly generate foreign exchange and involve non-national investment, should be viewed as a whole-of-government exercise. It's about applying economic, diplomatic and regional security investments to Australia's strategic policy.

Because our interests include promoting a secure and prosperous region and sustainable Australian fisheries, we should leverage our engagement in fisheries to support an overall constructive influence in the Pacific.

Fisheries are now one of the six high-level policy priorities under Australia's international aid policy framework for the Pacific islands region (DFAT 2014).

If our fisheries engagement is done well, it will facilitate stronger relations to support our broad regional political, economic, social, environmental and security objectives.

If regional fisheries were to become seriously depleted, we would be under considerable political pressure to provide greater economic support for most of our island neighbours, with possible long-term implications for political stability.

Our east coast tuna fishery, with about 30–35 boats, is our fourth biggest fishery and is valued at around \$31 million, but we're a minor participant and a non-competitor in the fishing industry in the Pacific. We're in a position to be a credible bridge between Pacific and Asian fishing interests.

Australia's well placed to help in capacity building, fisheries science, maritime surveillance and enforcement and can facilitate regional strategic discussions about sustainable returns from fisheries for Pacific island countries.

But this needs a large dose of realism: Australia won't win the argument for elevating regional fisheries based on Australian industry interests. We should be emphasising that effective fisheries engagement opens lots of regional doors for facilitating discussions of broader political and security issues, as well as promoting and supporting regional cooperation.

Historically, Australia has been a valued regional partner in Pacific fisheries. We've actively contributed to the work of the Secretariat of the Pacific Community (SPC) fisheries program since the late 1950s, established the Pacific Islands Forum Fisheries Agency (FFA) in 1979, founded the Western Central Pacific Fisheries Commission in the

1995–2005 period, and established the South Pacific Regional Fisheries Management Organisation (SPRFMO) in the 2006–2012 period.

But in the past decade our presence in regional fisheries has arguably decreased on both the strategic and technical levels. Australia's key messages to the region should be that the Pacific island nations are strategically important to us and that we want to increase our support to the regional fisheries sector.

Fisheries environment

The total value of the tuna catch in the Western and Central Pacific was US\$5.8 billion in 2014 (WCPFC 2015). The landed value of the tuna catch from Pacific island countries' exclusive economic zones (EEZs) is estimated to be around \$4 billion a year.

The returns to Pacific Islands Forum countries from access arrangements and other investments is estimated to be \$350–400 million, or around 8% of the gross value of the Western and Central Pacific fishery.

The significance of coastal fisheries is demonstrated by the total contributions of subsistence and commercial catches to GDP across the region. Together, they're estimated to be worth US\$320–500 million. Most of these earnings go to coastal communities.

Stock status

Retaining Western and Central Pacific fish stocks in a healthy state capable of maximising long-term returns is (along with tourism) critical for generating a degree of economic hope for island peoples.

However, the status of Pacific fish stocks is a mixed bag (Harley et al. 2015). The *Regional roadmap for sustainable Pacific fisheries*, endorsed by the Pacific Islands Forum last September, sets out the need to ensure fish stocks are managed sustainably while also identifying targets for enhanced revenues (FFA 2015, Keen & Hanich 2015).

On the one hand, the skipjack tuna stock, which accounts for most of the catch and the vast majority of the returns earned by the islands, is biologically robust and currently at levels that support highly profitable fishing. The management challenge here is to ensure that it's maintained at the current level. In December 2015 the WCPFC adopted a target reference point for skipjack tuna to ensure that fishing is managed at a sustainable level. Albacore is the next most important stock to the island states and it's been depleted to levels that no longer support profitable fishing, particularly by domestic, unsubsidised fleets.

Recent changes to the stock assessment for albacore reflect a more fragile stock than was previously thought and raise specific concerns that the continuation of current effort levels will pose an unacceptably high risk of breaching the agreed stock limit reference point. The challenge here is to recast management arrangements in ways that not only reduce catch and effort but also provide opportunities for the island countries to control that catch and effort. This is particularly important for southern island countries, which typically don't gain benefits from skipjack.

Bigeye tuna is in a poor biological state and requires urgent catch reductions in order to recover to the agreed limit reference point. While stocks of skipjack and yellowfin are relatively robust, many near-shore resources, particularly close to urban centres, are overfished.

One of the key challenges is that the Pacific tuna fishery is becoming harder to manage as it becomes more valuable. At the moment, fishing companies and island countries are both profiting in the short term from income and employment in processing plants, in canneries, on vessels and in regional agencies. Fisheries are now a very important component of the fabric of the Pacific's labour market.

But regional fisheries experts now agree that there'll need to be cuts to maintain the key species in this fishery at a level that's both biologically sustainable and able to produce maximum economic returns in the long term. Such

a fishery won't be at 2.6 million tonnes a year, as it is now. While there are some major differences, all Pacific major tuna species are pushing towards, or are now beyond, optimal catches, and the capacity of fleets is increasing.

As Pacific island countries aim to grow their economies and feed their people, many want to move away from 'over-the-horizon' type fishing operations to local basing to take advantage of linked benefits. This has been the policy of Pacific island states since the early 1990s, but it has taken time to operationalise it, especially to create adequate investment environments and find the partners willing to take on the risk.

There's also pressure to over-license foreign vessels as fishing companies and the governments of distant-water fishing nations compete for limited access rights to fish.

At the same time, there's increasing pressure on this shared resource from expanding artisanal and industrial-scale demand in Indonesia, the Philippines and the South China Sea.

Overseas fishing companies are reluctant to cut their effort and, indeed, many are investing in new vessels. Island countries are making more through the vessel day-scheme than before. Any reductions in catch will affect the fishing companies' budget bottom lines.

Fish stocks are no magic pudding; there are very distinct limits to growth.

Fish stocks are no magic pudding; there are very distinct limits to growth. While catches can be increased by employing new technology and techniques even as stocks decline, the underlying dynamics of the fish stocks dictate that declines, some of which will be severe, will occur unless further management action is taken.

However, it's wrong to blame all of the ills in Pacific fisheries on foreign fleets: by and large, island countries have the potential and tools to manage most of the fishery.

How the burden of achieving reductions is shared among Western Central Pacific tuna fishery stakeholders is one of the most complex issues facing Pacific island states (Gillett & Cartwright 2010; Cartwright et al. 2013).

Science

There are huge challenges in designing and monitoring appropriate conservation management measures for one of the world's largest, most valuable and most complex fisheries. Gaining enough information on how all stocks move and are distributed across the region and respond to fishing pressure is also a major challenge.

Fortunately, the oceanic fisheries program at the SPC is well placed and is continuing to build its knowledge. But a key challenge will be to ensure that such programs have the right fisheries science staff in place to assess stocks.

That's not to say that issues related to fisheries sustainability in the region are mainly scientific. In fact, they are affected more by the political will of governments to make decisions that take into account both short- and long-term outcomes for the region's fisheries.

Related to this key issue is the ability of RFMOs to provide 'frank and fearless' advice to inform stock management decisions that will keep the stock at agreed target levels for the long term.

Driven by the FFA, the SPC and national fisheries agencies, the region has established the capacity to manage fish. While yet to reach its full potential, the WCPFC has also stemmed overfishing to some degree. All in all, regional countries are justifiably proud of their achievements so far.

But there's still a way to go. Some countries are aware that agreeing to and managing a harvest strategy will potentially result in some pain in the short term as harvest levels are adjusted.

China

Another challenge relates to China's long-term fisheries objectives. China has the world's biggest distant-water fleet. It has rapidly expanded its Western and Central Pacific tropical longline fleet to be the largest (although longlining takes only around 10% of the fish). Beijing is focused on the southern longline fishery but is showing increasing interest in developing its capacity in tropical longline and even purse seine fisheries.

Unfortunately, the Chinese fleet, along with some other Asian fleets, hasn't provided accurate logbook and observer data. This reflects the challenge to the WCPFC in enforcing reporting requirements.

National fisheries management

A key requirement is to strengthen national fisheries management in the Pacific, particularly given that fisheries income now makes up a high percentage of the total income of some Pacific island countries.

National fisheries capacity is a regional weak point. In addition, there's often a lack of transparency in national thinking on fisheries management and a lack of a whole-of-government approach when it comes to island states' positions at the negotiating table.

While the FFA does a very good job in this area, it's under great pressure because of the number of meetings that its staff must attend around the Pacific each year.

Monitoring, control and surveillance

Fisheries monitoring, control and surveillance in the Pacific has made enormous strides. Vessel monitoring systems are available for compliance monitoring in fisheries monitoring centres, such as at the FFA and in the island states. While there's only a very small observer coverage on longliners, it's 100% on purse seiners.

The IUU fishing problem has evolved. Unregulated fishing remains a threat in some areas and fleets (longlining with high-seas transshipping is still allowed), but the main risk to the region is the misreporting or non-reporting of catch.

Misreporting is a form of criminal fraud in which licensed vessels intentionally understate catches for financial gain. This effectively steals scarce revenue from the island states and undermines the effectiveness of fisheries management. Part of the solution will be enhanced near real-time e-reporting of catch logs, robust port inspection programs and increased penalties for violations.

Strengthening the FFA's regional fisheries surveillance centre and its vessel monitoring system, as well as implementing national and other regional fisheries information management systems, will be important in dealing with flag states that don't report on the activities of their vessels.

However, national and regional information management systems are quite well advanced, especially when compared to those in the Indian Ocean. There'll be a requirement to respond to unlicensed incursions into EEZs, although this perhaps isn't as significant a problem as it was in the past.

There'll be ongoing resource challenges in undertaking surveillance across such a large area, in which 3,500 or more fishing boats are active. The main challenges for monitoring, control and surveillance will be to build on current foundations and frameworks, take advantage of modern technology, and build national and regional capacity.

