

FRAMEWORK CONTRACT MARE/2011/01 – EVALUATION AND IMPACT
ASSESSMENT ACTIVITIES FOR THE DG MARE

Lot 3 - Retrospective and prospective evaluations on the
international dimension of the CFP

SPECIFIC CONTRACT 01

*EX-POST EVALUATION OF THE CURRENT PROTOCOL TO THE FISHERIES
PARTNERSHIP AGREEMENT (FPA) BETWEEN THE EUROPEAN UNION
AND REPUBLIC OF KIRIBATI, AND EX-ANTE EVALUATION INCLUDING AN
ANALYSIS OF THE IMPACT OF THE FUTURE PROTOCOL ON
SUSTAINABILITY*

FINAL REPORT
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<p>COFREPECHE: 32 rue de Paradis, 75010 Paris, France. info@cofrepeche.fr</p>		
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Action	SURNAME	First name	Organisation Position	Category
Authors	MACFADYEN	Graeme	POSEIDON Director / Team leader - Fisheries economist	I
	BANKS	Richard	POSEIDON Director / Fisheries economist	I
Peer review (draft final report)	MEES	Chris	MRAG Managing Director / Senior fisheries expert	I
Proof reading	HUNTINGTON	Tim	POSEIDON Director	I
Edition	PICAULT LE FOL	David Gwendal	COFREPECHE Project officers	II
Approval	DEFAUX	Vincent	COFREPECHE Projects Director	I
Validation	SILVA	Jean-Pierre	COFREPECHE Deputy Managing Director	I

Acronyms and abbreviations

ACP	African, Caribbean and Pacific	ins	Inches
ADB	Asian Development Bank	INTERCO	International Code of Signals
AFAD	Anchored FAD	IT	Information Technology
AER	Annual Economic Report	IUU	Illegal, Unregulated or Unreported
ALC	Automatic Location Communicator	JC	Joint Committee
AUS\$	Australian Dollar	KDP	Kiribati Development Plan
B/C	Benefit/cost	kg	Kilogrammes
BET	Bigeye Tuna	lb	Pounds
CCM	Commission Cooperating Member	LDC	Lesser Developing Country
CCS	Catch Certificate Scheme	MCS	Monitoring, Control and Surveillance
CFP	Common Fisheries Policy	MDGS	Millennium Development Goals
CI	Conservation International	MFED	Ministry of Finance and Economic Development
CIF	Carriage Insurance and Freight	MFMRD	Ministry of Fisheries and Marine Resources Development
CMM	Conservation and Management Measures	mm	millimeters
CNM	Commission Non Cooperating Member	mn	million
CPPL	Central Pacific Producers Limited	MoU	Memorandum of Understanding
CRGA	Committee of Representatives of Governments and Administrations	MPA	Marine Protected Area
CRISP	Coral Reef Initiative for the Pacific	MSY	Maximum Sustainable Yield
DCF	Data Collection Framework	MTC	Minimum Terms and Conditions
DCR	Data Collection Regulation	MTU	Mobilisation Transmission Unit
DEVFI SH	The Development of Tuna Fisheries in the Pacific ACP Countries Project	MY	Management Year
DFAD	Drifting FAD	NEA	New England Aquarium
DG MARE	Directorate General for Maritime Affairs and Fisheries	OFP	Oceanic Fisheries Programme
DWFN	Distant Water Fishing Nations	OPAGAC	Organización de Productores Asociados de Grandes Atuneros Congeladores
EAFM	Ecosystem Approach to Fisheries Management	ORTHONG EL	Organisation de Producteurs de Thon Congelé
EBIT	Earnings Before Interest and Tax	PACP	Pacific ACPs
EC	European Commission	PAE	Party Allowable Effort
EDF	European Development Fund	PIPA	Phoenix Islands Protected Area
EEZ	Exclusive Economic Zone	PNA	Parties to the Nauru Agreement
ENSO	El Niño Southern Oscillation	PNAO	Parties to the Nauru Agreement Office
EP	European Parliament	PNG	Papua New Guinea
EPA	Economic Partnership Agreement	PROCFISH	Pacific Regional Coastal Fisheries Development Programme
EPO	Eastern Pacific Ocean	RERF	Revenue Equalisation Reserve Fund

