



The Western Tropical Pacific Warm Pool Large Marine Ecosystem – Status, Benefits and Challenges in the context of the Future of Fisheries

Hugh Walton, Project Coordinator and Chief Technical Adviser

Pacific Islands Oceanic Fisheries Management Project II

Forum Fisheries Agency, Solomon Islands

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Presentation outline

- **The nature and extent of the Tropical Pacific Warm Pool**
- **Tuna fisheries resources**
- **Fisheries Benefits**
- **Governance and Management Challenges**
- **The Future of Fisheries**

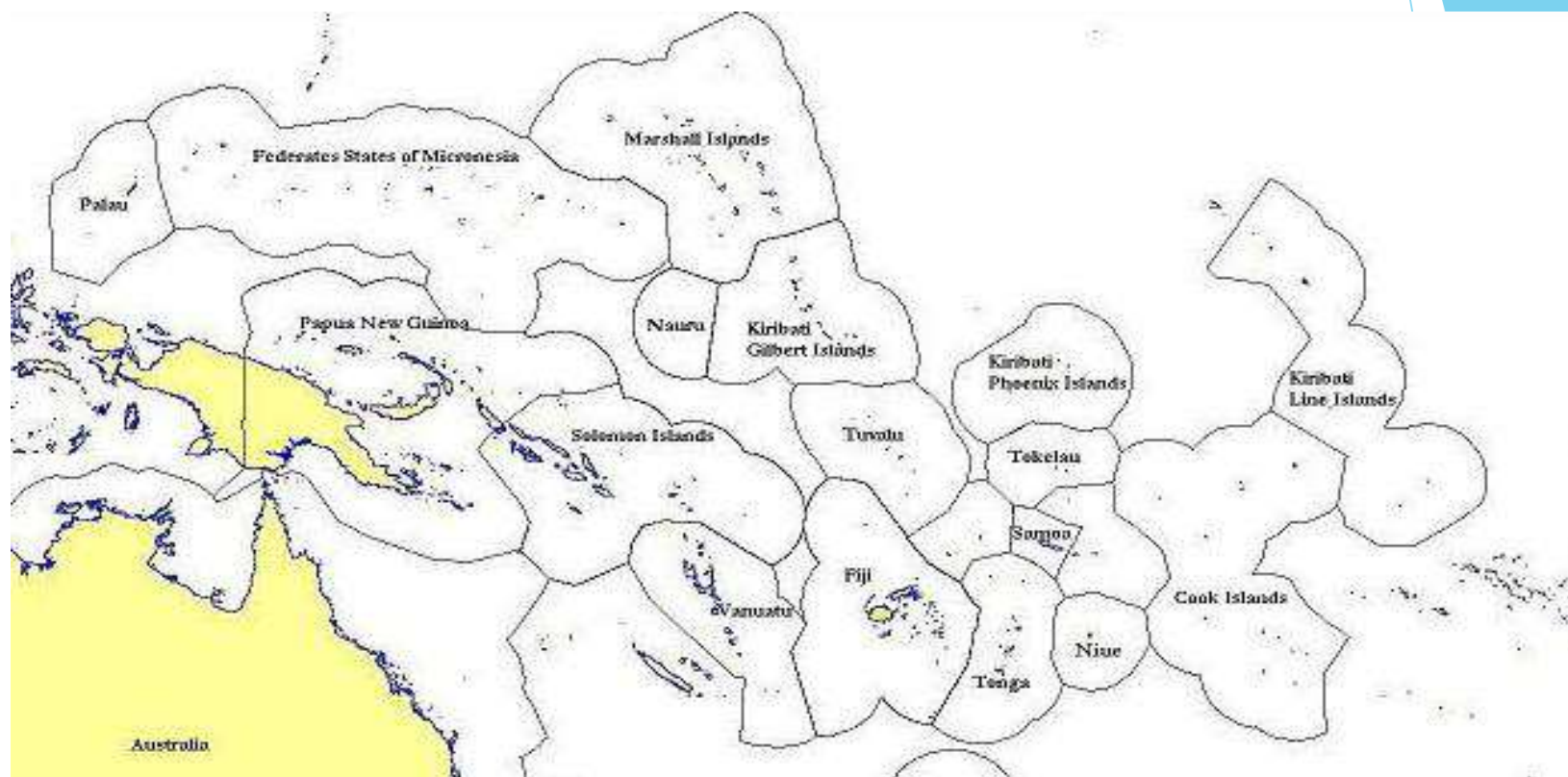


The nature and extent of the Tropical Pacific Warm Pool

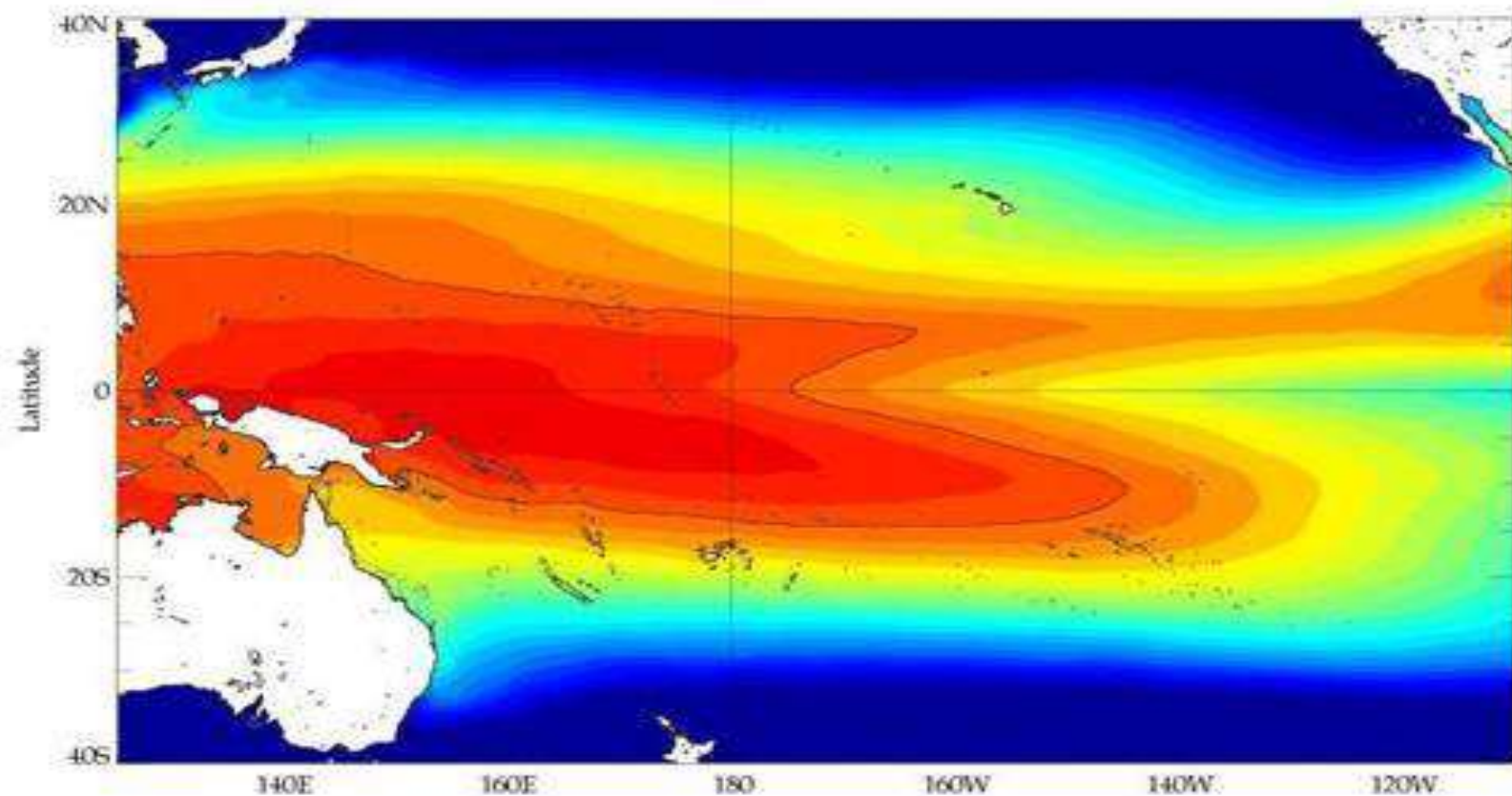
- The waters of the Pacific Islands region cover an area of around 40 million square kilometres, or around 8 per cent of the Earth's surface and equivalent to about 30% of the area of the Earth's land surfaces.
- Most of this area falls within the national jurisdiction of 14 Pacific SIDS, so that they are custodians of a significant part of the surface of the Earth and, in particular, custodians of a large part of one of the Earth's major international waters ecosystems.
- These waters at the same time divide Pacific Island communities across huge distances and unite them by substantial dependence on a shared marine environment and shared marine resources.