Coastal fisheries

While tuna fisheries will continue to dominate regional discussions, that focus may be to the detriment of coastal fisheries. For most remote island communities, industrial tuna fishing provides few tangible benefits and is often seen to reduce catches of near-shore pelagic species (such as tuna).

One of the unknowns in the Pacific is the ability of coastal and reef fisheries to continue to supply basic protein needs for Pacific islanders. Coastal fisheries are in many ways the islands' food basket, but many are already under significant pressure. As populations increase, they'll rapidly pass the point at which the catch is sustainable.

Reef resources and high-value commodities, such as giant clams, are under pressure. A key challenge will be to give people in urban and regional areas direct access to tuna to help supply them with the recommended quantities of fish (Bell et al. 2015).

Coastal fisheries are an area of underfunded work and research that has potentially serious food security impacts. Only one Pacific island country (Samoa) has a coastal fisheries management plan. However, the Melanesian Spearhead Group has developed a roadmap for inshore fisheries and sustainable development (IUCN 2014, Vaartjes et al. 2015). Last year, the Secretariat of the Pacific Community's Fisheries, Aquaculture and Marine Ecosystems Division published *The new song for coastal fisheries: pathways to change*, a blueprint for more effective community management in inshore fisheries management (SPC 2015).

Over the past 30 years, seafood has been replaced in Pacific diets by nutritionally poor imported foods, contributing to a rising prevalence of obesity and related diseases. A staggering nine of the ten countries with the highest rates of obesity in the world and seven of the ten countries with the highest rates of diabetes are Pacific island nations.

Australia's engagement

Australia's regional security policy places considerable emphasis on strengthening our bilateral and multilateral engagements with our Pacific island neighbours.

The Pacific fisheries and our role in improving their management to increase and maintain a substantial flow of benefits should be seen as critical to this policy. Enhanced fisheries diplomacy should produce a steady increase in sound overall political and security relations as well as better outcomes for Australia and the Pacific from the regional tuna fisheries.

While fisheries are now one of our six top aid areas, we should make the Pacific our key regional fisheries priority.

While fisheries are now one of our six top aid areas, we should make the Pacific our key regional fisheries priority. Fisheries in this region are in many ways at a tipping point, and the next few years will be critical.

We should give priority to reinvigorating our historical position as a respected and valued influence in regional fisheries affairs. But we must be realistic in our expectations of what our influence and capabilities can achieve, so we need clear-eyed objectives and priority areas.

We're highly regarded in the region when we muster informed, politically and culturally aware resources to engage sensitively and appropriately. While we don't have a significant tuna fishery and aren't reliant on our fisheries, we must be very wary of being perceived as heavy-handed outsiders driving outcomes for what are essentially other countries' resources.

So far, Australia has had a balanced approach: we've supported the Pacific and provided leadership on difficult issues but reserved the right to 'go hard' on issues that we deem important to us.

This independence helps us and the Pacific: we have long-term relationships with non-Pacific members in other RFMOs, and we can use those relationships to leverage support on a range of issues.

By generating a regional political consensus on proper fishing practices, our fisheries diplomacy should become an increasing part of our regional engagement. It's a form of soft-power diplomacy, and we should use it to build resilience in the region's fisheries, thereby strengthening the Pacific's economic and food security.

We should position ourselves as the fisheries 'conscience' of the Pacific, as we've arguably done by urging the adoption of a harvest strategy. We don't wear the hat of a major fishing power, and we're seen by the region as having good connections with the US, Japan and China, as well as other external fisheries actors.

We must always bear in mind that, when it comes to fisheries, for Pacific island nations it's all about embracing the objective of sustained economic returns in a variety of forms.

Australia's strengths—fisheries science, management, monitoring, control and surveillance—are reasonably well understood in the region. But we should be translating this into greater national-interest benefits for Australia as well as strengthening regional capacities. There aren't many other countries that have our appeal in the Pacific in this field.

Australia should therefore focus on reframing regional fisheries discussions not just as technical matters, but as policy issues that warrant the highest and most sustained level of broad political and security engagement with our neighbours.

Recommendation: Go to Pacific Islands Forum leaders' meetings with a strong fisheries agenda and ensure that fisheries are covered appropriately in forum communiqués and forum leaders' statements.

Australia needs to be prepared for some potential political blowback. When we advance more sensitive fisheries management positions, that might result in a nation surrendering some of the benefits it currently enjoys from unsustainable fisheries management practices.

We can be an effective catalyst in codifying approaches to managing future risks to the region's living marine resources, but we're only one player in a big fishery. We'll need higher levels of coordination and top-level guidance and priority setting in Canberra.

We need to develop a more cohesive long-term approach to guide regional fisheries engagement. Fortunately, there's a regional framework in place through the work of the FFA, the WCPFC, the SPC's Division of Fisheries, Aquaculture and Marine Ecosystems, and the Parties to the Nauru Agreement (PNA).⁵

Australia is both a member of and a donor to the first three of these bodies. We'll need to ensure that they and the Nauru parties work together seamlessly and that they reduce competition to achieve the goal of sustainable fisheries.

Recommendation: Maintain our current support for key Pacific fisheries bodies and continue to support sustainable fisheries management to ensure economic and socially viable returns to Pacific island states.

Australia needs to ensure that we continue to have a productive dialogue on the PNA's agenda: around 90% of regional tuna stocks lies in the equatorial zone (10°N–10°S), and 70% is in PNA waters.

The PNA has done well without donors, so its members aren't looking for external assistance. Indeed, unsolicited donor assistance wouldn't be welcomed. We should work openly with the PNA to help its members achieve their goals, but only if asked. We should support the PNA as it beds down its zonal rights-based management approach and seek to assist other countries by extending the lessons learned to other Pacific fisheries.

Two policy streams will be important: one for the PNA, the members of which are concerned with maximising the benefits from the skipjack fishery and see bigeye tuna as a distant-water fishing problem (and one they shouldn't lose money to fix); and one for the non-PNA states that are more closely aligned with Australian fisheries interests. Balancing these interests will be critical, as supporting one may be seen as contrary to the interests of the other (see box).

Key bodies and arrangements for Pacific fisheries engagement

The FFA comprises 16 Pacific states, including Australia, and the territory of Tokelau. It aims to ensure that members' interests are represented effectively in fisheries negotiations and to provide a range of technical services and advice at the national, regional and subregional levels. Australia is the largest donor to the FFA, making it a focal point for our fisheries engagement in the Pacific.

In 2005, the region established the Western and Central Pacific Fisheries Commission, which has its secretariat offices in Pohnpei. All of the key coastal and distant-water fishing states and entities collaborated to establish the organisation, which has a mandate to ensure the long-term conservation and sustainable use of the region's tropical tuna fisheries. Its key challenge is to reduce overfishing in complex fisheries that catch multiple species, use multiple types of gear and operate in multiple jurisdictions. It's going to face a difficult time trying to get the necessary conservation measures agreed and implemented over the next few years.

The Parties to the Nauru Agreement (PNA) control the world's largest tuna purse seine fishery. They include the Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu, but not Australia.

The PNA has very successfully introduced a vessel-day scheme that creates a limited number of fishing days within the entire PNA region and a standardised minimum fee per day. Days are distributed among PNA members and can be traded among them. Fishing fleets compete against each other for a share of the pool. PNA members now assert greater control over their resources and wield greater influence as a bloc in wider regional forums. Revenues have increased by as much as 500% over the past five years.

The PNA has been very effective in getting countries a good return on their resources, but there are some concerns about a 'blowout' in fishing days. It's too early to say that the vessel day-scheme will deliver sustainable economic benefit. It's not obvious that the scheme is being used to reduce purse seine capacity in the region. The PNA will continue to create new dynamics in the relationship between island countries and external fishing powers: in many ways, it's the PNA that's calling the shots in Pacific fisheries.

The SPC's Division of Fisheries, Aquaculture and Marine Ecosystems gives the 22 member countries and territories the tools and information they need to make informed decisions on the management and development of their aquatic resources and the implementation of those decisions. The division runs oceanic and coastal fisheries programs, helping the SPC to provide world-class science on the health of fish stocks.

Despite increased Australian financial support to the FFA's and SPC's core programs, there's a perception in the region that fisheries issues have to some degree dropped off the radar of Australian governments over the past decade.

Most Pacific states have had relatively consistent representation at regional fisheries bodies' meetings over many years. It would be sensible for Australia to do the same where that's possible.

In many cases, the Pacific island officials and ministers who deal with fisheries are also responsible for regional and international climate change policy discussions. In this way, our international agenda for climate action has links to the credibility of our regional fisheries policy objectives.

Australia and the development of harvest strategies

In December 2014, the WCPFC adopted a fisheries harvest strategy drafted and brokered by Australia and proposed by the FFA.

Harvest strategies are proactive and adaptive, and provide a framework for taking the best available information about a stock or fishery and using a risk-based, weight of evidence approach to set harvest levels.

The strategies provide a more certain operating environment in which management decisions affecting the fishery or stocks are more consistent, predictable and transparent.

This is an exemplar for the role Australia can play in RFMOs to advance best practice fisheries management.

A key challenge for the WCPFC is to establish its role as a credible fisheries management organisation by securing collaborative action from all parties to support the sustainability of the resource. Australia should be advocating strongly for the WCPFC and should be working with distant-water fishing nations to get conservation and management measures through the commission.

However, much of the work to win the 'hearts and minds' of island states will be at the bilateral level. To do that effectively, our posts will need to keep track of the economic flows in these fisheries. Overall, we need to raise fisheries issues more in our bilateral relations.