EU	European Union	RFMO	Regional Fisheries Management Organisation
F	Fishing mortality	RMI	Republic of the Marshall Islands
FAD	Fish Aggregation Device	SCICOFISH	Scientific Support for the Management of Coastal and Oceanic Fisheries in the Pacific Islands Region
FAME	Fisheries, Aquaculture and Marine Ecosystems	SEAPODY M	Spatial Ecosystem and Populations Dynamics Model
FAO	Food and Agriculture Organisation	SIDS	Small island developing states
FFA	Forum Fisheries Agency	SJK	Skipjack Tuna
FFC	Forum Fisheries Commission	SMACFish	Sustainable Management of Aquaculture and Coastal Fisheries in the Pacific Region for Food Security and Small-scale Livelihoods
FMIS	Fisheries Monitoring Information System	SOE	State Owned Enterprise
FMSY	Fishing mortality rate that would give Maximum Sustainable Yield	SPC	Secretariat of the Pacific Community
FOB	Free OnBoard	TAE	Total Allowable Effort
FPA	Fisheries Partnership Agreement	TCC	Technical and Science Committee
FSM	Federated States of Micronesia	TUFMAW	Tuna Fisheries Database Management System
FSMA	FSM Arrangement	UNICEF	United Nations International Children's Emergency Fund
FTE	Full Time Equivalent	UNFSA	United Nations Fish Stocks Agreement
GATT	General Agreement on Tariffs and Trade	US\$	United States Dollar
GDP	Gross Domestic Product	USLMT	United States Multi-Lateral Treaty
GSP	Generalised System Of Preferences	VDS	Vessel Day Scheme
HS	High Seas	VDSC	Vessel Day Scheme Committee
HSP	High Seas Pockets	VMS	Vessel Monitoring System
IA	Implementing Agreement	WCP	Western Central Pacific
IATTC	Inter-American Tropical Tuna Commission	WCPFC	Western Central Pacific Commission
IEO	Instituto Español oceanografico	WCPO	Western Central Pacific Ocean
IEPA	Interim Economic Partnership Agreement	WTO	World Trade Organisation
IMF	International Monetary Fund	YFT	Yellowfin Tuna

Currency Exchange Rates used in this report (www.oanda.com)

€1 =	2007	2008	2009	2010	2011	2012
US\$	1.35	1.58	1.41	1.22	1.45	1.34
AUS\$	1.59	1.64	1.74	1.44	1.35	1.25

Rates are mid-year rates, except for 2012 which is rate at time of writing (Feb/March 2012)

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EXECUTIVE SUMMARY

INTRODUCTION

- i. This report provides an ex-post evaluation of the current Protocol to the Fisheries Partnership Agreement (FPA) between the European Union and the Republic of Kiribati. It also provides an ex-ante evaluation and analysis of impacts of a potential future Protocol on sustainability. The evaluation covers the period September 2006 to March 2012. The FPA provides fishing opportunities for EU purse seine and longline vessels to fish in the waters of Kiribati.