The Nature and Extent of the Topical Pacific Warm Pool



The Nature and Extent of the Tropical Pacific Warm Pool



The Nature and Extent of the Topical Pacific Warm Pool

- The waters hold the world's largest stocks of tuna and related pelagic species providing around a third of the worlds' catches of tuna and related species, and over half of the world's supplies for canned tuna.
- The broader WCPO region, including those parts of Indonesia and Philippines in the Pacific Ocean, provides over half of the world's catches of the major species of tuna – over 2 million tonnes annually.
- The waters of the region also contain globally important stocks of sharks, billfish and other large pelagic species, whales and other marine mammals and turtles.



- The provisional total WCP–CA tuna catch for 2014 was estimated at 2,860,648 mt, clearly the highest ever at 170,000 mt above the previous record catch in 2013 (2,690,881 mt);
- This catch represented 83% of the total Pacific Ocean catch of 3,486,124 mt, and 60% of the global tuna catch (the provisional estimate for 2014 is 4,783,629 mt, and when finalised is expected to be the highest on record mainly due to increased WCP-CA catches).
- The 2014 WCP–CA catch of skipjack (1,957,693 mt – 68% of the total catch) was the highest recorded, eclipsing the previous record of catch in 2013 by 115,000 mt (1,842,485 mt).

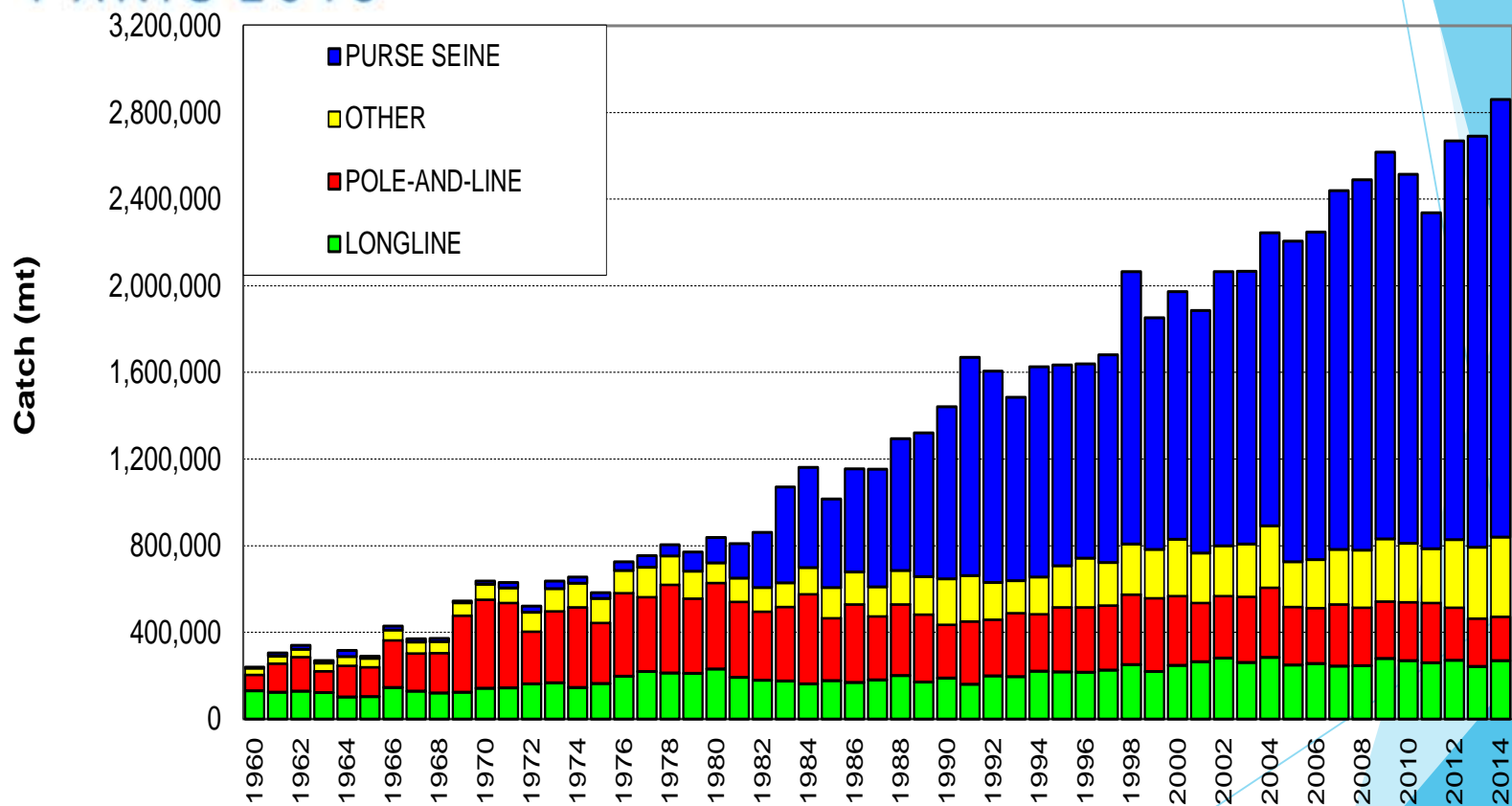


- The WCP–CA yellowfin catch for 2014 (608,807 mt – 21%) was also the highest recorded (5,000 mt higher than the record catch of 2008 – 603,244 mt) and mainly due to increased catches in several longline fisheries.
- The WCP–CA bigeye catch for 2014 (161,299 mt – 6%) was slightly higher than in 2013, but relatively stable compared to the average over the past ten years.
- The 2014 WCP–CA albacore catch (132,849 mt - 5%) was slightly lower than in 2013 and about 15,000 mt lower than the record catch in 2002 at 147,793 mt. The WCP–CA albacore catch includes catches of north and south Pacific albacore in the WCP–CA, which comprised 76% of the total Pacific Ocean albacore catch of 173,702 mt in 2014