New Zealand will be particularly important. It's a key player at the WCPFC and particularly with the non-PNA group, and its southern longline interests are closely aligned with those of the Australian industry. There's some overlap between our two countries' fisheries aid programs, so we have much to gain from a coordinated approach with New Zealand.

The Philippines and Indonesia are contracting parties to the WCPFC, while Vietnam is a cooperating non-member. It will be increasingly important to engage all three. Large tonnages of bigeye tuna and a large proportion of yellowfin tuna are caught in Indonesian and Philippines waters. A considerable proportion of Indonesia's tuna fishery is unregulated.

These Southeast Asian countries have significant fisheries expansion plans that include the Pacific, but they all lack basic fisheries data and an understanding of what that data means for the long-term sustainability of their fisheries.

Australia can help Southeast Asian nations with resources and structures to implement better data reporting. We can also strengthen their political will to take the next vital step, which is managing the fisheries, including by implementing measures that they've agreed to in the WCPFC.

There's also a need for dialogue with China. Chinese distant-water fishing operations are partly the result of a desire to increase Chinese influence and are supported by subsidies through China's Fisheries Bureau, which is administered by its Ministry of Agriculture.

Appropriate training in Australia would help China to develop good data collection systems, especially electronic reporting systems. We should be forging a fisheries partnership with China, as we want China to be inside the responsible fisheries 'tent'. We could also use diplomatic avenues to promote greater cooperation between Chinese companies and Pacific island governments to form mutually productive partnerships.

Australia should continue to point out the need to work with China to constrain subsidised Chinese boats in order to ensure a level playing field for everyone. China has aggressively increased vessel numbers, and those vessels remain largely high-seas based. There are good opportunities, particularly in the albacore fishery, for a wide range of innovative commercial arrangements that could secure long-term access for Chinese vessels (and perhaps even

onshore investors). At the same time, there are opportunities to increase government revenue and value-adding initiatives for island countries.

Despite some suggestions that Beijing has a plan to drive other fleets broke with its fleet subsidies, it's also in China's interest to maintain stocks in such a condition that its fleets can operate profitably.

Recommendation: Engage China in a fisheries dialogue on the need for management conservation measures, assist China on fisheries data collection systems and develop a better understanding of the current system of subsidies.

South Pacific Regional Fisheries Management Organisation

Concern over the management of demersal (bottom-dwelling) stock in the high seas during the 1980s and 1990s and, in particular, problems with straddling stocks such as orange roughy, led Australia and like-minded states to explore opportunities to establish a regional fisheries body in the South Pacific.

Headquartered in Wellington, New Zealand, the SPRFMO is an intergovernmental organisation committed to the conservation and sustainable use of the fishery resources of the South Pacific Ocean and safeguarding the marine ecosystems in which the resources occur.

The SPRFMO Convention closed a gap in the international conservation and management of non-highly migratory fisheries and the protection of marine biodiversity in the South Pacific.

The SPRFMO Convention closed a gap in the international conservation and management of non-highly migratory fisheries and the protection of marine biodiversity in the South Pacific.

It provides a framework for the management of Chilean jack mackerel, alfonsino, orange roughy and squid. Chilean jack mackerel is the most significant stock, with an annual allocation of 460,000 tonnes. The fishing areas for the species are in the southeast Pacific, off the coast of Chile and Peru. (Australia has no commercial interest in the Chilean jack mackerel industry.)

The SPRFMO Convention entered into force on 24 August 2012. The key members are Chile, New Zealand, China, South Korea, the EU and Australia. Taiwan is also a member. Currently, there are 20 members and cooperating non-contracting parties, as well as 10 observers.

The convention area, which adjoins Australia's EEZ, is significant in its size and its proximity to and influence on Australian fisheries activity. We have an interest in supporting the management of straddling stocks on the South Tasman Rise, Lord Howe Island, Norfolk Island and the Macquarie Ridge.

As a new organisation, the SPRFMO can champion the precautionary and ecosystem approaches to fisheries management, but its resources are modest. In February 2015, the SPRFMO Commission appointed an Australian officer from DAWR as its new chairperson.

Australia should develop our collaboration with SPFRMO members. We're seen as a moderate voice, with direct fishing activity in the convention area under strong domestic management.

We can build on our reputation as a mediator and broker and use it to promote responsible fisheries management and balance the needs of coastal states with the needs of distant-water fishing nations.

We can also work bilaterally in a number of areas, for example by encouraging the US to ratify the SPRFMO Convention and continuing to expand our longstanding linkages with Chile in the Southern Ocean. Our work in the Pacific can help to engage island states and their aspirations and develop broader understanding of the role of the SPRFMO.

Australian expertise in allocation as well as monitoring, control and surveillance is an area of potential development within the SPRFMO. We can engage with member states, working with New Zealand, to build agreement on appropriate Marine Stewardship Council agendas.

Australia could support capacity building and coordination between SPRFMO states by holding regional conferences on South Pacific fisheries science.

Working within the SPRFMO opens up opportunities to interact with the Pacific Alliance, a trade and economic integration grouping of Chile, Peru, Mexico and Colombia. Australia's an observer of the Pacific Alliance and, along with Chile, has been negotiating on joining the Trans-Pacific Partnership agreement. Chile now attends annual South Pacific Defence Ministers' Meetings.

As with other RFMOs, Australia has the opportunity to influence the management regime applied to the SPRFMO fisheries and hence the conditions or framework under which the relevant Australian fishing industry sectors and related services industries directly operate. An effective RFMO provides tangible benefits to Australia by providing additional protection for our EEZ from the effects of IUU fishing.

Engaging Pacific leaders, monitoring, control and surveillance, leveraging science, and women and fisheries

Australia should be trying to present strategic fisheries issues to Pacific leaders. Generally, we don't fully leverage the opportunity of the Pacific Islands Forum when it comes to fisheries. We should be engaging more at the forum to get fisheries ministers to focus on a range of issues and not solely on maximising short-term gains.

It will be critical to invest in the science to determine exactly what's going on with stocks. We'll need management in place for the entire fisheries, not just the 60% of fish caught in the WCPFC's zones.

More importantly, since we don't manage stocks simply to conserve them but to maximise long-term economic and other benefits, we must better understand the economics of the region's tuna fisheries at the national and regional levels.

Determining the potential of tuna fisheries and then measuring to what extent we're realising that potential—or more likely threatening it—are critical.

However, science isn't the whole story. The main game should be an effort to generate the political will to take hard decisions on current overfishing and overcapacity and improve fisheries decision-making by island governments.

Recommendation: Support Australian universities to link elements of their undergraduate and postgraduate fisheries work to Pacific island fisheries priorities and support Pacific islander scholarships and intern programs at Australian institutions.

Australia's domestic fisheries legislation and policy prescribe very high standards. But we need to ensure that we don't approach regional fisheries issues expecting similar levels of performance and governance. Rather, we'll need to be mindful of the aspirations and abilities of the Pacific states. Australia should work collaboratively so our neighbours see that it's their own fisheries that they must protect.

In many ways, regional fisheries engagement isn't crying out for our leadership. Because regional tuna fisheries are insignificant to Australia, we're not seen as having the same 'skin in the game' as the island states.

However, we'll be called on to pay the region's fisheries management 'bills' if things go wrong. That said, on many sensitive fisheries matters we'll need to back up other countries rather than drive them.

Australia should keep on building capacity in monitoring, control and surveillance but, by and large, the Pacific does those things well. In many ways, the FFA is viewed as using global best practice in those areas.

The way that Australia can add value is by harmonising compliance rules in regional fishing bodies so that the rules aren't unduly burdensome for fishing fleets, as well as by developing port state control measures and assisting on e-reporting mechanisms.

For reasons that aren't clear, Australia doesn't share vessel monitoring data with the FFA (however, it does receive FFA vessel monitoring systems contacts that are inside our EEZ). The FFA provides Border Protection Command with those elements of the regional 'picture' permitted in accordance with the data-sharing matrix that operates within the FFA membership. We can continue to assist Pacific island states to ratify and implement the Niue Treaty Subsidiary Agreement on cooperative enforcement patrols involving a combination of maritime enforcement agencies from several countries.

More generally, the Attorney-General's Department should strengthen its work with partner countries to develop and implement fisheries agreements. International legal requirements are often difficult to adapt to regional or national contexts, and this needs to be addressed.

AFMA officers' technical and operational experience is highly valued in the Pacific. AFMA should continue to play a key role in capacity-building programs and the development of cooperative measures at the regional level. There's an obvious requirement for long-term funding for AFMA to continue its capacity-building work in the Pacific.

The current emphasis on monitoring, control and surveillance assistance, while helpful, needs to be reoriented towards fisheries management and economics, possibly involving industry expertise.

The current emphasis on monitoring, control and surveillance assistance, while helpful, needs to be reoriented towards fisheries management and economics, possibly involving industry expertise. Those regional fisheries issues that are more operational should involve participation by Australian officials who can relate to the practicalities of implementing management arrangements. In the future, the emphasis should be more about building capacity in fisheries management. We should bear in mind here that cuts to our aid budget affect Pacific fisheries departments that are, for the most part, heavily aid dependent.

In the Pacific Patrol Boat Program, the Defence Department delivered 22 vessels to 12 recipient island nations, along with posted maritime surveillance advisers. This has been a highly successful maritime capacity-building program and is well appreciated in the region. The Pacific countries have welcomed our commitment to replace the vessels as part of the new \$1.9 billion Pacific Maritime Security Program.

The new program includes the delivery of replacement patrol boats, integrated aerial surveillance activities and enhancements to regional coordination. Australia will build up to 21 new boats and support them with 30 years of through-life sustainment and personnel costs. As the program evolves, it would be useful if our advisers could be more integrated into Australia's fisheries engagement work in the region (for example, through regular briefings by the officials responsible for our fisheries diplomacy).

