Solomon Islands Government

MINISTRY OF FISHERIES AND MARINE RESOURCES

Solomon Islands Tuna Management and Development Plan

Acronyms

ALB – Albacore tuna
BET – Bigeye tuna
CA – Competent Authority
CMM – Conservation and Management Measures (established by the WCPFC)
CPUE – Catch Per Unit Effort
DWFN – Distant-Water Fishing Nations
EAFM – Ecosystem Approach to Fisheries Management
EBA – Everything But Arms Agreement
EEZ – Exclusive Economic Zone
EPA – Economic Partnership Agreement
EU – European Union
FAD – Fish Aggregating Device
FAO – United Nations Food and Agriculture Organisation
FFA – Pacific Islands Forum Fisheries Agency
FSMA – Federated States of Micronesia Arrangement
IEPA – Interim Economic Partnership Agreement
IUU – Illegal Unreported and Unregulated
MFMR – Ministry of Fisheries and Marine Resources
MGA – Main Group Archipelago
MHWM – Mean High Water Mark
MSC – Marine Stewardship Council
MCSS – Monitoring, Control and Surveillance Strategy
MSY – Maximum Sustainable Yield
MEY – Maximum Economic Yield
NM – Nautical Mile
NFD – National Fisheries Developments
NPOA – National Plan of Action
NGO – Non Government Organisation
OFP – SPC Oceanic Fisheries Programme
PAE – Party Annual Effort
PNA – Parties to the Nauru Agreement
RFMO – Regional Fisheries Management Organization
ROP – Regional Observer Programme
RoR – Rules of Origin
SC-SPTBF – FFC Subcommittee for South Pacific Tuna and Billfish Fisheries
SICHE – Solomon Islands College of Higher Education
SIG – Solomon Islands Government
SINOP – Solomon Islands National Observer Programme
SKJ – Skipjack tuna
SLA – Service Level Agreement
SPC – Secretariat of the Pacific Community
TIASI – Tuna Industry Association of Solomon Islands
TMDP – Tuna Management and Development Plan
TAE – Total Allowable Effort
UNCLOS – United National Convention on Law of the Sea
UNFSA – United Nations Fish Stock Agreement
VDS – Vessel Day Scheme
VMS – Vessel Monitoring System
WCPFC – Western and Central Pacific Fisheries Commission
WCPO – Western Central Pacific Ocean
YFT – Yellowfin tuna

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1.0 Introduction

Solomon Islands tuna fisheries are valuable natural resources and are an important source of current and future employment and government revenue. Recent changes in Solomon Islands' tuna management policies are expected to generate more revenue for the government and increased onshore processing of tuna. There are opportunities for Solomon Islands to build on these recent changes to obtain even more benefits from tuna fisheries.

This Tuna Management and Development Plan (TMDP) is designed to guide future management and development of tuna fisheries to achieve the overall goal of the Solomon Islands Government, *Tuna fisheries are managed to ensure Solomon Islands receives maximum economic and social benefits from the sustainable use of its tuna resources*. The TMDP sets out a series of goals, strategies and actions by which the overall goal will be achieved. Preparation of the TMDP is provided for under Section 7 of the Fisheries Act 1998.

The TMDP is consistent with the *Solomon Islands National Development Strategy 2011 – 2020*, including its overarching theme, *To Build Better Lives for All Solomon Islanders*, and objectives including, *Increase economic growth and equitably distribute employment and income benefits*, and, *Effectively respond to climate change and manage the environment and risks of natural disasters*. The TMDP is also consistent with the Ministry of Fisheries and Marine Resources Corporate Plan, and particularly the key outcomes: *The orderly development and quality management of Solomon islands fisheries and marine resources*; and, *Solomon Islands receives maximum economic and social benefits from the sustainable use of its fisheries and marine resources*.

2.0 Solomon Islands Tuna Fisheries

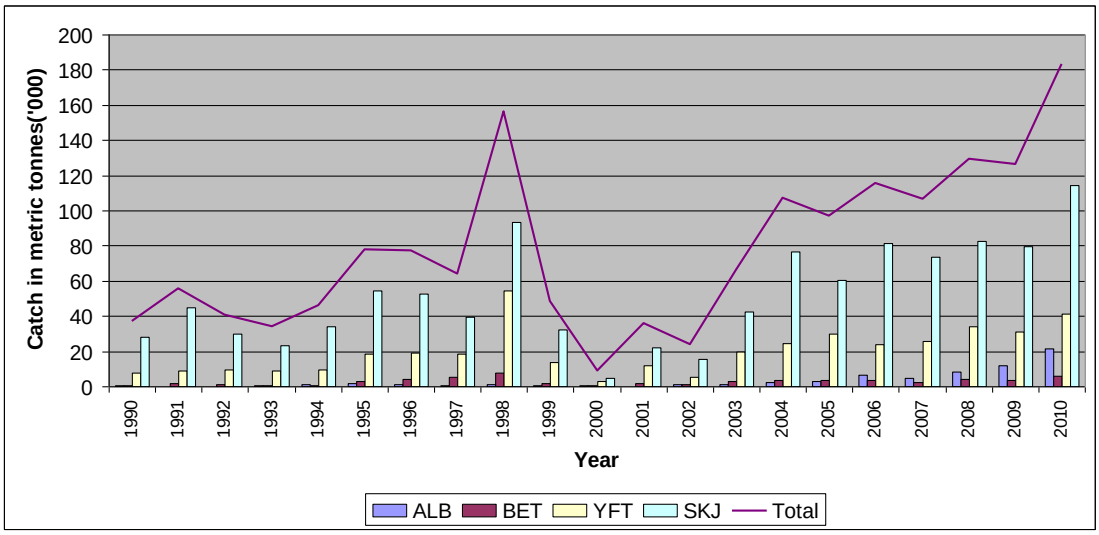
2.1 Overview

There are three, largely distinct, commercial tuna fisheries in the Solomon Islands, in addition to the small-scale net and line fisheries used to supply local markets. Figure 1, overleaf, shows tuna catches in Solomon Islands by species since 1990. Figure 2 shows tuna catches by method since 1990.