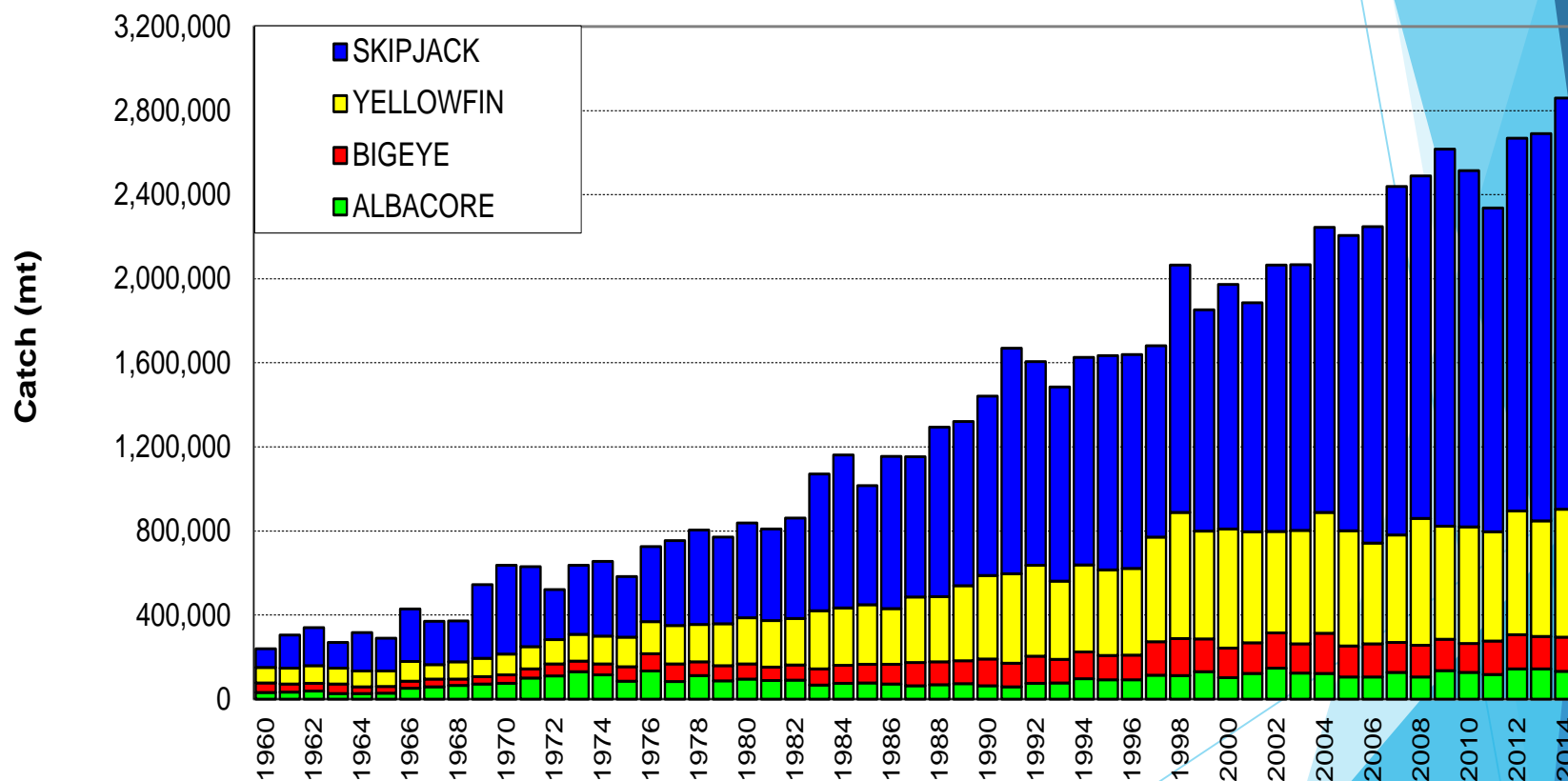
The Tunas Fisheries Resources

Catch by gear type



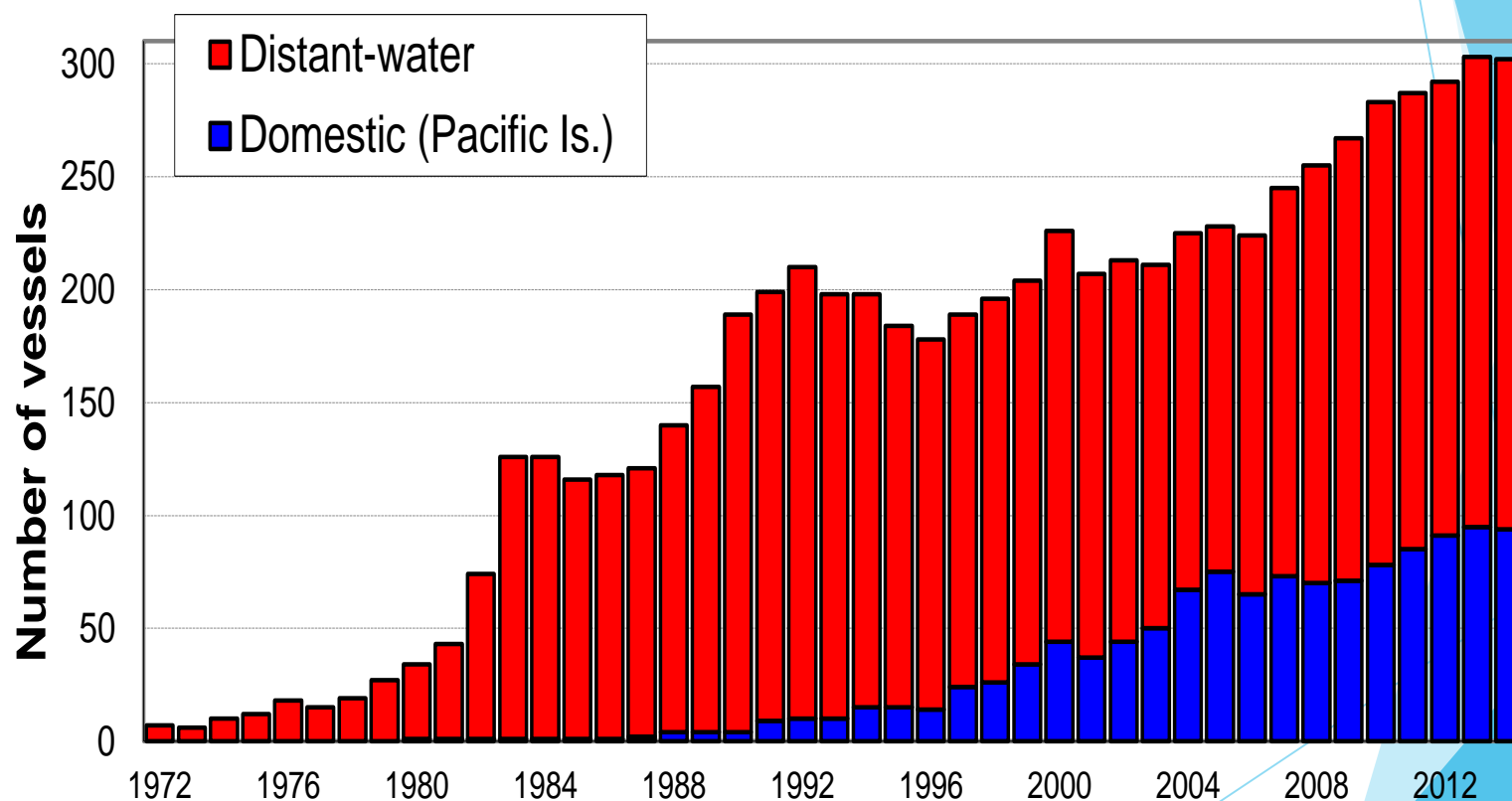
The Tuna Fishery Resources

Catch by Species



The Tuna Fishery Resources

The number of purse seine vessels
(not including Philippines, Indonesia
Viet Nam and Japan Coastal Fleets)

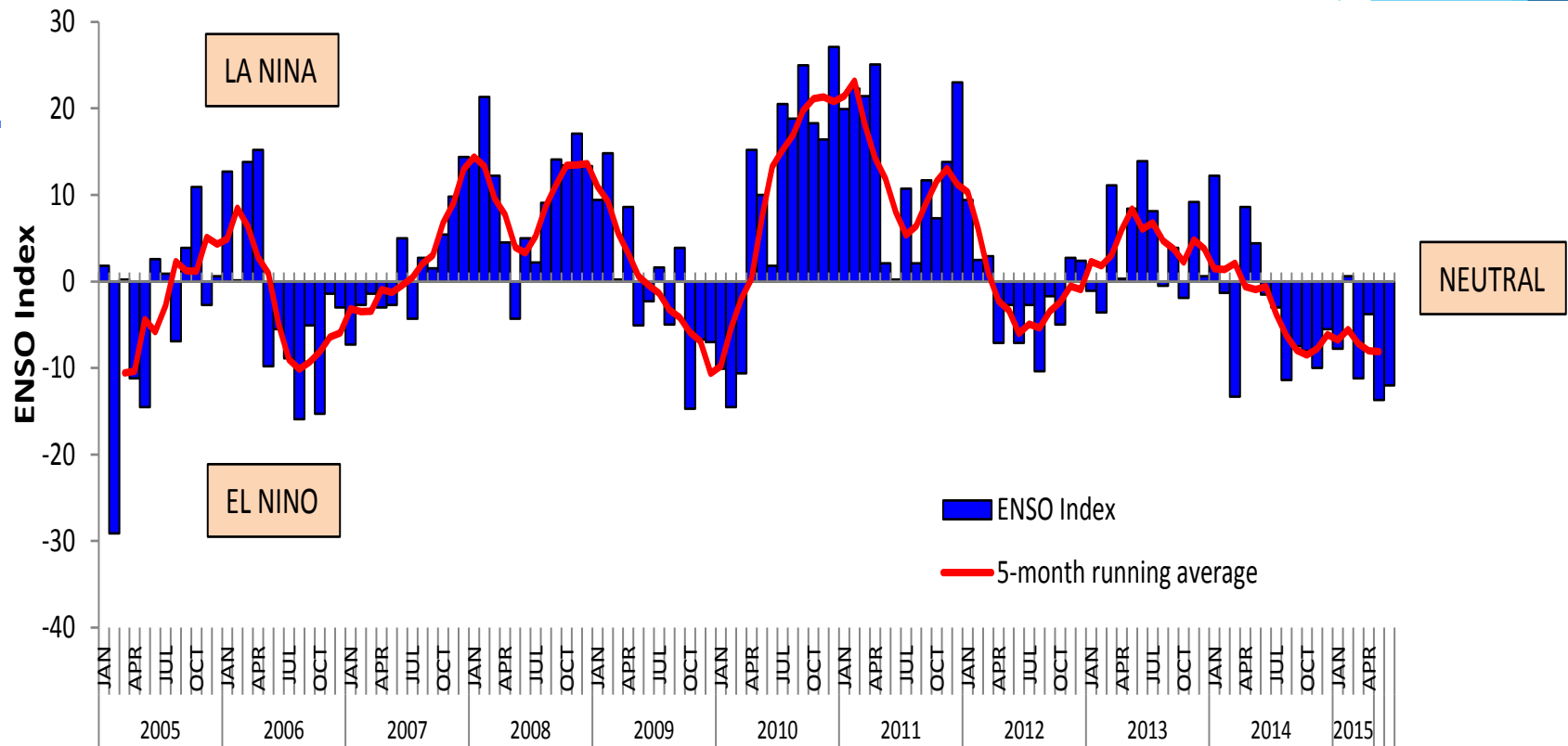


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Environment Conditions

Trends in El Nino Southern Oscillation Index (ENSO), 2005-2015



Environment Conditions

Trends in El Nino Southern Oscillation Index (ENSO), 2005-2015

- The purse-seine catch/effort distribution in tropical areas of the WCP-CA is strongly influenced by El Nino–Southern Oscillation Index (ENSO) events
- The fishery experienced a return to neutral ENSO conditions during 2012. Weak-moderate La Niña conditions were experienced during 2013, then neutral conditions into early 2014.
- El Niño conditions developed during 2014 and has persisted into early-mid 2015, with a forecast of more pronounced El Niño conditions in late 2015 to a level not experienced in the fishery for almost 20 years (i.e. since 1997/1998).



Environment Conditions

Trends in El Nino Southern Oscillation Index (ENSO), 2005-2015

- In line with the prevailing ENSO conditions, fishing activity during 2014 (El Niño-type conditions) expanded into the eastern tropical areas compared to 2013 (La Niña conditions).
- For the first time in many years, purse seine effort during 2014 in the area to the east of longitude 160°E was more pronounced than in the area to the west of this longitude (i.e. PNG, FSM and Solomon Islands).
- With the ENSO forecast for late 2015 predicting more pronounced El Nino conditions, the recent increased purse seine activity in the eastern tropical areas should therefore be maintained.