One glaring gap in efforts to strengthen regional fisheries management is that there's no regional fisheries science and management program. CSIRO and ACIAR are well regarded for their work, which provides a firm base for capacity building.

Recommendation: Strengthen research and capacity-building programs in Indo-Pacific fisheries management, including stock assessments and the development of harvest strategies.

Several Pacific nations are running into serious trouble by being 'yellow carded' by the EU on fisheries market access. Australia should help regional states by establishing traceability systems to monitor catches, transshipments and sales of fisheries products.

Women's roles and perspectives are important to the overall management and development of Pacific island coastal and oceanic fisheries. In coastal fisheries, women participate in most activities, from catching, harvesting and processing to selling and marketing (SPC 2015).

The role of women in fisheries science and management at the national level should be promoted. Coastal communities should be encouraged to increase the participation of women in the implementation of community management activities.

There's a real need to engage women more in fisheries development in the Pacific and provide opportunities for them to take on leadership roles. A sustainable fishing industry can empower women by improving livelihoods and food security.

Recommendation: Fund a Women in Fisheries Development Program to empower women in fisheries work in the Pacific region.

For coastal fisheries, Australia should help develop management plans, including for monitoring and control. In this space, we should be leveraging the excellent reputation of CSIRO and the Australian Centre for International Agricultural Research in the region to ensure that crucial food fisheries are maintained.

CHAPTER 4

Indian Ocean

The Indian Ocean region is made up of coastal states' EEZs and high-seas pockets supporting very diverse fisheries.

The fishing industry is not only a key economic sector in the Indian Ocean region; depleted fishing stocks also have broader implications for the security of the region. Fisheries are one of the most significant renewable resources that Indian Ocean countries have to secure food supplies, maintain livelihoods and assist economic growth.

Twenty-five of the Indian Ocean region's 35 coastal states are developing countries for which fisheries are a critical source of animal protein and central to alleviating poverty and creating employment.

The region's fisheries produce around a third of the world's tuna and include the valuable southern bluefin tuna fishery (which extends into the Pacific Ocean)—where the Commission for the Conservation of Southern Bluefin Tuna covers the stock through its range. Twenty-five per cent of tuna caught in the Indian Ocean is from Indonesia. Half the tuna caught by small vessels in the Indian Ocean is caught in waters off coastal states.

Other important pelagic stock, including yellowfin, bigeye and albacore tuna, support industrial and artisanal fisheries. Hundreds of thousands of people depend on coastal fisheries, especially for employment.

These oceanic and coastal fisheries are critical for the region's economic security.

Regional fisheries management is diverse in its scope and the competence of the relevant RFMOs (Table 1) but, compared to the Pacific, the Indian Ocean is the 'wild west'. For the most part, RFMOs in the Indian Ocean have only policy recommendation functions, meaning that it's up to the individual states to implement effective fisheries management measures. Consequently, Indian Ocean fisheries management has developed very slowly.

Many developing states lack the resources to patrol their waters effectively to guard against IUU fishing. They face difficulties in retaining data on fish populations and catches and in keeping track of foreign boats operating in the area. There are very low levels of observer coverage in the region.

Apart from fishing vessels from Japan, Taiwan and South Korea, the domestic fleets of Indian Ocean coastal states, particularly Indonesia, are expanding. European vessels are entering the region following the depletion of Atlantic Ocean fish stocks. There's significant overinvestment in Indian Ocean fleets.

Countries in the region have identified the significance of the 'blue economy', emphasising the sustainable development of marine resources. Seychelles is promoting this approach, reflecting the needs and aspirations of small-island developing states. This approach has also been supported by India and Mauritius and by the states bordering the Bay of Bengal.

Table 1: Key Indian Ocean regional fisheries management organisations

Organisation	Area of competence	Species coverage	Members
Bay of Bengal Program Intergovernmental Organisation	EEZs and high seas within convention area	All marine species	Bangladesh, India, Maldives, Sri Lanka
Southwest Indian Ocean Fisheries Commission	Areas under national jurisdiction within convention area	All living marine resources	Comoros, France, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Somalia, South Africa, Tanzania, Yemen
Indian Ocean Tuna Commission	High seas and areas under national jurisdiction within convention area	Tuna and tuna-like species Non-target species of ecological importance	Australia, Belize, China, Comoros, Eritrea, EU, France, Guinea, India, Indonesia, Iran, Japan, Kenya, South Korea, Malaysia, Maldives, Mauritius, Mozambique, Oman, Pakistan, Philippines, Seychelles, Sierra Leone, Somalia, Sri Lanka, Sudan, Tanzania, Thailand, UK, Vanuatu, Yemen Cooperating non-members: Djibouti, Senegal, South Africa
Southern Indian Ocean Fisheries Agreement	High seas	High-seas demersal stocks	Australia, Cook Islands, EU, Mauritius, Seychelles

Source: modified from Palma-Robles 2014

The 'blue economy' approach integrates development with recognition of the importance of ecosystem services from mangroves, wetlands and sea grass environments, but also industries such as port development, fisheries, aquaculture, renewable energy, mineral exploration and marine-based tourism.

Australia can contribute to better fisheries management by working with Indian Ocean bodies to help build capacity, skills and governance. We should ensure that RFMOs are adequately resourced. They'll need to provide information to member states so that appropriate management arrangements, including monitoring, control and surveillance systems, can be implemented.

We should also build the capacity of regional states bilaterally: the Indian Ocean region includes states with capacity in fisheries management, but it also includes near failed states, such as Somalia.

As an Indian Ocean littoral state, we have a direct interest in the sustainability of the region's fisheries. We also have a specific interest in ensuring opportunities to access stocks for our fishing industry: the Indian Ocean contains the spawning area for southern bluefin tuna, a species of significant economic interest to Australia.

Our direct fishing interests are limited, but we have a strong reputation and track record in fisheries management and science that can help to bring Indian Ocean states together on fisheries issues.

Our fisheries interests in the Indian Ocean will be affected by range shifts of pelagic species. Changes in ocean temperature and chemistry will lead to broad-ranging shifts in the distribution of tropical tunas southwards towards mid-latitudes and away from warming water in higher latitudes.

These shifts will increase the likelihood of southern bluefin tuna being caught by fleets targeting yellowfin tuna. Fleet movements following range shifts might increase the level of unreported catch. Such fishing has consequences for the effective management of the species and is an area for future cooperative work between the CCSBT and the Indian Ocean Tuna Commission (IOTC).

Key issues

The status of key stocks in the Indian Ocean is of concern. Yellowfin and bigeye tuna stocks are under pressure from heavy fishing. The current level of fishing for albacore is likely to lead to further declines in biomass and productivity, leading to reduced catches. Uncertainties remain over skipjack, and catches will continue to decline. Striped marlin is subject to overfishing, while other billfish stocks are under pressure. The stock status of all shark species is uncertain (IOTC 2015).

Approaches to allocation are an important regional issue. The IOTC, the key regional tuna body, has traditionally managed stocks through effort controls. However, other approaches should be explored, including catch limits or total allowable effort, and allocation should be a high priority for the commission. This is an area where Australia should make a key contribution.

Many IOTC member states lack effective monitoring, control and surveillance capabilities, and there's a real lack of port state control measures. Maritime security issues such as piracy and the use of fishing vessels for the illegal movement of arms, people and contraband continue to affect areas of operation of fishing vessels.

Engagement in the Indian Ocean fisheries sector

Our rights-based approach to management and the integrated principles enshrined in our fisheries legislation (such as the precautionary approach, the ecosystem approach and environmental impact assessments) should be the basic framework for strengthening our fisheries engagement in the Indian Ocean.

An approach that focuses on sustainable fisheries and responsible fishing also supports the thrust of the Indian Ocean Rim Association's objectives for fisheries management.

Australia engages with the region on tuna management. We try to find common solutions to the problems of IUU fishing, principally through our membership of the IOTC.

In the area of demersal stock management, Australia ratified the Southern Indian Ocean Fisheries Agreement (SIOFA) in 2012. SIOFA was established to address the unregulated fishing of shared and straddling stocks, such as orange roughy, on the high seas.

High-seas stocks managed under SIOFA may also occur within Australia's EEZ. We have a clear interest in ensuring compatibility with domestic fisheries management and consistent and responsible management arrangements across the Indian Ocean.

Indian Ocean Tuna Commission

The IOTC manages tuna, billfish and swordfish species throughout the high seas and EEZs of the Indian Ocean. It was established in 1996 as a regional fisheries body chartered by the Food and Agriculture Organization of the United Nations (FAO). China's membership of the IOTC has meant that Taiwan, which is very active in the region, is excluded.

In addition to Taiwan, South Korea, Japan and China are active in the purse seine and longline tuna fisheries. About 40% of the catches are made by industrial fleets, and the rest by artisanal fishers.

For the past four years, Australia has convened a meeting (and sponsored the participation) of Indian Ocean coastal states before IOTC meetings, allowing them to share information on matters of mutual interest on the IOTC meeting agenda. We also convene a meeting of the coastal states during the IOTC meeting to allow effective caucusing among them.

Our engagement with the IOTC, particularly on scientific and management expertise, is highly regarded and provides important opportunities to support regional management. Australia should continue to support capacity-building initiatives to improve member states' operational fisheries management.

The IOTC area includes Australia's western and eastern tuna and billfish fisheries, eastern and western skipjack fisheries and the southern bluefin tuna fishery.

One of Australia's key future strategic interests is to ensure appropriate cooperation between the IOTC and the CCSBT. We should be fully involved in ensuring collaboration between the two tuna bodies in managing transshipments of fish and monitoring catches.