2.2 Purse Seine Fishery

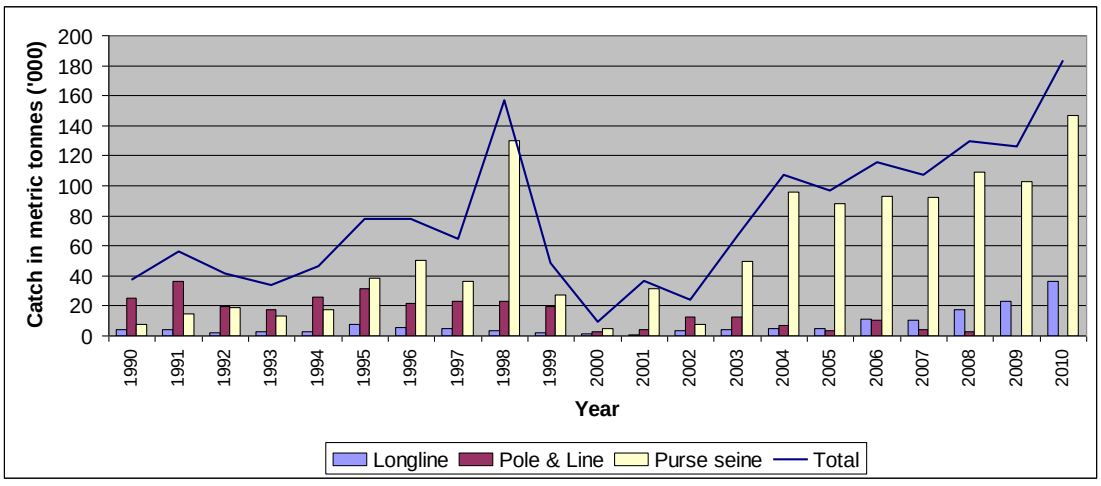
The purse seine fishery catches predominantly skipjack tuna with significant bycatches of yellowfin and bigeye tuna. This fishery was developed by US Treaty vessels and Solomon Islands vessels in the 1980s, which were joined by vessels from other Distant Water Fishing Nations (DWFN) from the 1990s. Management was initially by way of licences but is now under the Parties to the Nauru Agreement (PNA) Vessel Day Scheme (VDS). Solomon Islands' Party Annual Effort (PAE) of 3,185 VDS Fishing Days for 2013 is approximately 9% of the Total Allowable Effort (TAE) for all PNA Parties. Fishing effort for tuna taken in archipelagic waters is not counted against the PAE.

Figure 1. Tuna catches in Solomon Islands EEZ by species since 1990



The purse seine fishery currently comprises: (i) a small domestic fleet of purse seiners owned by National Fisheries Developments (NFD), (ii) a larger fleet of foreign purse seiners operating under arrangements between the Solomon Islands Government (SIG) and the governments of bilateral partners or under charter arrangements with Solomon Islands companies, and (iii) vessels operating under the Federated States of Micronesia (FSM) Arrangement and the US Multilateral Treaty. New bilateral agreements based on the PNA agreed minimum fee of US$5,000 per VDS Fishing Day from 2012 and US$6,000 per VDs Fishing Day from 2014 should result in increased government revenues from foreign fishing vessel access fees from 2012.

Figure 2. Tuna catches in Solomon Islands EEZ by method since 1990



2.3 Longline Fishery

The longline fishery comprises two overlapping fisheries; a large-vessel fleet (from Japan and Korea) targeting yellowfin and bigeye tuna (with a bycatch of albacore) and a small-vessel fleet (mostly from Taiwan and China) targeting albacore tuna (with a bycatch of

yellowfin and bigeye tuna). There are no locally registered longline vessels. From 1978 to 1995 the fishery comprised mostly Japanese vessels; Taiwanese vessels joined the fishery in the early 1980s and Korean vessels more recently. In recent years the number of licences for smaller vessels targeting albacore tuna has increased rapidly and in 2011 the total number of licences (in both target fisheries) reached about 255. Total catches of albacore have also increased rapidly in recent years.

A 2011 review of the longline fishery resulted in significant changes from 2012:

(i) the fishery is managed as two target fisheries with limits on the bycatch of other tuna species, as required;

(ii) the number of licences in each target fishery is limited; and

(iii) an increasing proportion of catches from foreign vessels chartered by locally-based companies must be landed for onshore processing.

From 2014 the longline fishery is expected to be managed under a VDS. The Solomon Islands' indicative PAE is significantly less than fishing effort in recent years, which will result in reduced fishing effort in the EEZ or Solomon Islands acquiring longline VDS Days to maintain current effort levels.

2.4 Pole and Line Fishery

From 1980 – 1999 Solomon Islands supported one of the largest pole and line fleets in the Western Central Pacific Ocean (WCPO) with the fleet dominated by local vessels. The fishery declined in the 2000s due to low fish prices and ethnic tensions and most effort was transferred to the purse seine fishery. NFD has re-established a small pole and line fleet and is working with FFA to investigate different methods for catching baitfish to support the fishery. Current market demand for pole and line-caught fish – based on reduced bycatch benefits – may help the expansion of the fleet. The number of foreign licence pole and line vessels has also increased.

2.5 Employment and Onshore Investment

Tuna fisheries are an important source of employment and export earnings for Solomon Islands. They also make a contribution to government revenue through access fees and other taxes and duties paid. Total employment in fisheries sector is estimated to be around 3,000. Plans are underway to increase employment on fishing vessels by offering Solomon Islanders training through established institutions such as Solomon Islands National University (SINU). Total fisheries export earnings (mostly tuna products) for 2011 was SB$222 million, which is 7% of total export earnings for that year. Licence fees and associated charges from domestic and foreign vessels in 2011 provided about SB$106 million in government revenue. NFD purse seiners land most of their catch into the country's only tuna cannery, operated by SolTuna at Noro, Western Province. Employment on NFD vessels and at the SolTuna Processing Plant exceeds 1,500 people.

All tuna landed by joint ventures and foreign licence purse seiners is transhipped for processing in other countries. SIG has made it a high priority to secure investment in onshore tuna processing facilities and has taken concrete steps towards this goal. The Tuna

Investment Strategy is almost complete and SIG is acquiring land for tuna processing facilities at Ndoma, Tenaru (both Guadalcanal) and Suafa Bay (Malaita). A consortium led by Korean company Dongwon has submitted a proposal to build a cannery at the Ndoma site.

In recent years all fish caught by longline vessels under bilateral agreements and vessels chartered by locally based companies were processed outside the country. In the late 2000s one company air-freighted fresh-chilled tuna to overseas markets but this proved unprofitable. Recent policy changes requiring increased onshore processing have resulted in new developments. A new facility has been constructed to pack fresh-chilled sashimi grade bigeye and yellowfin to be air-freighted to markets and a second shift has been established at the SolTuna Processing Plant to process albacore tuna – employing more than 600 new staff. At least three more tuna packing plants or loining factories are planned or under construction.

2.6 Regional Management Agencies

Solomon Islands tuna fisheries are based on stocks that range widely through the WCPO. Therefore, Solomon Islands must cooperate with other Pacific Countries and countries fishing in the WCPO to manage tuna stocks effectively. The key management organisations are the Western Central Pacific Fishery Commission (WCPFC), the Parties to the Nauru Agreement (PNA), and the Forum Fisheries Agency (FFA).

The WCPFC is an intergovernmental body established under a Convention that drew on the United Nations Law of the Sea and the UN Fish Stocks Agreement (UNFSA). It was established in 2005 and is the central decision making body in the WCPO. It seeks to address problems in management of WCPO fisheries including:

- IUU, over-capitalization, excessive fleet capacity
- Vessel re-flagging to escape controls, unreliable data
- Insufficiently selective gear, overfishing of target species and
- Insufficient multilateral cooperation in respect to conservation and management of highly migratory fish stocks.

The Commission currently has 25 members, 7 participating territories and 9 cooperating non-members that range from developing coastal states to most developed and economically powerful nations in the world. Decision-making is by consensus so it can be difficult to reach decisions. The Commission uses Conservation and Management Measures (CMMs) to achieve its objectives; there are currently more than 40 CMMs. Implementation of the CMMs applicable to the Solomon Islands is an important strategy in the TMDP.