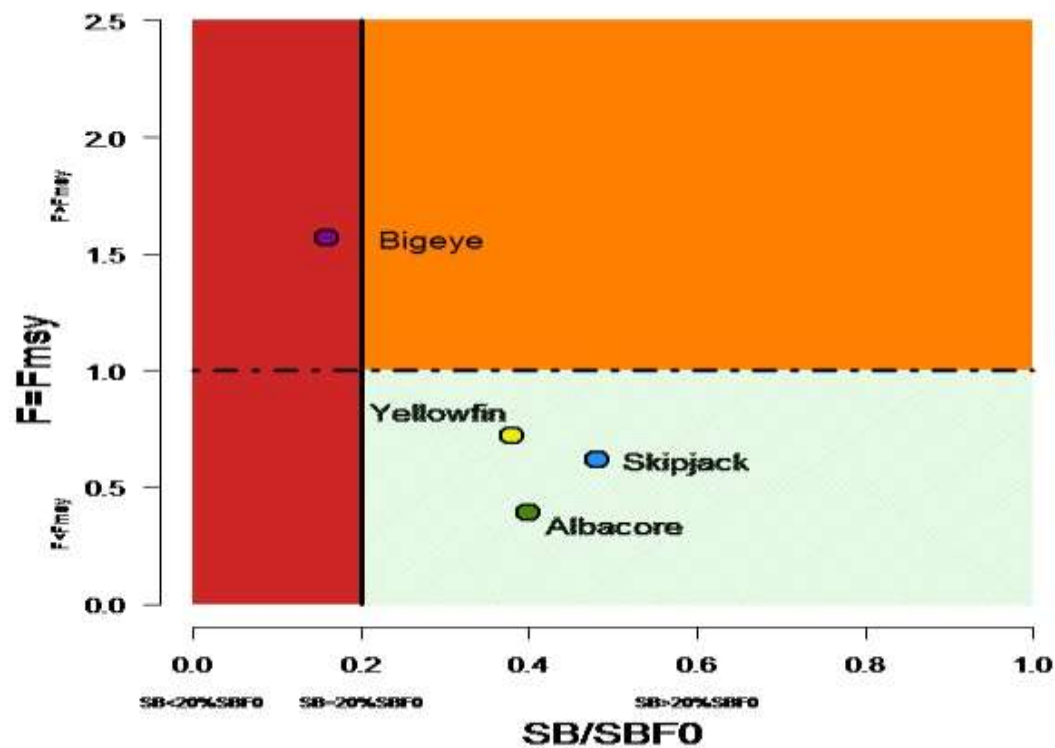


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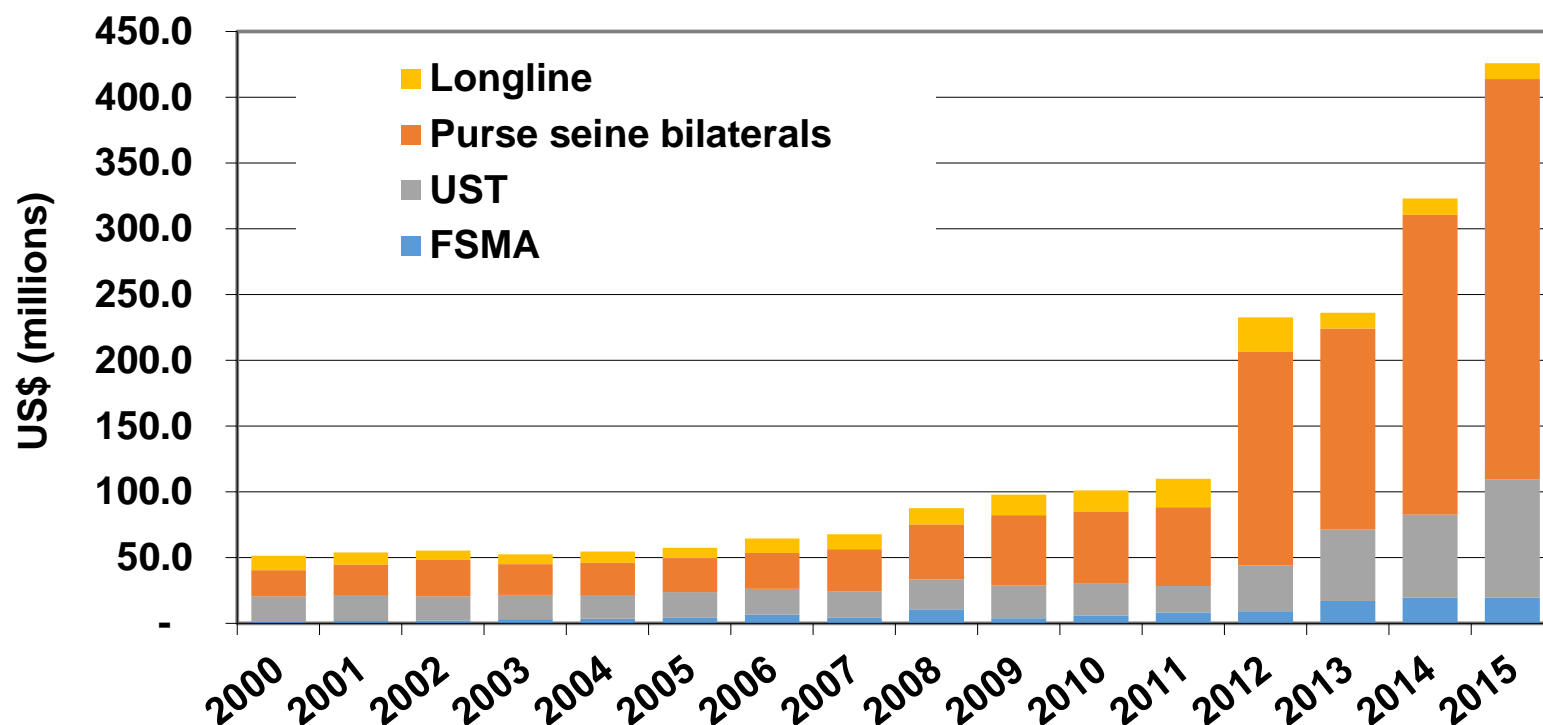
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Stock Status