Our scientists' and officials' work on allocation and harvest strategies in these areas has been appreciated by the IOTC as a major contribution in capacity building and should be continued. Our recent work with the EU and the Maldives to establish a resolution on target and limit reference points in the IOTC stocks is a good example.

Indian Ocean coastal states are looking to develop their offshore fishery capacity. Australia should be working closely with them to ensure that data recording and monitoring systems are in place and that the reporting of catches is accurate, adequate and timely. We should prioritise discussions on monitoring, control and surveillance within IOTC forums.

This will require considerable effort at the country level and in supporting and training port and fisheries administrators to improve catch data collection. In collaboration with other donors and the IOTC, we should establish a pilot project that could focus on improving catch records and catch monitoring.

Commission for the Conservation of Southern Bluefin Tuna

Southern bluefin tuna (SBT) is one of Australia's most valuable tuna fisheries: we currently export \$150 million per year of ranched⁶ SBT caught off South Australia. After quota cuts in the 1980s and 2000s, catch quotas are now increasing. Australia and Japan are the two largest harvesters of SBT, followed by South Korea, Taiwan, New Zealand, Indonesia and South Africa.

One challenge with a recovering stock is the threat of illegal catches on the high seas by flag-of-convenience vessels and unregulated catches by CCSBT members and non-members.

Australia was influential in establishing the CCSBT Convention, which came into force in May 1994. We've remained a major contributor to the management of SBT within this regional framework, including to its well-regarded fisheries science.

Australia has also led work on ecologically related species, especially on managing seabird bycatch in the SBT fishery. The SBT fishery is Australia's primary international fishery, and the CCSBT is the one tuna RFMO where our fishing interests are most clearly focused.

In that sense, the CCSBT is the RFMO where our reputation as a responsible fishing nation should be most clearly evident.

The background to the CCSBT

Australia, Japan and New Zealand were the original signatories to the CCSBT and the original members of the CCSBT Commission. South Korea joined in 2001, while Indonesia joined in 2008.

The CCSBT allows the membership of ‘fishing entities’—a membership category that recognises the particular political and diplomatic status of Taiwan. Taiwan joined the ‘Extended Commission’ on 30 August 2002. The European Union joining the Extended Commission in 2015 after previously joining as a cooperating non-member in 2006.

In October 2003, the members of the commission agreed to invite countries with interests in the fishery to join as ‘cooperating non-members’. This approach has been useful in engaging states involved in the fishery. This status is often seen as a transitional arrangement leading to full membership on accession to the convention.

The Philippines joined as a cooperating non-member in August 2004 and South Africa in August 2006. Fiji and the US have observed recent meetings of the CCSBT, and Fiji has enquired about more formal status within the framework.

Australia has a direct interest in working with Indonesia to ensure that the CCSBT Commission has access to critical data and information. Indonesia is close to the SBT spawning grounds and has a central role in the rebuilding of the fishery. While it remains a smaller player, with the CCSBT it has a crucial role in monitoring catches and, with Australian support, is continuing to expand its capacity in both observer and landing data.

China is developing a market for SBT and high-value sashimi tuna more generally and has a large number of boats fishing in areas where SBT is caught. It has expanded its fishing considerably in two key SBT areas: in the Indian Ocean and north of New Zealand.

Efforts by the commission’s secretariat and individual members to encourage China to join the CCSBT haven’t been successful. Australia should encourage China to accede to the CCSBT and join the CCSBT Commission as a full member. The annual Australia–China High Level Dialogue could be the appropriate vehicle for discussing this issue, in the context of a broad focus on regional fisheries.

Australia should work with other members of the commission to ensure that big scientific programs that are central to the work of the commission...are funded.

Australia should work with other members of the commission to ensure that big scientific programs that are central to the work of the commission, the viability of stock assessments and the rebuilding strategy are funded.

A recovering stock is likely to pose further issues. The option to catch illegally is more likely to be taken up if the stock is stronger. This is common sense: poor catch rates from a low stock mean that fishing is more likely to be uneconomic.

Australia’s recreational SBT catch, which has increased in recent years, is a significant challenge. Recreational fishing has been observed off southwestern Victoria as well as in the more ‘traditional’ recreational fishery off the east coast of Tasmania.

We need to address key issues in this fishery in such a way that we maintain our reputation and avoid any risk of a trust deficit opening up between us and other CCSBT Commission members, which might damage our image in other regional tuna bodies.

Southern Indian Ocean Fisheries Agreement

SIOFA addresses the sustainable management of non-highly migratory species in the high seas of the southern Indian Ocean.

Australia, along with New Zealand and South Africa, initiated negotiations that led to the agreement. We ratified the agreement on 23 March 2012, and SIOFA came into force on 21 June 2012. The current parties to SIOFA are Australia, the Cook Islands, the EU, France, Japan, the Republic of Korea, Mauritius and Seychelles.

Some fishery resources under the mandate of SIOFA may also straddle the Australian EEZ and may be important to domestic fisheries. It's important for Australia, as a coastal state, to ensure that consistent and responsible management arrangements are used across the Indian Ocean to safeguard the interests of domestic industries that harvest these stocks.

We can influence regional management measures adopted by the meetings of the parties to SIOFA, seek to ensure that those measures are compatible with our domestic management arrangements, and secure access for the Australian fishing industry.

In one sense, Australia's engagement with SIOFA isn't worth a great deal: only one or two Australian boats are operating in the high seas in this area, and those vessels are under strong Australian flag state control. However, our engagement with SIOFA sets up future opportunities for deepwater fishing and fulfils our commitments under broader international fisheries law frameworks.

Regional Plan of Action to Promote Responsible Fishing Practices

Australia is a key member of the Regional Plan of Action to Promote Responsible Fishing Practices Including Combating Illegal, Unreported and Unregulated Fishing in the Region (RPOA-IUU).

In 2006, Australia and Indonesia established a collaborative approach to address illegal fishing in Australian waters and in the Timor and Arafura seas, mostly by small Indonesian vessels.

Indonesia, Timor-Leste and Papua New Guinea were also subject to IUU fishing, much of it by vessels coming from other Southeast Asian countries.

Eleven countries have joined the RPOA-IUU: Australia, Brunei Darussalam, Cambodia, Indonesia, Malaysia, Papua New Guinea, Philippines, Singapore, Thailand, Timor-Leste, and Vietnam.

The objectives of the RPOA are to enhance and strengthen fisheries management in the region in order to sustain fisheries resources and the marine environment and to optimise the benefits from adopting responsible fishing practices.

The actions cover the conservation of fisheries resources and their environment, managing fishing capacity, and combating IUU fishing in the southern and eastern South China Sea, the Sulu-Sulawesi seas, the Gulf of Thailand, and the Arafura-Timor seas.

Recommendation: Continue to provide technical support and training to parties to the Regional Plan of Action to Promote Responsible Fishing Practices, leveraging Australia's technical expertise in monitoring, control and surveillance.

Indian Ocean Rim Association

Outside fisheries-related institutions and multilateral forums, Australia's membership of the Indian Ocean Rim Association (IORA) provides a number of opportunities to advance our fisheries and broader political interests in Indian Ocean cooperation.

IORA aims to spearhead future regional integration as the Indian Ocean grows in economic importance. It's the only pan-regional forum in the Indian Ocean that tries to address challenges faced by the more than 2 billion people who live around the Indian Ocean rim.

Initiated in March 1995 and formally launched March 1997, IORA provides an intergovernmental forum for 20 Indian Ocean littoral states.

Membership of IORA is in demand: Somalia's in the queue to join the association, although there are still a few formalities before its membership is finalised; Myanmar and the Maldives are also applying to join.

Fisheries management is one of IORA's six priority areas, but the Fisheries Support Unit in Oman, the fisheries flagship project of IORA, isn't well integrated into the regional fisheries architecture. Australia should assist here.

Recommendation: Continue to support and advance the fisheries work program of IORA.

Bay of Bengal

The Bay of Bengal is the world's largest bay and is an important yet neglected part of southern Asia. It's bookended by India on its western side and Thailand to its east; Bangladesh, Myanmar and Sri Lanka are in between.

This part of the Asian littoral is surrounded by some of the world's most important trading routes, but has long been ignored by Australia.

Countries around the Bay of Bengal, including Bangladesh, Sri Lanka and Myanmar, are experiencing high growth rates. China, India and Japan are building connectivity throughout the region with huge investments in new ports, roads, pipelines and railways.

The Bay of Bengal is likely to become increasingly important for Australia in the coming decades. Our economic linkages with India, Bangladesh, Sri Lanka and Myanmar, for example, could come to rival many of our current economic links in East Asia.

The Bay of Bengal Program Inter-Governmental Organisation (BOBP-IGO) comprises Bangladesh, India, the Maldives and Sri Lanka and aims to enhance cooperation and provide technical and management support to enable sustainable coastal fisheries development and management.

The BOBP-IGO Agreement was signed by the governments of Bangladesh, India and Sri Lanka on 26 April 2003 and by the Maldives on 21 May 2003.

The Bay of Bengal Large Marine Ecosystem Project is a multilateral initiative between the Maldives, India, Sri Lanka, Bangladesh, Myanmar, Thailand, Indonesia and Malaysia supported by the FAO. It aims to improve the livelihoods of fishing communities by focusing on improved fisheries management and environmental conservation.

The project provides a framework that affords Australia opportunities to engage in developing the fisheries management framework in the region to ensure the effective management of long-term conservation and the sustainable use of fish stocks.

Recent work by Australia in supporting the development of IORA's Fisheries Support Unit in Oman as a potential point of coordination for IORA countries could be extended to a subregional coordination model in the Bay of Bengal region, enhancing the contribution of these institutions to wider regional objectives.

Bilateral linkages

Along with Australia's work in regional multilateral organisations and forums, we maintain important bilateral relations relevant to fishing.