Established in 1982, the PNA brings together eight Pacific Island countries[1] to manage tuna in the WCPO sustainably. A PNA Office was established in 2010 in Majuro and a CEO

[1] The PNA members are: Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Palau, Papua New Guinea, Solomon Islands and Tuvalu.

appointed. Collectively, the waters of PNA countries supply 25% of the world's tuna, an estimated $2 billion worth of fish every year.

Historically PNA has focused on purse seine fishing in tropical western pacific but is now expanding its focus to include longline fishing. Regionally, FFA and PNA members are leading changes to the management and allocation of the tuna fishery that enhance PNA control of the fishery and increase returns to their members. Some of these changes and initiatives include:

- The development and implementation of the Vessel Day Scheme (VDS)
- Seasonal FAD closures
- Closures of high seas areas to fishing
- 100% observer coverage on purse seine vessels, and
- Catch retention requirements.

PNA does not control the fishery entirely so needs ongoing cooperation from other FFA members and members of the Commission. Solomon Islands is a key member of PNA and implementation of endorsed PNA measures and regulations are critical to the success of the TMDP.

The Forum Fisheries Agency (FFA) was established to help its 17 Pacific Island member countries[2] sustainably manage their fishery resources that fall within their 200 mile Exclusive Economic Zones (EEZs) and on the adjacent high seas. FFA is an advisory body providing expertise, technical assistance and other support to its members who make sovereign decisions about their tuna resources and participate in regional decision making on tuna management through agencies such as the Western and Central Pacific Fisheries Commission (WCPFC) and the Secretariat of the Pacific Community (SPC).

Since 1979, FFA has facilitated regional cooperation so that all Pacific countries benefit from the sustainable use of tuna – worth over $3 billion a year and important for many people's livelihoods in the Pacific.

2.7 Industry Associations

Currently there is one main industry association that has interest in tuna fishing. The Tuna Industry Association Solomon Islands (TIASI) is the peak industry body that represents all tuna fishing and processing companies in the Solomon Islands. It's theme is to sustainably develop the Solomon Islands tuna resources in partnership with government and stakeholders both locally and overseas. While TIASI remains the peak industry body for tuna fishing and processing in Solomon Islands it is expected it will have an important role in the operation of the Fisheries Advisory Council provided for in the Fisheries Act and recommended under Strategy 6 of the TMDP.

[2] FFA's 17 members are Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu.

3.0 Tuna Management and Development Plan

The purpose of the TMDP is to provide clear policy guidance and consistent direction at all levels of tuna fishery management and fishing, from strategic to operational, to help ensure coordination of different specific policies within overall SIG policy directions. It establishes direction on which licensing guidelines will be applied that will reduce scope for ad hoc decisions and reduce vulnerability to legal challenge. The TMDP also helps identify, evaluate and manage development opportunities and allow for regular ongoing engagement with stakeholders.

The TMDP applies to all Solomon Island registered tuna fishing vessels when operating in Solomon Island fisheries waters or on the high seas and all foreign vessels when operating in Solomon Islands fisheries waters. The TMDP applies to fishing companies whether foreign owned, foreign owned locally-based, or local and those wishing to establish or set up tuna fishing in the Solomon Islands. It also applies to all Solomon Island nationals when fishing for tuna on these vessels or any other vessels fishing in the Solomon Islands EEZ. The new Fisheries Act will allow for control of Solomon Islands registered vessels operating outside the SI EEZ so these will also be covered by the TMDP.

The key species covered under this Plan include:

- South Pacific Albacore *Thunnus alaunga*
- Yellowfin tuna *Thunnus albacores*
- Bigeye tuna *Thunnus obesus*
- Skipjack tuna *Katsuwonus pelamis*

Their biological characteristics and stock status are described in Attachment 1

Other species captured as an incidental catch of pelagic fishing operations that target tuna include mahi mahi, marlin, rainbow runner, sailfish, swordfish, wahoo and numerous shark species. These can be added to the list of key species if their catch rates increase significantly in the future.

The fishing methods addressed in the TMDP are:

- Purse seine
- Pelagic longline
- Trolling
- Pole and line
- Handlining[3]

The TMDP covers all waters from 3 nautical miles (NM) out to the 200NM Exclusive Economic Zone (EEZ) including archipelagic waters[4]. The TMDP does not apply directly to waters inside 3NM as these are managed by villages (through customary ownership rights) and Provincial Governments. The TMDP does, however, address the need to manage stocks outside 3NM to help ensure adequate catch rates within 3NM.

[3] Currently MFMR does not issue licenses for handling and trolling. When MFMR does commence issuing these licenses or permits the first consideration will be for subsistence/traditional fishers.
[4] Archipelagic waters are waters outside of 12NM but within UNCLOS-recognised archipelagos. Coastal states have stronger rights to determine management of fisheries within archipelagic waters than within the EEZ.

4.0 Challenges and Opportunities

Solomon Islands faces a number of challenges – both general and fisheries-specific. It also has significant opportunities. Addressing these challenges and making the most of the opportunities has guided the development of the strategies and objectives contained in this Plan.

Challenges:

- **High unemployment** – Solomon Islands as a developing country has limited employment opportunities with an estimated 80% of the population being technically unemployed or living a subsistence lifestyle with little or no paid work.
- **Limited exports; reliance on donor aid** – Economic growth has been solid in recent years, however, Solomon Islands has a limited export base and relies heavily on aid from donor partners with an estimated USD203 Million aid in 2011[5] compared with the GDP of USD870 Million in the same year.
- **Limited, expensive infrastructure** – Infrastructure such as ports, roads and transport services are limited and consumables such as electricity, water and fuel are expensive and supply is unreliable.
- **Poor communications** – Phone networks and internet service is poor by developed world standards. These are key tools in modern fishing and marketing operations, and are important for effective consultative management of fisheries.
- **Low volumes; high prices for fuel and other inputs** – Many industry inputs are imported, and in relatively low volumes. Therefore, current and would-be investors face relatively high prices for inputs compared with alternative host countries.
- **Dependent on shared stocks** – Tuna stocks in the SI EEZ are highly migratory and shared with other countries so cooperative management is required. Difficulties reaching consensus can arise when countries have differing objectives when utilising the same stocks
- **Climate impacts** – Fish catchability varies somewhat in El Niño/La Nina events. Climate change is expected to impact Solomon Islands fisheries, however, impacts are expected to be moderate compared with some other Pacific Island countries.
- **Perception of instability** – There are perceptions among potential investors of government instability and inconsistencies in the application of government policy.
- **Raising the profile of fisheries** – The importance of offshore fisheries is currently under-rated by the general community. Its profile needs to be raised to ensure there is adequate funding and resources available to maximise opportunities.