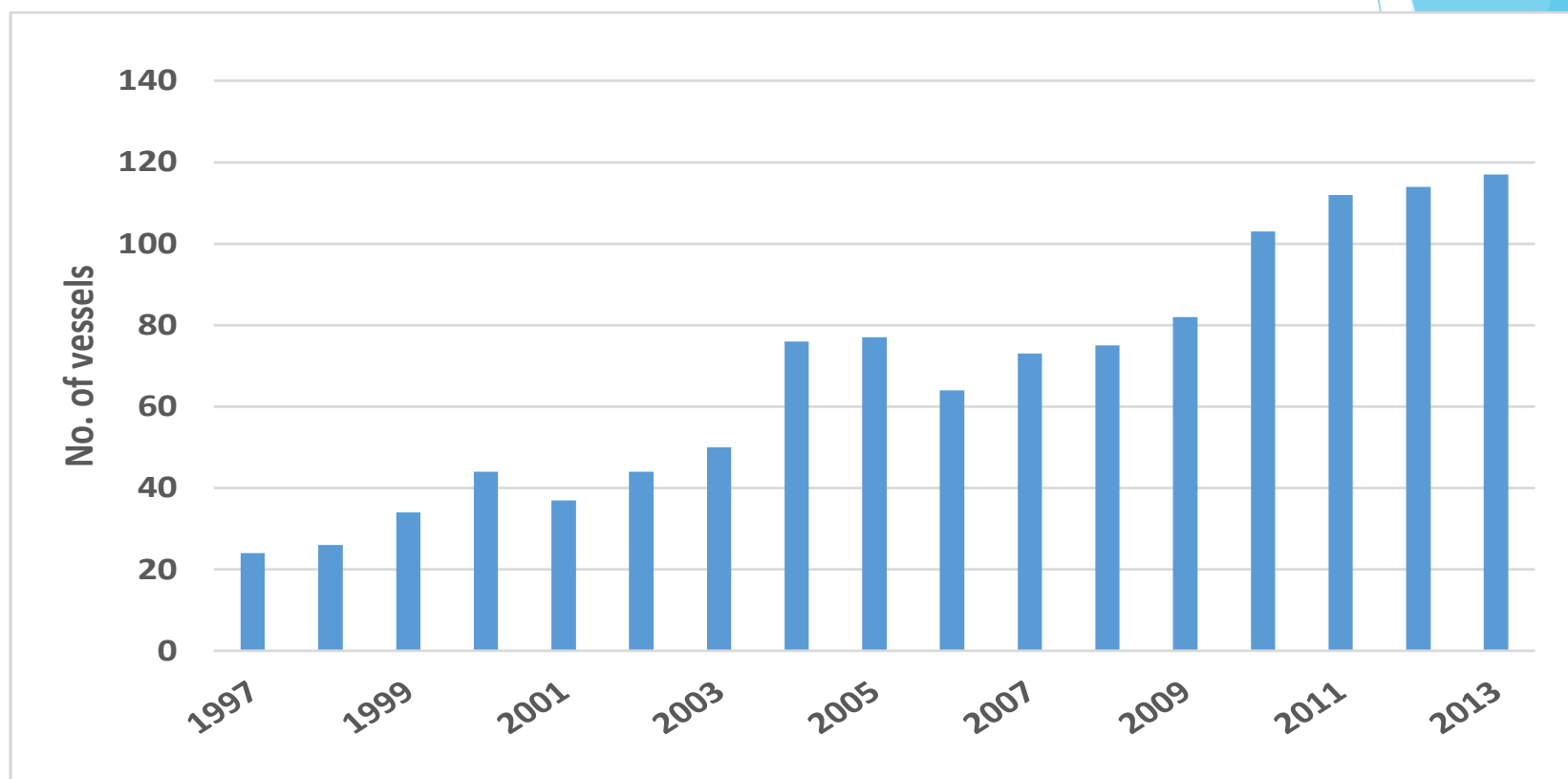
Fisheries Benefits

Access Fees



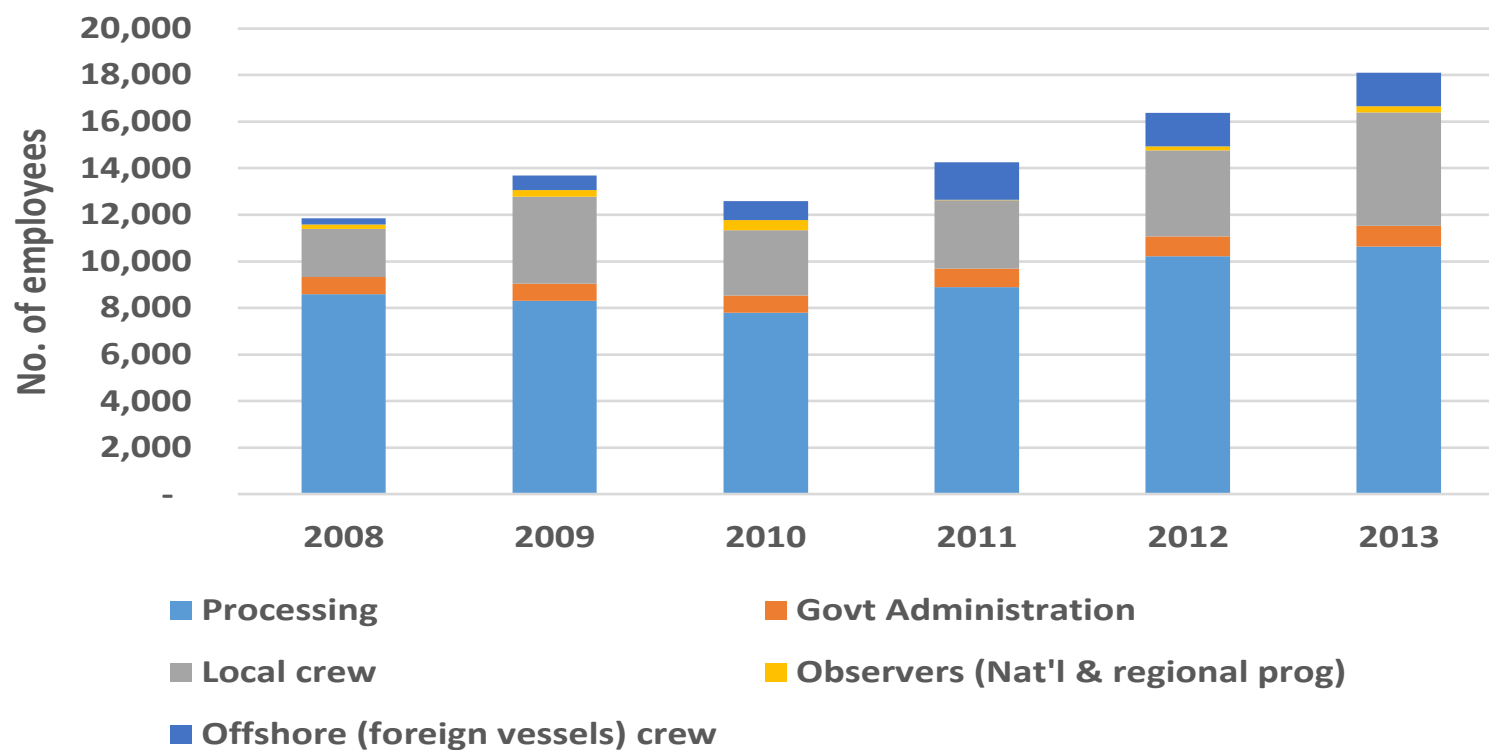
Fisheries Benefits

Local and foreign locally based vessels – purse seine



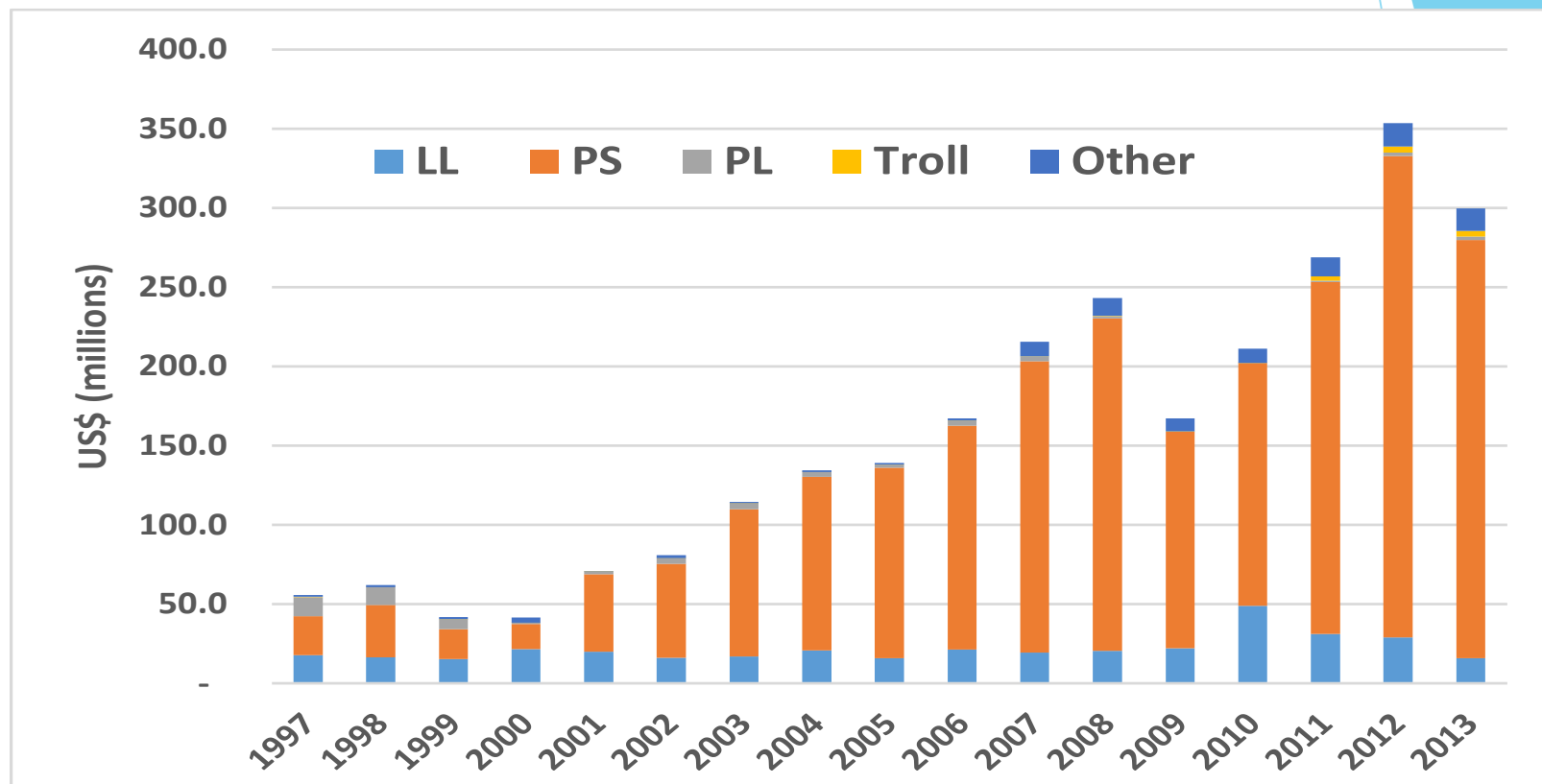
The benefits

Employment



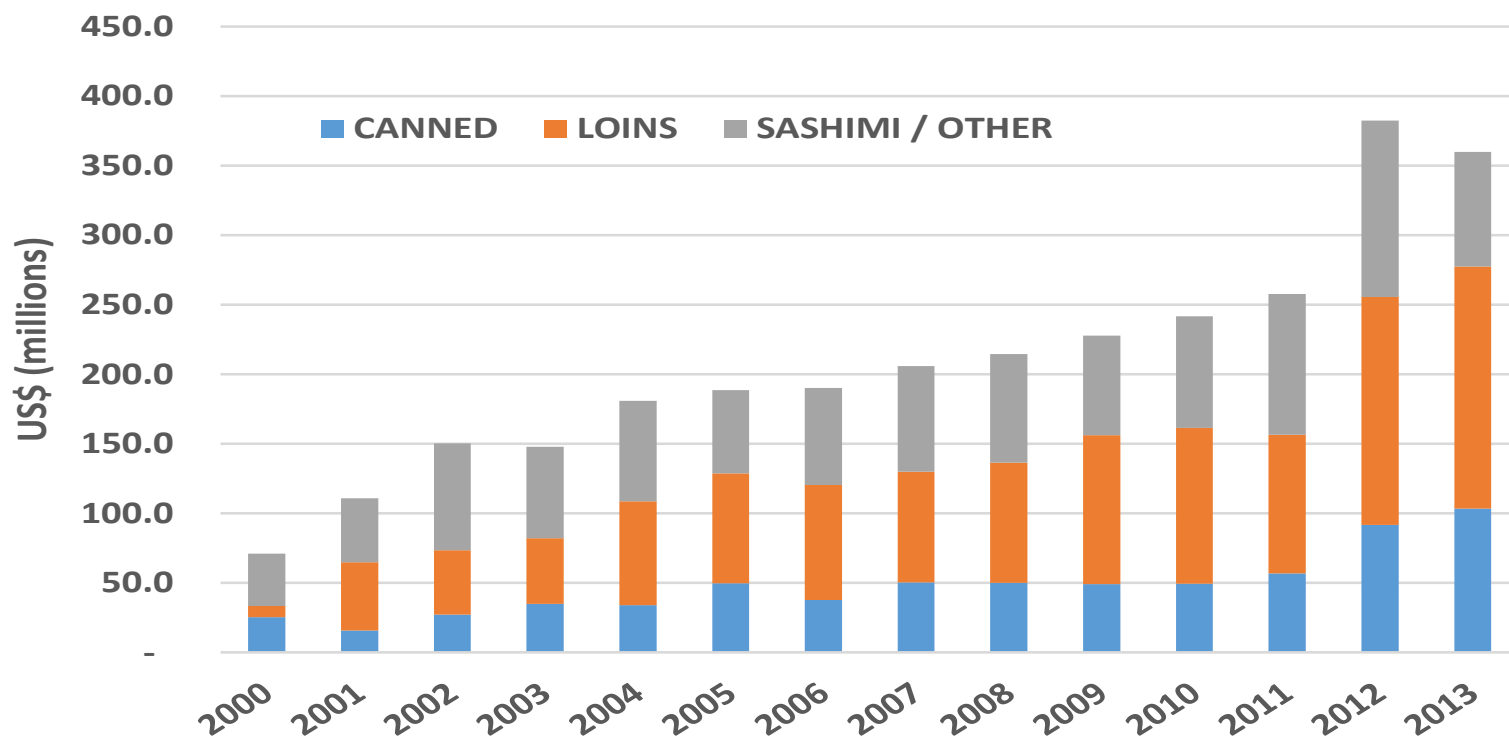
The Benefits

Contribution to GDP by Gear Type



The Benefits

Exports by product form



Governance and Management Challenges

The WCPFC and Fisheries Management

- WCPFC decision making, CMM compliance and implementation
- SIDS capacity and reporting
- Implementation processes and effective decision making



Governance and Management Challenges

THE PNA Vessel Day Scheme

- 9 participating countries – Solomon Islands, Papua New Guinea, Federated States of Micronesia, Marshall Islands, Nauru, Tuvalu Kiribati, Palau and Tokelau
- Limits fishing effort in the purse seine fishery through a limit on fishing days - PS VDS Inc Tokelau 45,881, LL VDS 152316
- Prohibits High Seas Fishing for PNA licensed vessels
- Party Allowable Effort to allocated to each of the 9 parties
- Trading of days allowed between Parties
- Adjustment factors based on vessel length to take account of link between vessel length and CPUE.