Indonesia

Indonesia sees itself as a fulcrum between the Indian and Pacific oceans. This was highlighted in the new maritime doctrine announced recently by Indonesian President Joko Widodo.

Our fisheries relationship with Indonesia is significant and should be strengthened. We have a common concern over shared stocks in the Arafura and Timor seas and in Indonesian traditional fisheries in Australian waters in the Timor Sea (which are covered in a 'box' defined in a bilateral memorandum of understanding).

From the Indonesian perspective, the memorandum of understanding box continues to provide access to resources that are important for the livelihoods of a large number of fishers and their families.

However, Australia understands that the stocks of many exploited species are depleted, so we want a more precautionary approach. For example, such an approach would require controlling the amount of fishing effort or the number of boats allowed to fish in the box to bring the agreement more into line with current standards of sustainability.

Apart from stock management, there's also reason to be concerned about whether the traditional fishery can coexist with petroleum developments in the box without compromising the security and safety of the petroleum infrastructure and its people and without additional high security costs. (The two could coexist if there were a security presence and 'rules of engagement' that prevent a traditional vessel from reaching the infrastructure.)

The Australian offshore petroleum industry is developing rapidly. Some of the largest developments are occurring in the Browse Basin, which lies beneath much of the memorandum of understanding box. For example, the Ichthys LNG project's floating production, storage and offloading facility will be used for condensate dewatering, stabilisation, storage and export. This is mega-infrastructure, and it's in the MOU box.

The longer term future of the 42-year-old memorandum of understanding has yet to be fully canvassed with Indonesia: the Australian–Indonesian Working Group on Marine Affairs and Fisheries has a sub-group on the agreement, but neither group has met for the past three years.

Recommendation: Examine the memorandum of understanding on traditional Indonesian fishing in Australian waters, in particular stock management and potential marine use conflicts between the traditional fishing sector and the offshore oil and gas industry, from a whole-of-government perspective and thereafter with Indonesia as a matter of priority.

Australia and Indonesia collaborate through the RPOA-IUU, which provides opportunities for enhanced capacity building in monitoring, control and surveillance for Indonesia and for technical and scientific exchanges between the two countries, and share membership of three RFMOs.

We've now effectively stopped the problem of illegal Indonesian fishing in Australian waters—only five apprehensions were made in 2014–15. A three-pronged approach contributed to the success: Australian education campaigns in Indonesia with Indonesian fishers; effective maritime enforcement, resulting in the confiscation and destruction of around 1,000 Indonesian illegal fishing boats; and capacity building and training programs in monitoring, control and surveillance conducted by Australia in Indonesia.

The three main landing sites for Indian Ocean tuna longline vessels are the fishing ports of Benoa (Bali), Muara Baru (north Jakarta) and Cilacap (Central Java). More than 60% of the tuna catch is landed at Benoa, where the dominant species is yellowfin tuna.

Australia has deep and extensive links in tuna catch monitoring that extend into collaborative science with a particular emphasis on SBT. This has included work guided by a mutually agreed strategic plan to achieve statistically robust data collection and reporting systems for Indonesia's tuna catches.

This has had a number of benefits. Our work with Indonesia has facilitated its increased participation in and attainment of membership of the IOTC, the CCSBT and the WCPFC.

A key objective of Australian-funded projects has been to develop Indonesia's research capacity for pelagic fisheries at the Benoa Tuna Monitoring and Research Laboratory of the Research Center for Capture Fisheries. This has direct benefits for Indonesia's engagement with RFMOs over pelagic species and in improving the management of coastal fisheries. Increasing opportunities for Indonesian postgraduate training in Australian universities and research institutes would enhance this research capacity.

President Widodo has reinforced Indonesia's maritime (including fisheries) interests by advancing the concept that Indonesia will play a key role as a maritime fulcrum, asserting itself as a world 'maritime axis'. The Indonesian Government is cracking down on illegal foreign fishing vessels operating in its waters, using a zero-tolerance approach.

Indonesia has traditionally looked north and east towards the Pacific for economic, diplomatic and strategic reasons, but recent Indonesian Government statements give greater attention to the Indian Ocean (see box).

The five pillars of Indonesia's maritime axis doctrine

- Rebuild Indonesia's maritime culture.
- Maintain and manage sea resources with a focus on establishing sovereignty over sea-based food products.
- Prioritise infrastructure and maritime connectivity development by modernising sea ports while also improving the shipping industry, logistics and maritime tourism.
- Through maritime diplomacy, Indonesia must end the sources of conflict at sea, such as fish thefts, violation of sovereignty, territorial disputes, piracy and pollution.
- As a country that is the bridge between two oceans, Indonesia is obligated to build its maritime defence power.

ACIAR's fisheries program

The goal of the Australian Centre for International Agricultural Research fisheries program is to improve the livelihoods of people dependent on capture fisheries and aquatic farming systems in partner countries and in Australia. Partner countries include Indonesia, Timor-Leste, the Philippines, Vietnam, Laos, Cambodia, Myanmar, Papua New Guinea and Pacific island countries.

The program helps collaborating agencies build and sustain their capacity to manage capture fisheries and aquaculture industries for improved incomes and food security.

In the aquaculture area, the program aims to develop and promote the application of technologies to increase production efficiency and better understand and manage production- and market-related risks.

In capture fisheries, focal areas are stock assessments and management, resource and habitat rehabilitation, and innovative management approaches.

India

India's fishing effort is mostly confined to inshore waters, where artisanal and traditional fishing operations account for 93% of production. Deep-sea fleets operating to the edge of India's EEZ contribute only 7% of production, mostly from prawn trawling. Despite this emphasis on coastal and inshore areas, production has increased by a factor of six in the past 50 years. While offshore fisheries provide some opportunities, there appears to be limited scope for the further development of coastal and inshore fisheries.

It's likely that India's oceanic fishery capacity will develop. This will increase India's engagement with regional fisheries arrangements and will open up greater opportunities for Australia to develop bilateral linkages on fisheries.

Indonesia's closer links with India and Australia mean we should also be looking at the prospects for trilateral cooperation on fisheries in the eastern Indian Ocean.

China

China has emerged as a major high-seas fishing nation over the past 10 years. Distant-water fishing has been promoted as a means to increase the supply of fisheries product. The distant-water sector is estimated to employ 50,000 fishers.

China's economic growth has fuelled the expansion of its fisheries interests in the Indo-Pacific. This is reflected in its increasing domestic market for high-value species such as tuna. Food security and access to product will continue to be major drivers of China's fisheries diplomacy.

Beijing has increased the number of its access agreements with coastal states. The country's rise as a fishing power is linked to its geopolitical aspirations, and Chinese fishing vessels are a visible sign of the spread of its influence. At the same time, it's an active member of key regional fishing bodies as a means to gain information and contribute to scientific engagement.

China isn't beyond using its fishing fleets to create a strategic presence. For example, in the East and South China seas, Chinese fishing vessels have been given a green light by the government to fish in contested maritime areas.

China's distant-water fisheries

China has the world's largest distant-water fleet, and it's heavily subsidised. The Chinese Ministry of Agriculture's Bureau of Fisheries has a distant-water fishing subdivision.

More than half the catch is transported back to China, and high-value species are sold abroad. China also plans to develop non-traditional fisheries, such as for Antarctic krill.

A third of China's distant-water fleet is owned by a large state-owned enterprise, the Chinese National Fisheries Corporation, and its subsidiaries. The rest of the industry is composed of regional middle-sized companies and small coastal companies.

China's distant-water fishing operations are rapidly expanding, and its fleets are poorly regulated and not bound by international agreements.

A strong distant-water fishing fleet is considered an important part of China's sea power and helps to safeguard China's ocean interests. It uses the fleet to create a strategic presence in the East and South China seas. The boats help the Chinese navy by developing knowledge of local conditions.

China's fishing fleet expansion offers opportunities for other states to cooperate with China on fishery matters.

A strategic focus

Notwithstanding Australia's relatively limited direct involvement in Indian Ocean fisheries, we can leverage significant influence as an active participant in the regional fisheries governance architecture through our engagement with the IOTC, SIOFA and the CCSBT.

Our bilateral relationships with Indonesia, India and China will also be important in helping to bolster fisheries governance.

IORA's increasing focus on fisheries through the Fisheries Support Unit in Oman provides further opportunities to strengthen fisheries governance. We can build on links through IORA to focus on broader strategic issues relating to Indian Ocean fisheries. Our bilateral relationships with Indonesia, India and China will also be important in helping to bolster fisheries governance.

CHAPTER 5

Southern Ocean

Australia has longstanding strategic interests in the Southern Ocean linked to our sovereign interests in the sub-Antarctic and the Australian Antarctic Territory.

The Australian fishing industry operates a small number of large vessels fishing for valuable Patagonian toothfish and mackerel icefish at Heard Island and McDonald Islands (HIMI), Patagonian toothfish at Macquarie Island and recently in other parts of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) area, such as the Ross Sea for Antarctic toothfish (Figure 3). These fisheries are important; toothfish is one of Australia's most valuable fisheries in terms of catch.

CCAMLR waters also contain Antarctic krill, a key species in the Southern Ocean ecosystem and the world's largest underexploited marine resource stock. As yet, no Australian vessel is fishing for krill.

Our interests are shaped by a commitment to the Antarctic Treaty and the broader Antarctic Treaty System, which includes the Convention for the Conservation of Antarctic Marine Living Resources. The convention provides a framework for the management of marine living resources (excluding whales and seals) in the Southern Ocean under the CCAMLR.

The CCAMLR area includes the waters around HIMI, where Australia exercises sovereign right, as well as waters off the Australian Antarctic Territory.