[5] MDPAC, 2011, Paris Declaration Monitoring Survey

Fisheries-specific opportunities:

- **International requirement for food security** – Increasing international desire for food security is resulting in high demand for fish such as tuna and for long-term access to fisheries. Solomon Islands is well placed to take advantage of this increased demand.
- **Key fish stocks in good shape** – Scientific advice from SPC-OFP confirms that stocks of YFT, SKJ and ALB are all considered to be healthy and not overfished at current fishing levels. Although BET are considered overfished, actions are being taken to reduce mortalities and return the stock to a healthy state.
- **Significant catches available** – Solomon Islands has generally reliable, moderately large tuna fisheries with good catch rates. It is close to the main fishing grounds in the WCPO.
- **Onshore development opportunities** – Unlike some PNA members Solomon Islands has good potential ports and abundant land, water, and low wage labour available to support onshore developments such as fish processing.
- **Market access** – As a least-developed country (LDC) Solomon Islands is exempt from the 24% import duty to the EU under the 'Everything But Arms' (EBA) Initiative. However, this only applies to specific processed products and strict rules of origin mean fish must be sourced from Solomon Islands or EU-flagged vessels. To qualify for 'global sourcing' Solomon Islands needs to sign an Economic Partnership Agreement (EPA) or Interim EPA with the EU.

5.0 Overall Goal and Strategies

The TMDP is based on one Overall Goal and seven Strategies. These are set out below.

Overall Goal

"Tuna fisheries are managed to ensure Solomon Islands receives maximum economic and social benefits from the sustainable use of its tuna resources"

Strategies to support the Goal

MFMR, in consultation with stakeholders, has identified seven Strategies by which the overall Goal will be achieved. The Strategies are:

1. Ensure fish stocks are maintained at sustainable levels that support profitable fisheries.
2. Manage fisheries within recognised principles of ecosystem approach to management
3. Maximise employment opportunities for Solomon Islanders
4. Increase investment in fisheries and SIG income from the tuna fishery sector
5. Enhance food security and livelihoods, and minimise adverse social, cultural, and gender impacts.
6. Ensure good governance, management and compliance systems are in place
7. Enhance Solomon Islands influence at regional and international management organisations.

The Strategies are supported by a series of objectives and actions shown in the following section. The Strategies are also supported by other documents addressing specific management requirements. Some of these already exist; others will be prepared in 2013. The supporting documents are:

- Solomon Islands Tuna Investment Strategy – Completed
- Guidelines and Principles for assessing Licensing Applications, including the assessment of new fishing methods – 2014
- Inspection manual and standing operating procedures developed for EU Catch Certificate, Vessel offloading, monitoring of transhipments and boarding at sea – Ongoing but be completed in 2015
- Ecological Based Fisheries Management for Solomon Islands Tuna fisheries – Completed
- 5 year Strategic Research Plan for Solomon Islands Tuna Fisheries – Completed
- PNA Strategic Plan and Implementing Arrangements - Completed
- WCPFC Conservation and Management Measures (CMMs) – Ongoing
- Completion of Processing Agreement for domestic investment and processing – Under consultation
- Introduction of the Fisheries Integrated Management System and e-monitoring - Adopted

6.0 Objectives and Actions to Support Overall Goal and Strategies

Note that some objectives contribute to achieving a number of strategies.

Overall Objective:			
Outcomes and activities	**Objectively verifiable indicators (OVIs)**	**Means of Verification (MoV)**	**Assumptions**
Goal 1: Ensure fish stocks are sustainable and at levels that support profitable fisheries			
Outcome 1.1: Catch or effort limits established for the SI EEZ and MGA			
Activity 1.1.1 Support PNA and WCPFC Commission efforts to develop target and limit reference points for key target species	Limit Reference points finalised for SKJ by December 2013. SKJ Target Reference point finalised by December 2014. Target Reference Point for Albacore, Bigeye and Yellowfin agreed by Dec 2015	WCPFC CMM 2014-01	All party agreement DWFN cooperation
Activity 1.1.2: Solomon Islands adopts TRPs set by PNA for the MGA	As above	SI National measures	Industry agreement
Outcome 1.2 Catch and effort limits for key target species established by end – 2014			
Activity 1.2.2: Purse seine VDS fully operational for SI EEZ and MGA	2,795 EEZ VDS days (2013) allocated at the PNA benchmark price or above (VDS pooling – see below) 800 EEZ VDS days allocated to domestic purse seine Sustainable MGA limits identified (1,000 PS vessel days), and implemented after industry consultation (See pole-and-line below).	PNA FIMS Industry meeting report PNA FIMS (MGA)	PNA Agreement on days PNA Countries participating Agreements on allocations

	MGA purse seine vessel limit < 50 metres in length to control capacity and catch Solomon Is MGA AW days visible on PNAO/FIMS tracking system for transparency		
Activity 1.2.3: Explore anchored and drifting FAD management options	FAD management plan implemented in 2014 and extended to the MGA in 2015, including specifying seasonal closures and number of FADs. Review of FAD tracking options	FAD Management plan Industry meeting report Annual compliance report	Industry acceptance
Activity 1.2.4: Longline VDS fully operational for SI EEZ	23,465 days (2014) or equivalent vessel limits allocated, comprising 19,000 LLVDS for albacore. 2014 albacore limit set at 100 vessels in 2014 as a precautionary measure, and allocated only to domestic processors 4,465 LL VDS for tropical yellowfin/bigeye - Fishing north of -7.5 degrees only. Quota limits set by MFMR for Solomon Islands charter 14,500 mt (Tokelau Arrangement), and review of BET/YFT options in 2015.	PNA LL VDS agreement Tender advertisement Tender evaluation report PNA FIMS FIMS quota uptake reports	Political acceptance Effective allocation system
Activity 1.2.5: Pole-and-line management system established for MGS and EEZ	P&L VDS established for the MGA at 0.25/Vessel day). 400 day limit and non-transferable to purse seine.	ALCs on pole-and-line vessels VMS records	Industry agreement

		PNA FIMS	
Outcome 1.3: National, PNA and WCPFC measures formulated and implemented			
Activity 1.3.1: Solomon Islands participating in Regional and sub –regional meetings	Attend PNA and WCPFC meetings and if required submit or contribute to position papers (e.g. high seas closures) Automatically implement management measures through the national licensing system Report on application the WCPFC TCC and PNA Annual meeting	PNA IAs Licence minimum terms and conditions TCC and PNA annual meetings reports	Attendance at meetings Bilateral agreements and national licences reflect the measures Attendance at meetings
Activity 1.3.2: All elements of the SI Fisheries Bill enacted	Revised SI Fisheries Bill	Fisheries Bill	Political support
Activity 1.3.3: Adopt all conservation and management measures into a licensing / bilateral agreement framework	Licences and permits adapted to reflect measures	Licence conditions	Political and industry support
Outcome 1.4.Promote and support appropriate research on tuna fishery stock status and management arrangements in the WCPO			
Activity 1.4.1: Provide support to SPC research programmes	National observer programme coverage at 100% (purse seine); 5% (longline) and pole-and-line (5%) to SPC research outcomes Port sampling data collected on longliners	Observer implementation reports	Full support to SINOP
Activity 1.4.3: Review data management systems	Fisheries Management Information system fully operational by 2016	Catch and effort reports	No delays in inputting data