Governance and Management Challenges

Fishing Capacity and SIDS Aspirations

- SIDS aspire to further enhance benefits from the tuna fishery through greater participation
- There is a need to balance SIDS aspirations with capacity limits
- PNA SIDS are increasingly requiring investment as a condition of ongoing access
- SIDS aspire to capacity transfer
- DWFN cooperation is required

Governance and Management Challenges

Managing Bigeye

- An issue in both tropical longline and purse seine fisheries
- Tropical longline bigeye prevalent in some countries and not in others
- PS juvenile catches associated with FAD sets
- Mitigation must be via capacity limits and improved management of FAD fishing (FAD closures)



Governance and Management Challenges

Climate Change

- Atoll countries very vulnerable to sea level rise
- Issues still not well understood
- Mitigation strategies remain unclear
- Rhetoric abounds and is ongoing



Governance and Management Challenges

Maintaining Market Access

- Maintaining food safety competent authority status
- Meeting EU IUU regulation enforcement requirements
- Allocating fiscal and human resources to meet these challenges



Governance and Management Challenges

Food Security

- Increasing pressure on nearshore resources especially in the vicinity of urban locations
- Increasing populations to feed
- Greater dependence on tuna for food security
- Improved utilisation of nearshore FADs
- Improved utilisation of purse seine and longline bycatch



- In 2015, FFA has convened a series of meetings to reconsider the findings of a 2010 report on the future of Pacific Fisheries
- In a consultative process with stakeholders, FFA and SPC a regional roadmap has been developed and most recently endorsed by Pacific Leaders at their meeting in Papua New Guinea in September 2015
- The roadmap comprises four goals and five strategies for tuna fisheries and three goals and five strategies for coastal fisheries

The Future of Fisheries - Tuna Fisheries

Goals and Indicators

- **Sustainability:** A sustainable resource is a pre-requisite to sustainable development. Within 10 years the overfishing of bigeye tuna will have been eliminated; and all target species will be on track to support economically viable fisheries. Impacts of fishing on by-catch such as sharks and turtles will have been significantly reduced.
- **Value:** The region's tuna catch in 2024 will be worth double what it is in 2014. This will be achieved by increasing value rather than volume, by eliminating oversupply and targeting higher value products and markets. In line with increased value and profitability, there will be scope to increase access fees for countries that wish to continue licensing foreign vessels.



The Future of Fisheries

Goals and Indicators

- • Employment: 18,000 new jobs will be created in the tuna industry within 10 years. While many of these will be in tuna processing in Melanesia, opportunities for nationals of all FFA members will be created for vessel crew, observers and fisheries management staff. Standards to ensure that employment is safe and worthwhile will be harmonised.
- Food security: The supply of tuna for domestic consumption in the region will increase by 70,000 tonnes per year by 2024, to provide nutritious food and reduce pressure on inshore resources. Depending on national circumstance, small-scale catches, supplies from processors in the region, and by-catch from industrial vessels will all contribute to this increase.



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The Future of Fisheries

Strategies

- Effective zone- based management: Zone based management provides the key to taking control of the major fisheries. FFA members commit to a system of national rights, within a cooperative framework of binding limits that will be managed under formal Harvest Strategies, including through equitable and responsible reduction where necessary.
- Progressively restrict fishing on the high seas by foreign fleets: Expansion of fishing effort in the high seas is of no benefit to Pacific Island countries. Imposition of controls through licensing conditions and work within the Western and Central Pacific Fisheries Commission will level the playing field, while NGOs and major markets will be encouraged to promote fish sourced from well managed national zones as a higher standard deserving of market and price recognition.



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The Future of Fisheries

Strategies

- Prioritise the supply of raw materials to processors in the region: Development of domestic tuna processing has struggled against low cost economies in Asia; but these operations are not viable without massive supplies of Pacific tuna. The region will move to harmonised mandatory offloading of part of the catch of access vessels and increased transshipment fees
- Establish high standards for employment in the fishing and processing industry: Uniform minimum standards and a renewed emphasis on training will help to avoid countries being played off against each other.
- Establish regional processing hubs in partnership between countries: The diversity of opportunities for processing and the need for economies of scale will be addressed by developing 'processing hubs' in two or three countries that can receive the fish from other FFA waters and provide benefits in jobs and ownership.



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The Future of Fisheries

Coastal Fisheries

Goals and Indicators

Within 10 years:

- **Empowerment:** FICs will have policies and legislation that provide for the involvement of coastal communities in the management of their fisheries resources. Supported by national controls on export commodities, communities will drive management regimes with clear user rights.
- **Resilience:** FICs will implement strategies to manage the threats to coastal ecosystems. By conserving fisheries habitats, controlling pollution and addressing damage from outside the fishing sector can we develop resilience to the impacts of climate change and ocean acidification.



The Future of Fisheries

Coastal Fisheries

Goals and Indicators

Within 10 years:

- Livelihoods: Within 10 years all FICs will have adopted policies to develop alternative livelihoods for coastal communities that are impacted by declining fisheries resources. In most cases, overfishing occurs because coastal communities have no alternative. Aquaculture, water-based tourism and fishing for tuna (noted above) provide options, but many solutions will lie outside the fisheries sector.



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The Future of Fisheries

Coastal Fisheries

Strategies

- Provide relevant information to inform management and policy:
The decisions of Governments and community managers will be based on good information; science will be translated into simple and informative material to guide community management; and communities will be able to combine their traditional knowledge with scientific understanding
- Re-focus fisheries agencies to support coastal fisheries Management: Many fisheries agencies are under-resourced, and focus mainly on tuna and out-dated fisheries development activities. There is a need to re-direct staff and resources into supporting community based management, and enforcing national regulations and restrictions where appropriate.



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The Future of Fisheries

Coastal Fisheries

Strategies

- Ensure effective collaboration and coordination of stakeholders

There are many stakeholders with an interest in the management of coastal areas apart from Fisheries Departments. There is a need to coordinate the work of different Government departments, NGOs and donors – as well as engaging better with organisations that have good community outreach, such as faith-based organisations.

- Develop and enforce strong and up-to-date legislation, policy and

Plans: The new approach of empowering communities to manage their resources needs to be backed by strong and appropriate legislation, policies and plans. Strengthened enforcement will be needed, both by community authorised officers, fisheries and law enforcement officers and customs.



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The Future of Fisheries

Coastal Fisheries

Strategies

Ensure equitable access to benefits and involvement in decision making: Involving women, youth and disadvantaged groups in decision making and access to benefits of marine resource use is not only fair; it is necessary for success. Women and youth are closely involved in harvesting and selling marine resources, and are less likely to respect management measures on which they are not consulted.



Thank you for your time and sorry this was a bit long!

hugh.walton@ffa.int