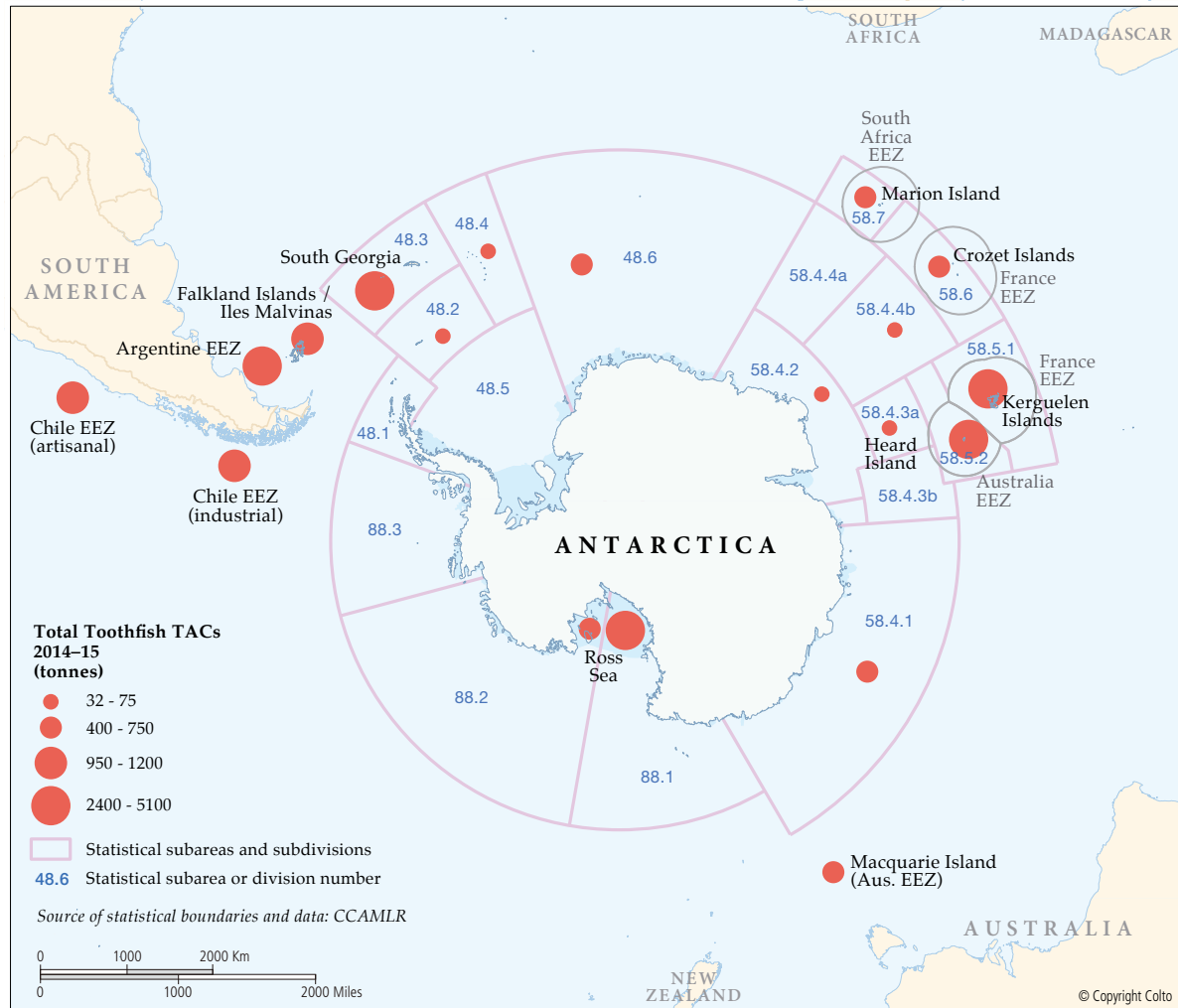
Australian industry has high standards of compliance with international measures and national regulations. It's also an active participant in the Coalition of Legal Toothfish Operators, a key industry organisation that has observer status at CCAMLR meetings and that pressures flag states to act on IUU vessels.

The CCAMLR employs a precautionary and ecosystem approach to marine resource management. To be commission members and have voting rights, parties have to be engaged in harvesting or research. Two-thirds of the members are fishers.

In 2002, in the context of the convention, the CCAMLR agreed to the guiding principle that it's a 'conservation organisation with attributes of an RFMO'. The conservation objective takes fishing into account, but the CCAMLR isn't a fisheries management body in the traditional sense.

Australia has specific obligations as the depositary state for the convention. We're responsible for addressing queries from potential acceding states; accepting all notifications and documents related to the convention treaty; examining whether all formal requirements are met; depositing and registering the treaty; and notifying commission members of all relevant acts.

Figure 3: Southern Ocean toothfish fisheries, 2014–15



Source: Reproduced with permission of Colto, online

Our scientific contribution to the CCAMLR is significant. Australia is one of a small number of the 25 commission members that do most of the scientific ‘heavy lifting’. This science is carried out through research voyages as part of Australian Antarctic science programs and collaborative activities with a range of countries. We also use Australian fishing vessels as research platforms.

Much has been achieved in reducing IUU fishing in CCAMLR waters by a combination of measures including increased monitoring and surveillance of vessels, the introduction of a catch documentation scheme, rigorous port state inspection in key market destinations and relentless efforts by a number of CCAMLR members through representations to non-contracting parties that are port and flag states.

But the CCAMLR continues to face IUU fishing in areas of the high seas within its jurisdiction. Although no formal commission recording has been done in recent years, there’s some evidence that at least six IUU vessels continue to operate in this area. While these vessels are flagged to non-contracting parties of the CCAMLR, it may be that the beneficiaries of fishing catches are CCAMLR member states. If that’s the case, those vessels could be prosecuted by a member state where the beneficial owner resides.

While the illegal fishing problem has been effectively addressed in and around HIMI's EEZ, Australia's reputation as a nation that takes its sovereign rights seriously, along with our direct fisheries interests (including market impacts), would be adversely affected by a widespread public perception of IUU fishing activity in the Southern Ocean. Australia should continue to engage on this problem, including by working with INTERPOL and with regional partners (the RPOA) and like-minded CCAMLR members.

Australia has been a key player in addressing the incidental mortality of seabird species, including albatrosses and petrels, caused by fishing activities in the Southern Ocean. As a key state in the negotiation and entry into force of the Agreement on the Conservation of Albatrosses and Petrels, we remain strongly engaged with the agreement and host the secretariat in Hobart. We continue to support research on mitigation measures, including innovations in fishing gear and techniques and the development of guidelines and plans of action to combat incidental seabird mortality. This work includes the active involvement of Australian industry and reinforces our commitment to sustainable and responsible fisheries.

Recommendation: Continue to support environmentally responsible fishing practices in the Southern Ocean, and work with Australian industry and regional fishing bodies to achieve high levels of compliance with relevant requirements.

Australia and the CCAMLR

The Australian Antarctic Division of the Department of the Environment leads Australia's engagement in the CCAMLR. It's guided by an annual CCAMLR strategy developed by the Department of the Environment and endorsed by the DAWR, AFMA, DFAT and the Attorney-General's Department. The ministers for the Environment and Agriculture formally sign off on the strategy annually. Our position in the CCAMLR is developed through regular interagency consultations involving three formal interdepartmental meetings each year.

This approach provides a model for engagement in other regional fisheries bodies. Positions announced or argued by states in one fisheries organisation are likely to be raised by those same states in other fisheries bodies.

An annual meeting of relevant agencies to discuss emerging issues within regional fisheries bodies would help to ensure a consistent Australian approach to such issues.

The Australian Antarctic Division uses the CCAMLR Consultative Forum, which involves relevant government agencies, the fishing industry, NGOs, state and territory representatives and academics, for advice on matters affecting our interests in the Southern Ocean.

Australia's current priorities include a focus on developing marine protected areas in Antarctica.

Australia's current priorities include a focus on developing marine protected areas in Antarctica. We've proposed a network of such areas off East Antarctica together with France and the EU. This proposal (along with a similar initiative for marine protected areas in the Ross Sea region proposed by New Zealand and the US, later merged into one proposal) has yet to gain consensus within the commission.

Other key priority areas for Australia are engaging in and enhancing management of exploratory fisheries, informing decisions regarding acceptable total precautionary levels of krill harvest, pursuing measures to shut down IUU fishing and seeking to incorporate climate change impacts on Antarctic marine living resources in commission decision-making.

Our work in the Southern Ocean is sensibly focused in the East Antarctic region. That's congruent with our core interest of sovereignty over the Australian Antarctic Territory, but we should work with other like-minded states to demonstrate our commitment to the *whole* CCAMLR area: we'd want to avoid any perception that we're focused only on those waters surrounding our sub-Antarctic territories and the Australian Antarctic Territory.

France

France is an important participant in the Antarctic Treaty System and the CCAMLR. It has a number of sub-Antarctic islands in the Southern Ocean as well as the Indian Ocean island territory of Reunion.

Our bilateral relationship with France in the Antarctic and Southern Ocean includes logistics and operational cooperation, reciprocal fisheries surveillance and enforcement, and science collaboration.

We're both original signatories to the Antarctic Treaty and are Antarctic claimant states. We also share deep and long connections to Antarctic affairs going back to the 19th century. France's Antarctic program uses Hobart as a base and port of embarkation.

The voyage track of the French vessel *L'Astrolabe* from Hobart to the French base at Dumont Durville provides an important Southern Ocean oceanographic observational transect, data from which contributes to global climate change research. Added to this data is the oceanographic observational data collected from Australian fishing vessels.

A treaty permits enforcement personnel from Australia or France to deploy on to the other country's patrol vessels and to undertake enforcement activities such as the hot pursuit, apprehension and boarding illegal fishing boats.