Outcomes and activities	Objectively verifiable indicators (OVIs)	Means of Verification (MoV)	Assumptions
Goal 2: Manage fisheries within recognised principles of ecosystem approach to management			
Outcome 2.1: Ecosystem impacts caused by tuna fisheries. Regularly assessed			
Activity 2.1.1: Review and update *EAFM for Solomon Islands Tuna Fisheries by end-2015* and biannually thereafter.	Revised EAFM report	Workshop report	National commitment to EAFM
Outcome 2.2: Management arrangements developed that minimise discarding and promote the use of by-product.			
Activity 2.2.1: Develop and implement shark NPOA	NPOA on sharks implemented	NPOA	MFMR implementation
Activity 2.2.2: By July-2014 implement Commission CMMs on ○ sharks ○ turtles	License MTCs upgraded Awareness training in shark and turtle mitigation	Licences	MFMR implementation
Outcome 2.3: Baitfish resources managed to ensure their sustainability.			
Activity 2.3.1: Undertake a baitfish risk assessment by mid-2014	Risk assessment workshop completed	Risk assessment report	Full support from all stakeholders
Activity 2.3.2: Prepare and implement a baitfish management plan by end-2015.	Baitfish management plan implemented by January 2016	Baitfish management plan	Full support from all stakeholders
Outcome 2.4: FAD measures are consistent with EAFM			
Activity 2.4.1: Develop and implement a FAD management plan in 2014	WWZ FAD management plan - 4 months (July-Oct) 2014 MGA FAD management plan implemented by January 2016. Note BET interactions ~ 1%	FAD management plan	Full support from all stakeholders
Activity 2.4.2: Monitor the use and species interactions from FADs in cooperation with industry.	ISSF/TMI trials into shark avoidance	WCPFC Research reports	

Outcomes and activities	Objectively verifiable indicators (OVIs)	Means of Verification (MoV)	Assumptions
Goal 3: Maximise employment opportunities for Solomon Islanders **Leverage resource access so as to promote maximum national participation**			
Outcome 3.1: Access to fishing partners prioritized with agreement to employ Solomon Islands on their fishing vessels and land fish for processing in Solomon Islands.			
Activity 3.1.1 Agree VDS limits that compliment fish processing activities	Processing Investment Agreement	Investment support documents Schedule on discounts determined	Investor interest countries against competing
Outcome 3.2: Career paths developed in line with regional initiatives and in conjunction with fishing partners, training facilities, and mentoring programs for onshore fishing related workers and vessel crew.			
Activity 3.2.1: Work with PNA/FFA and SPC in identifying career path options to support islandisation	Participate in sub-regional meetings to assess PIC career paths	Strategy papers and sub-regional resolutions	Institutional support
Activity 3.2.2: Assess training needs of processing establishments	Undertake TNA with the processing sector	TNA report	MFMR capacity to implement and support
Activity 3.2.3: Set an incentive scheme, tied to access fees that reward employment of nationals	Develop financial reward scaler	Discount scaler table	Economist available
Activity 3.2.4: Establish training facilities and certified courses and work with fishing partners to train Solomon Islanders to become process workers or fishing vessel crews (through SICHE Marine School or a suitable alternative.	SICHE Marine School fully operational Funded by donations and the Fisheries Development Fund	Consolidated fund allocations (Fisheries Development Fund?) Grants Training certificates	Political support
Activity 3.3.5: Increase the public image of the fishing sector and promote the tuna industry as a viable career option at school career days or similar events	Contract a PR professional	Press releases and Newspaper articles	Local PR expert available

Outcomes and activities	Objectively verifiable indicators (OVIs)	Means of Verification (MoV)	Assumptions
Goal 4: Increase investment in fisheries and SIG income from the tuna fishery sector			
Outcome 4.1: Solomon Islands maximises its revenue from available entitlements			
Activity 4.1.1: Continue to review PNA allocation of catching rights under purse seine and longline VDS and maximise Solomon Islands position	Attendance at PNA meetings	PNA reports	Meeting attendance
Activity 4.1.2: Remove FSM Arrangement.	452 days allocated back to the parties and added to the PAE	Cost/benefit report (MFMR)	MFMR economist in place and transparency within PNA Cooperation with other parties with the same views
Activity 4.1.3: Review costs and benefits of participating in US Treaty; maximise Solomon Islands share of rights if US Treaty pool shifted to PAEs	Liaise with the PNA economist and update economic analysis Prepare Ministers/MFMR briefing notes	Cost/benefit report (MFMR)	MFMR economist in place
Activity 4.1.4: Review current access agreements and fees to ensure SIG access fees reflect fishery profitability, including implementing VDS standard fee as minimum charge for access.	Liaise with the PNA economist and update economic analysis Revise PNA benchmark based on economic intelligence Prepare Ministers/MFMR briefing notes	• SI economist recruited • PNA models adjusted to incorporate EEZ CPUE data • PPT on economic outturns	• MFMR acts on conclusions to the economic advice
Activity 4.1.5: Explore additional options to increase access fees – VDS pooling, tendering	Attend VDS pooling group and agree strategy	VDS pooling arrangement (August, 2014)	Cooperation with other parties with the same views
Activity 4.1.6: Implementation of the longline licensing and tendering system	Tender framework designed Tenders evaluated Licences allocated	Tender notification and publication of awards	Political acceptance of the process

Outcome 4.2 SIF Tuna Investment strategy implemented			
Activity 4.2.1: Establish a Project Management Unit to facilitate implementation of domestic tuna industry projects, by mid- 2013.	Functioning PMU	PMU operational with competent staff	MSSIF technical advisory support External training support (IFC)
Activity 4.2.2: Facilitate the development or improvement of basic infrastructure to support the tuna industry.	Land purchases Liaise with other national government agencies/ development t partners on infrastructure upgrading (roading, water, power etc)	Purchase ledgers Working agreements between government agencies Development partners aware of infrastructure needs	Resolution of landownership issues Inter-governmental cooperation
Activity 4.2.3: Implement the SIG Tuna Investment Strategy.	Develop/ disseminate guidelines for investors, covering investment proposal requirements and processing and compliance with environmental and social impact requirements. Development of comprehensive onshore processing agreement template	Investment proposals aligned to guidelines Investment proposal processing/ decision-making streamlined	Investor interest
Outcome 4.3: Competent Authorities and other bodies implementing trade related functions (includes food safety, IUU, ICCAT).			
Activity 4.3.1: Support development of EPA or IEPA to improve access to European markets.	Dialogue with industry MFMR attendance at meetings (and/or) brief prepared for SI delegate Awareness/ advocacy for value of fisheries sector	Meeting reports Briefing PAFC Meeting report	Industry fully engaged Non conflicting wider political agendas
Activity 4.3.2: Review and update specific trade certificates and requirements and identify any changes required to maintain CA status (EU CC,	Annual review of support needs with industry and agencies (MFMR, Health, Min of Foreign Affairs)Maintain effective	CAs maintain competency recognition	Operational budgets/ technical competence maintained