A key to making the arrangement work is to ensure that there are adequate surface patrols by Australian vessels to share the burden of surveillance in the region.

IUU fishing operators would be aware of our reduced surface surveillance patrols. There's a risk that these vessels may move back into the highly productive HIMI fishery.

CHAPTER 6

Cross-cutting themes

Our regional engagement provides an opportunity to use Australian expertise in fisheries science and management to help address regional fisheries management. It's also a useful vehicle to advance our broader foreign and security policy objectives in the Indo-Pacific and Southern Ocean.

There are several key cross-cutting themes in this report:

- Make regional fisheries engagement a key element of Australia's broader foreign and strategic policy interests.
- Review current objectives for each region or fishery and build a strategic approach to regional fisheries engagement that focuses on these key objectives.
- Reinforce a whole-of-government approach that maximises skills and competencies and formalises coordinating processes to increase efficiencies in addressing ongoing and emerging issues.
- Look to key areas where fisheries engagement provides opportunities to further bilateral and regional linkages.
- Use areas where Australia has significant assets and performance, for example in monitoring and compliance expertise and fisheries management, to support regional fisheries.
- Maintain and strengthen our participation and performance in key RFMOs and related bodies where our direct economic interests are or could be affected and resource that engagement appropriately.
- Incorporate existing links with key stakeholders, especially industry and NGOs, into regional strategies and plans.

A key way for us to advance these interests is to engage in developing the fisheries management framework in the region to ensure the effective management of long-term conservation and the sustainable use of fish stocks. This is important for regional states' food and livelihood security and healthy ocean ecosystems. Sustainable fisheries are important for regional political stability in the Pacific and Indian oceans.

The regional fisheries management framework is centred on key RFMOs. Australia's strategic objective guiding our engagement with them is to ensure the sustainable management of shared fisheries resources. In many cases, we have an important role in supporting responsible fishing in areas where we have no significant fisheries interests.

In other organisations, most notably the CCSBT and the CCAMLR, Australia has direct fishery interests, and it's important to build linkages with like-minded states. While our engagement with RFMOs is important, a range of bilateral partnerships and relationships is an effective foundation for work on fisheries capacity building.

As noted throughout this report, Australia has been active in participating in the regional fisheries management framework. Australian engagement with RFMOs has benefits, both in improving fisheries management in the region and for Australia's broader political and security interests.

Our contributions to the WCPFC, the FFA and the SPC are the primary vehicles through which we can support stable, sustainable fisheries in the Pacific.

While we've had less direct interests in the Indian Ocean, we've been a very strong contributor to the development of regional architecture in that region, particularly IORA. We've given modest support to the Fisheries Support Unit in Oman, which is one of IORA's flagship projects and a potential point of coordination for IORA members.

The capacity of RFMOs to address issues such as overfishing, stock decline, food security, the sustainability of catches and traceability is in question. While NGOs have been active in the fisheries policy area for many years, new players—such as private philanthropic foundations—are emerging and are likely to become more visible in the future. These private organisations can sometimes command greater assets than those in the public sector, offering a route to achieving savings in our development assistance budget. Consultation to ensure that private funds support, rather than work against, our fisheries aid will be one way of developing a sound approach to investments in both sectors.

This report notes the benefits of education and training for fisheries managers and administrators in the Indo-Pacific. Australia provides some technical training to Pacific island states, but this should now be focused much more on fisheries management.

Australian assets in fisheries science and management expertise can be usefully deployed to help increase regional capacity.

Australian assets in fisheries science and management expertise can be usefully deployed to help increase regional capacity. Those assets are widely recognised by regional organisations, and we should continue to use them in key regional settings and in bilateral linkages. For example, we've gained considerable kudos through our work on developing harvest strategy approaches in the Western and Central Pacific and Indian oceans.

At the same time, regional fisheries issues are in many ways a series of complex multilevel 'games'. Attention needs to be given to the competencies and skills required by our officials engaged in such work, and focused training packages need to be developed to fill any gaps. Those competencies and skills should be set against a clear strategic focus in key regions, recognising that our interests vary in different fisheries. If Australia is to have a successful external engagement strategy on fisheries, it's vital that government has the support of all major stakeholders.

There's a large potential pool of fisheries managers, scientists and administrators who can be called on to build effective fisheries engagement. The use of these human resources in regional fisheries bodies will build relationships and support the exchange of expertise between regional countries.

Fisheries policy links our security, trade development, foreign policy and development cooperation policies. Continuing to build on our strengths in the broad area of fisheries management will improve the performance of regional fisheries bodies and their member states. Understanding key external fisheries challenges should guide effective regional engagement and enhance Australia's broader interests in the Indo-Pacific and Southern Ocean.

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Notes

- 1 The UN defines 'straddling' fish stocks as those that migrate between the EEZs of one or more states and the high seas, or occur in both.
- 2 DAWR: www.agriculture.gov.au/fisheries.
- 3 AFMA: www.afma.gov.au.
- 4 Presidential Initiative on Combating Illegal, Unreported, and Unregulated (IUU) Fishing and Seafood Fraud, www.nmfs.noaa.gov/ia/iuu/taskforce.html.
- 5 There's also the Secretariat of the Pacific Community's Regional Environment Program, which has been charged with the protection and sustainable development of the region's environment, including the marine environment. The Pacific Islands Forum also has responsibilities for regional oceans policy.
- 6 The ranching of southern bluefin tuna involves capture of wild juvenile fish from the ocean that are then transferred to cages in South Australian waters and fattened to commercial grow out weight.

ACRONYMS AND ABBREVIATIONS

AFMA	Australian Fisheries Management Authority
BOBP-IGO	Bay of Bengal Program Intergovernmental Organisation
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DFAT	Department of Foreign Affairs and Trade
DAWR	Department of Agriculture and Water Resources
EEZ	exclusive economic zone
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FFA	Forum Fisheries Agency
GDP	gross domestic product
HIMI	Heard Island and McDonald Islands
IORA	Indian Ocean Rim Association
IOTC	Indian Ocean Tuna Commission
IUU fishing	illegal, unregulated and unreported fishing
NGO	non-government organisation
PNA	Parties to the Nauru Agreement
RAN	Royal Australian Navy
RFMO	regional fisheries management organisation
RPOA-IUU	Regional Plan of Action to Promote Responsible Fishing Practice Including Combating Illegal, Unregulated and Unreported Fishing in the Region
SBT	southern bluefin tuna
SIOFA	Southern Indian Ocean Fisheries Agreement
SPC	Secretariat of the Pacific Community
SPRFMO	South Pacific Regional Fisheries Management Organisation
UN	United Nations
WCPFC	Western and Central Pacific Fisheries Commission

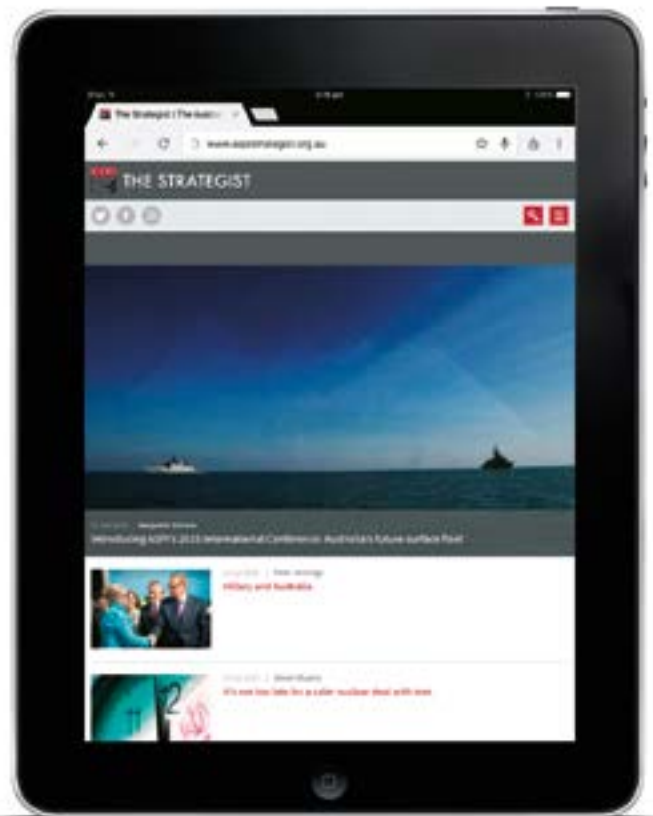
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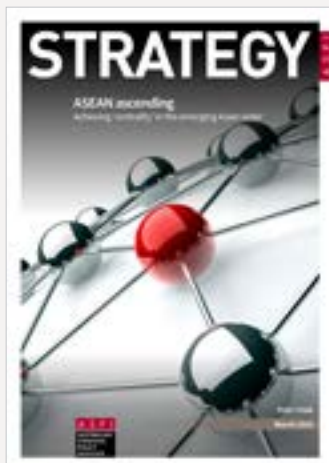
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Australia's regional fisheries engagement

There's a need for a whole-of-government approach to Australia's external fisheries policy that recognises clear linkages between fisheries, foreign, trade and strategic policy.

Our future fisheries engagement requires adequate resourcing, both financially and in the human resources necessary for its implementation.

Extending and complementing current stakeholder engagement practices is the key to this approach.

Regional fishery management organisations (RFMOs) and arrangements allow Australia to promote a strong approach on sustainable and responsible fishing practices and develop regional instruments to protect our fish stocks and wider regional interests.

Australia should commit to improving the RFMOs: we need to maintain our seat at the table and use it to assert our interests.

Australia has useful assets, especially fisheries science and management arrangements, to pursue our regional fisheries interests, and we should make better use of various levers to pursue those interests.



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