ICCAT)	dialogue with market-based regulators (EU DG MARE, DG SANCO)		
Outcome 4.4: Strategic trade requirements explored with international markets for Sol Is tuna			
Activity 4.4.1: Implement required changes to support achievement of MSC standards (PNA and NFD Ltd)	Attendance at workshops Formulate partnerships with local and international NGOs in the region (WWF) Implement the required changes needed to support MSC outcomes	MSC assessments and Fisheries Improvement plans Workshop reports	MFMR commitment

Outcomes and activities	Objectively verifiable indicators (OVIs)	Means of Verification (MoV)	Assumptions
Goal 5: Enhance food security and livelihoods, and minimise adverse social, cultural, gender and environmental impacts			
Outcome 5.1: Negative impact of large scale commercial fishing on coastal communities and small scale fishers minimised			
Activity 5.1.1: Liaise with artisanal and commercial (TIASI) fishers to assess any current impacts	Workshops	Workshop reports	Commitment to establishing working meetings
Activity 5.1.2: Ensure licensing guidelines appropriately restrict areas that vessel types can fish	MTCs adjusted to reflect the needs of artisanal fishers	Licence MTCs	Commercial industry compliance
Outcome 5.2: Solomon Islands food security enhanced.			
Activity 5.2.1: Ensure coastal communities benefit from large scale commercial tuna fisheries by allowing by-product to be landed for local markets	Incorporate bycatch/salted fish into Hapi Fis initiative	Market/inspection observations	Large commercial fishing cooperation
Activity 5.2.2: Encourage companies to support coastal communities through installation of FADs and supply of fish	Development Processing Agreements to incorporate linkages to local fishers		

Outcomes and activities	Objectively verifiable indicators (OVIs)	Means of Verification (MoV)	Assumptions
Outcome 5.3: Promote gender equity.			
Activity 5.3.1: Promote mainstreaming of gender considerations in all industry development .	Support for gender parity in wages, and establishing a living wage for unskilled labour Paying attention to important health, safety, transport and wage concerns Ensure the approach taken to training, mentoring, and improving stakeholders' skills and understanding is consistent with the Solomon Island's *Gender Equality and Women's Development* (GEWD) policy.	Processing Agreement	Strong political commitment to gender equality
Outcome 5.4: Negative impacts of fishing and onshore processing operations minimised, including environmental impacts and social impacts of foreign workers on local people and customs. Monitoring by SIG agencies			
Activity 5.4.1: Consult regularly with social agencies and NGOs to help monitor social impacts of fishing operations.	Identify NGO partners Participation in NGO workshops	Meeting minutes and consultation documents	MFMR commitment to gender equality
Activity 5.4.2: Ensure contingency plans in place for waste management or effluents from processing facilities are effective and monitored appropriately.	Sector specific E&S guidelines complied with by investors	E&S guidelines	MFMR (and other agency) commitment to implementing the required standards

Outcomes and activities	Objectively verifiable indicators (OVIs)	Means of Verification (MoV)	Assumptions
Goal 6: Ensure good governance, management and compliance systems are in place			
Outcome 6.1: : Organisational, administrative systems operating efficiently			
Activity 6.1.1: Provide career pathways and train MFMR staff so they can attain the level of expertise required to manage tuna fisheries	Career paths developed with the support of MSSIF Human Resource Advisor	Staff Terms of Reference and career path structure	Funding
Outcome 6.2: Information systems operating efficiently			
Activity 6.2.1: Establish FIMS	Purse seine and pole&line e-logbooks in place by 2015; Longline e-logbooks in place by 2016. FIMS operational in 2015; CDS and LL operational in 2016.	Data reports Alerts detected and verified	Funding and strong commitment to timelines
Activity 6.2.2: Undertake an annual assessment of information systems, and alert functions and identify required changes to FIMS	MFMR review of needs and outputs	Evaluation report	
Outcome 6.3: The Monitoring, Control and Surveillance Strategy implemented.			
Activity 6.3.1: Implement the SI NPOA-IUU	See details below	NPOA Action point check list	
Activity 6.3.2: Annually review and update the MCS Risk assessment.	Risk assessment workshop (end of 2014)	Risk assessment tables	
Activity 6.3.3: Review roles & responsibilities of fishery officers, strengthen the observer program and implement port sampling and implement the Standard Operating Procedures (SOPS)	Review staff strengths, weaknesses opportunities and threats (MPI) and refine Inspector code and SOPS	Review report	Sufficient funding and staff resourcing
Activity 6.3.4: Work with other agencies to strengthen the application of delegated duties	Establishing working agreements and coordination meetings	MoUs and intergovernmental	Inter-governmental cooperation

Outcomes and activities	Objectively verifiable indicators (OVIs)	Means of Verification (MoV)	Assumptions
• PPB deployment (PMD) • Pre-registration compliance checks (MID) • Port State measures (SIPA)		working agreements	
Activity 6.3.5: Hold monthly meetings of the MCSWG and determine monthly taskings	Improve intelligence feeds Monthly meetings	Monthly Tasking tables	All agency commitment to monthly meetings
Activity 6.3.6: Ensure mechanisms are in place to control Solomon Island registered vessels when operating outside of the Solomon Islands EEZ	VMS and exchange of observer reports	Reports received	Party and WCPFC cooperation
Activity 6.3.7: External review	External review of MFMR functionality (2016)	MPI report	MFMR commitment to review process
Outcome 6.4: SI Fisheries Law is strengthened to support compliance regulations and measures to control IUU fishing.			
Activity 6.4.1: Support passing of Fisheries Bill	Drafting amendments and facilitation of the Bill's progress through Parliament		Political support
Activity 6.4.2: Review tuna-sector related fisheries regulations to ensure consistency with Act	Bilateral agreements revised and Licence conditions and amended	Licence MTCs and Bilateral agreements	Political will to progress the Bill
Activity 6.4.3: Periodically review adequacy of penalties to deter IUU	Review committee in place Review of risks against economic gains Schedule refined	Revised penalty schedule	Government willingness to accept change
Activity 6.4.4: Regularly review regulations to implement CMMs and PNA measures.	Reporting on CMM and PNA IA outcomes	Licence MTCs and Bilateral agreements	MFMR staff reporting on outcomes
Outcome 6.5: Transparent and accountable decision-making processes established throughout MFMR within the realms when dealing with "Commercial in Confidence" data and information.			
Activity 6.5.1: Ensure appeal and review		Report on appeals	

Outcomes and activities	Objectively verifiable indicators (OVIs)	Means of Verification (MoV)	Assumptions
processes are adequately resourced and undertaken.			
Activity 6.5.2: Report annually relevant fisheries information to Parliament and the public, including information on stock status, catches, sector employment and government income.	Prepare annual report to Parliament	Parliamentary submissions	Timely reporting
Activity 6.5.3: Implement appropriate reporting procedures to produce standard information reports for wider dissemination by mid-2014.	Standard MFMR report templates developed Training in report writing skills	Reports prepared by staff (and not advisors)	MFMR staff fully aware of reporting requirements
Outcome 6.6: Annually review implementation of the TMDP.			
Activity 6.6.1: Review of the plan	Review against above OVIs Define required changes and re-evaluate tasking	Report on outcomes and refined tasking/Terms of reference	Monitoring control processes in place
Activity 6.6.2: Hold regular stakeholder consultation meetings on key decisions and welcome interactions with stakeholders.	Stakeholder meetings on various elements of the plan	Review papers prepared by MFMR with MSSIF support	Commitment to industry participation
Outcome 6.7: Fisheries Advisory Council re-established and functional			
Activity 6.7.1: Select a Fisheries Advisory Council and convene regular meetings	Members selected Quarterly meeting schedule in place	Council appointments in MFMR press release	Support or advisory process
Activity 6.7.2: Ensure the MFMR takes account system of information obtained and demonstrates consideration of this information.	Assessment of meeting outputs and documentary review of information Prepare tender and licensing guidelines for approval by FAC and Minister by October 2014	Report of the meeting Licensing guidelines	Minister and MFMR support for the consultation process

Objectives	Actions		
Goal 7: Enhance Solomon Islands influence at regional and international management organisations			
Outcome 7.1: Increase effectiveness of Solomon Islands representation at international and regional meetings.			
Activity 7.1.1: Undertake negotiation training and develop a mentoring program for current and future MFMR staff to facilitate ongoing meeting participation and performance improvements.	MSSIF support	Briefing papers and records of discussions	Appropriate support in place
Activity 7.1.2: Implement agreed regional and international rules in a timely manner.	MoUs signed and implemented through Regulations	Fisheries Regulations	•

7.0 Summary of Access Arrangements by Area, Licence Type, and Method

Applies to all fishing methods
Refer Licensing Guidelines for details

Area	Permitted Methods and Licence Types	Approach to Management
MHWM – 3 NM	Artisanal fishers and small scale fishing operations supplying local markets	• Management determined by villages and Provincial Government
3 NM – 12 NM	Permitted methods and licence types as above, PLUS: • Small scale industrial fishing, pole-and-line, troll and handline	• EAFM • Adaptive management based on catch rates

Archipelagic Waters[6]	Permitted methods and licence types as above, PLUS:
	• Locally registered fishing vessels landing their catch for onshore processing and using the following methods:
	  ○ Purse seine
	  ○ Pole and line
	  ○ Troll
	  ○ Handline
		• Fishing effort limits set by adaptive management based on catch rates
		• Access limited to vessels landing to domestic processors; employing domestic crew and under 50 , to maintain catch rates; MGA day limits set aside for purse seine (1,000 days, and 400 days for purse seine and pole-and-line respectively)
		• VMS for purse seine and ploe-and-line

[6] Archipelagic waters are outside 12 NM but within UNCLOS recognised archipelagos. Coastal states have greater management authority over archipelagic waters than in the EEZ. A map of the Solomon Islands EZZ showing the Archipelagic Waters is attachment 2

Area	Permitted Methods and Licence Types	Approach to Management
		• National management requirements
12 – 30 NM	Permitted methods and licence types as above, PLUS: • Foreign vessels chartered by local companies landing their catch for onshore processing and using the fishing methods listed above.	• Access agreements • VDS for purse seine and longline • VMS • WCPFC, PNA 3IA and national management requirements
30 – 60 NM	Permitted methods and licence types as above, PLUS: • Foreign longline, incuding chartered by locally based foreign, not landing catch to onshore processing • Foreign purse seine vessels operating under the FSM Arrangement and foreign vessels operating under bilateral agreements using the fishing methods described above.	• Access agreements • FSM Arrangement • VDS for purse seine and longline • VMS • WCPFC, PNA 3IA and national management requirements
60 – 200 NM	Permitted methods and licence types as above, PLUS: • Purse seine vessels operating under the US Treaty	• Access agreements • FSM Arrangement • US Treaty arrangement • VDS • VMS for purse seine and longline • WCPFC, PNA 3IA and national management requirements

8.0 Summary of Access to VDS Fishing Days

Applies to Purse Seine Fishery and Longline Fishery
Refer Licensing Guidelines and Tuna Investment Strategy for details

Category of Commercial Fishing Operation	Priority	Cost of Access/VDS Fishing Days
Local vessel: • Local company • Locally registered fishing vessel • Mostly local crew • Catch processed onshore	• The only category permitted to fish in archipelagic waters • First priority for VDS Days (for fishing in EEZ) • Allocation according to long-term development agreement	• Initially, no VDS Day fee for fishing in archipelagic waters; longer term, fees to be determined. • Price of VDS Days in EEZ

		to be determined
Foreign vessels chartered by local company: • Meets minimum local crew requirements • Fish processed in Solomon Islands	• Tier 1 allocation • Opportunity to purchase, at market rates, VDS Days based on the volume of catch required for onshore processing plant. • Order of priority for allocations to Tier 1 companies based on order of investment. • Allocation according to long-term development agreement	• Market rates
Foreign vessels fishing under bilateral agreement: • Fish processed in Solomon Islands • Company (or associated company) invests in relevant onshore processing and local crewing	• Tier 1 allocation • Opportunity to purchase, at market rates, VDS Days based on the volume of catch required for onshore processing plant. • Order of priority for allocations to Tier 1 companies based on order of investment. • Allocation according to long-term development agreement.	• Market rates
Foreign vessels fishing under bilateral agreement: • Fish processed in another country	• Tier 2; only allocated where VDS Days requirements for other categories met • Allocation for one year only	• Price determined by competitive bidding process.

Attachment 1; Key Target Species

Skipjack tuna are a surface–schooling tuna which are easily distinguished from other species of tuna due to their small size, small dark pectoral fins and three to six distinct dark longitudinal lines (stripes). It is found year round concentrated in warmer tropical waters of the WCPO,

With that distribution expanding seasonally into subtropical waters to the north and south. Skipjack are caught mainly on the surface by purse seine and pole and line gear and are used for producing canned tuna. The typical capture size for skipjack is between 40 and 70cm, corresponding to fish between one and three years of age, with very few captured fish exceeding 80cm. Skipjack tuna is a fast growing species (reaching 42-45cm within its first year), are relatively short-lived (few live longer than 3 - 4 years) and mature early (~ 1 years of age). Skipjack are also highly fecund and can spawn year round over a wide area of the tropical and subtropical Pacific. Environmental conditions are believed to significantly influence seasonal migration and recruitment and can produce widely varying recruitment levels between years. Skipjack are currently not overfished or subject to overfishing although catches should be monitored to ensure high catch rates are maintained into the future.

Yellowfin tuna are a relatively large tuna, easily distinguished as adults by the colour of their large second dorsal and anal fins which, along with finlets, are typically bright yellow. Yellowfin tuna are distributed throughout the tropical and sub-equatorial waters of the WCPO, and typically spend most of their time in the warmer mixed surface waters (above the thermocline). Small yellowfin are caught on the surface by a range of gears including handline, ringnet, purse seine and pole/line gear and are used mainly for canning, while the majority of larger/older fish

are caught by both purse seine and longline fisheries, with the longline catch often shipped fresh to overseas markets. The typical capture size for yellowfin shows two distinct modes in the WCPO, being 20 to 70cm (ringnet, handline, purse seine, pole and line) which corresponds to fish between approximately 3 months and 1.5 years of age, and between 90 and 160cm (purse seine, longline), corresponding to fish mostly between 1.5 and 6-7 years of age. Yellowfin tuna is a fast growing species (reaching > 45cm within its first year), have a life span of up to ~7 years of age and mature around 2-3 years of age. These biological characteristics promote moderate turnover in yellowfin populations. Yellowfin are highly fecund and can spawn year round over a wide area of the tropical and subtropical Pacific, provided environmental conditions (such as water temperature) are suitable. Yellowfin tuna are believed to constitute a single stock in the WCPO and are considered to be not overfished or subject to overfishing however region 3 that includes the SI EEZ is approaching levels of full exploitation.

Bigeye tuna are among the largest of tuna species and are distinguished as adults by their body depth, colouring (iridescent blue longitudinal band) and smaller anal and dorsal fins (relative to yellowfin). However, they are more difficult to distinguish from yellowfin tuna as juveniles (~50cm). In the WCPO, bigeye tuna have a relatively broad distribution, both geographically between 40°N and 40°S, and vertically between the surface and 500 m deep (occasionally to 1000 m) due to their tolerance of low oxygen levels and low temperatures.

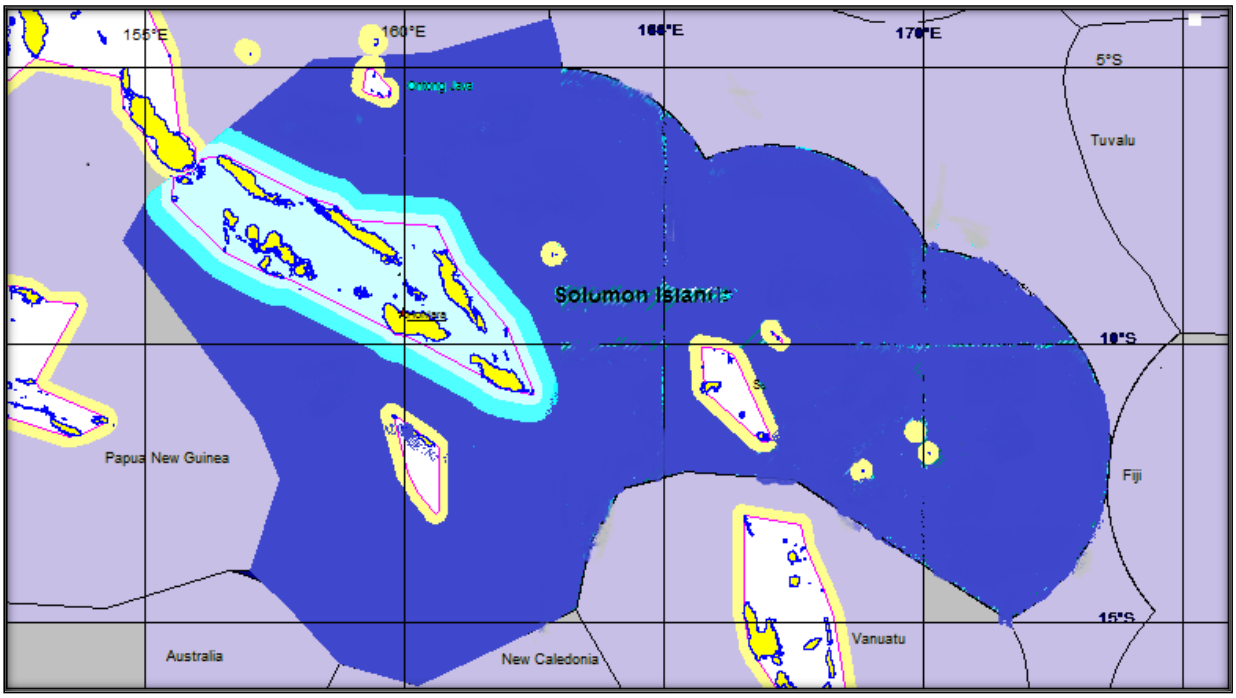
In the tropical and subtropical waters or the WCPO, adult bigeye tends to migrate from cooler deeper waters (beneath the thermocline) where they live during the day to shallower warmer waters at night. Juvenile bigeye tend to inhabit shallower waters and can form mixed schools with skipjack and yellowfin, which results in catches by the surface fishery, particularly in association with floating objects. In the WCPO, smaller bigeye are caught on the surface by a range of gears including handline, ringnet and purse seine and are used mainly for canning, while the majority of larger/older fish are caught by longline fisheries. While bigeye tuna account for a relatively small proportion of the total tuna catch in the region, adult bigeye tuna are extremely valuable (particularly as fresh fish in the Japanese sashimi market); their economic value probably exceeds US$1 billion annually. The typical capture size for bigeye shows two distinct modes in the WCPO, being 20 to 75cm (ringnet, handline, purse seine) which corresponds to fish between 3 months and 1.7 years of age, and between 100 and 180cm (mostly caught by longline), corresponding to fish between 2 and 10 years of age. Bigeye tuna grow more slowly than either yellowfin or skipjack, reaching around 40cm after one year, have a longer lifespan (at least 12 years) and mature later (around 3-4 years of age). Natural mortality is estimated to be relatively low compared with other tropical species. These biological characteristics promote only moderate turnover in bigeye populations, and, in combination with their susceptibility to multiple gear types throughout their lifespan, make bigeye tuna less resilient to exploitation than more productive species like skipjack. Like yellowfin, bigeye tuna are highly fecund and can spawn year round over a wide area of the tropical and subtropical Pacific, provided environmental conditions are suitable. Bigeye are currently experiencing overfishing and a suite of management measures are in place for purse seine and longline fishing to reduce fishing mortality to acceptable levels

Adult albacore are distinguished by their very long pectoral fins. Mature albacore (age at first maturity is about 4 - 5 years) spawn in tropical and sub-tropical waters between 10-25°S from the equator, with individual fish becoming available to surface fishing about 40°S from the equator approximately one to two years later, at a size of 45-50 cm.

From this area, albacore appear to gradually disperse towards lower latitudes, but make seasonal migrations between tropical and sub-tropical waters. Small albacore are caught by trolling at the surface in cool water outside the tropics, while larger fish are caught in deeper waters and mainly at lower latitudes (subtropical) using longline gear. Most of the catch is used for producing “white meat” canned tuna. Fish caught are typically from 1.5 to 10 years old. Albacore are relatively slow growing, and have a maximum fork length of about 130 cm. Natural mortality is low compared to tropical tunas, with significant numbers of fish reaching an age of 10 years or more. Albacore are not overfished and overfishing is not

occurring however concerns are being expressed that localised depletion of larger fish is occurring in some waters.

Attachment 2; Solomon Islands EEZ showing archipelagic waters



- Map is indicative only and not to scale
- Archipelagic waters are shown inside purple lines.
- Yellow borders around the Archipelagic waters and pale outline around the Main Group Archipelago indicate Territorial Seas
- Turquoise area around the Main Group Archipelago and dark blue colouration represent the Solomon Islands EEZ.