COUNTRY BACKGROUND

- ii. Kiribati is a remote Pacific nation made up of 33 widely dispersed islands (21 inhabited) divided into groups (Gilbert Group, Phoenix Group and the Line Group) that straddle the equator. While the total land area is only 726 km², the related exclusive economic zone (EEZ) is the largest EEZ of the Pacific islands countries at 3.55 mn km². Kiribati's population was 103,280 in 2011 and is almost entirely concentrated in the Gilbert Islands. At the current population growth rate of 1.25 %, the population is expected to double in the next 20 years. Kiribati is a sovereign democratic republic within the Commonwealth.
- iii. The Kiribati economy faces significant constraints common to other island atoll states. Gross Domestic Product (GDP) stands at €109 mn (2010), expanding by an estimated 2-3 % per annum. GDP per capita is one of the lowest of the Parties to the Nauru Agreement (PNA) nations at €1,047 and Kiribati is classified as a least developed African, Caribbean and Pacific (ACP) State. Challenges to economic development include size, remoteness and geographical fragmentation, infertile soils, limited exploitable resources and an expanding population. A major distinctive feature of national resources is the Revenue Equalisation Reserve Fund (RERF) with a value of around €410 mn (in 2011). Initially established from royalties from phosphate mining, the RERF is used to fund fiscal deficits. The Kiribati Development Plan (KDP) 2008–2011 builds upon the previous National Development Strategy 2004–2007 with actions to address fiscal management, population growth, and improved access to international labour markets. While progress in implementation has been slow, the strategic focus remains: (i) improving the economic environment in the outer islands, particularly Kiritimati (Christmas Island); (ii) strengthening access to health services; and (iii) addressing climate change.
- iv. Kiribati relies heavily on licence fees from distant water fishing nations (worth an annual average of €24.4 mn in the period 2009 - 2011) that provide 23-30 % of government revenue and remittances from Kiribati citizens employed abroad, mainly as seafarers. Fishing is also an important subsistence activity, with over 80 % of households involved in fishing. Fish consumption per capita per year is high by global and Pacific standards (between 72 kg and 207 kg for the entire country). The fishing sector contributes around 10 % of GDP. Kiribati has bilateral fisheries arrangements with the European Union, Japan, Taiwan, and the Republic of Korea, as well as private company agreements with vessels from Ecuador and El Salvador. Kiribati also receives revenue from a multilateral treaty signed with the United States.
- v. EU relations with the Pacific ACP countries, based on the Lome Conventions and the Cotonou Agreement have been aimed at supporting stabilisation following decolonisation, while at the same time supporting economic and social progress. At the regional level the 10th European Development Fund (EDF) (2008-2013) includes as a priority the sustainable management of natural resources and the environment, with support to programmes under the Forum Fisheries Agency (FFA) and Secretariat of the Pacific Community (SPC). While Kiribati benefits from regional initiatives, fisheries remain outside the 10th EDF Country Strategy Paper and National Indicative Programme for Kiribati. Fisheries-specific support is instead provided through the sectoral policy support component of the FPA. The Kiribati fisheries sector also benefits from regional initiatives by other donors (notably Australia, New Zealand and the US) and national support under the Australian-Kiribati Partnership for development.
- vi. In September 2004, the EU and 14 Pacific ACP countries, including Kiribati, opened negotiations on an Economic Partnership Agreement (EPA), which should eventually replace the preferential access scheme

contained in the Cotonou Agreement that expired at the end of 2007. EPA negotiations are still in progress. Whilst there is presently no trade in fishery products between Kiribati and the EU, the country has future aspirations in trading fresh tuna loins.

TUNA FISHERIES IN KIRIBATI AND THE REGION

- vii. The Western and Central Pacific Ocean (WCPO) is the main fishing ground for tunas, accounting for around 60 % of world catches. Total WCPO tuna catch for 2010 was estimated at 2.28 mn tonnes, with the purse seine fishery accounting for 80 %, pole-and-line fishing 6.5 %, and longline fishing about 6 %. EU purse seine vessels account for 2 % of catches in the WCP.
- viii. Purse seine fishing expanded rapidly during the 1980s, mainly through the operations of Japanese and US fleets. More recently the composition of the fleet became more diverse, with an expansion to include other Asian fishing nations, New Zealand and EU vessels. Vessels predominantly target skipjack tuna (81 % of the total catch) along with yellowfin (17 %) and bigeye (2 %) and overall dependency on free school fishing has increased over the years. Access to fishing by distant water purse seine vessels takes the form of regional or bilateral fisheries partnership arrangements or agreements, including: bilateral intergovernmental agreements; EU FPAs; commercial agreements between associations or companies; individual agreements between countries which are Parties to the Nauru Agreement (PNA); and the US Tuna Treaty.
- ix. The longline fishery catches mainly yellowfin and bigeye tunas, but also albacore, billfish, swordfish and other species including pelagic and reef sharks. The total number of vessels involved in the tropical WCPO fisheries has generally been around 3,000. European longliners operate primarily south of 20°S, outside the tropical area and the EU longline vessels have never fished in Kiribati waters. Together EU longliners account for less than 1 % of total WCPO longline catches.
- x. The status of the three main tuna stocks exploited in the WCP equatorial area is monitored by the Scientific Committee installed under the Western Central Pacific Commission (WCPFC) (the tuna Regional Fisheries Management Organisation (RFMO) for the WCPO). Currently skipjack is being exploited at moderate levels and overfishing is not occurring, yellowfin is currently fully exploited and there is a 50 % chance that overfishing is occurring, and recent assessments show that overfishing of bigeye tuna is currently occurring with present catch levels unlikely to be sustainable.
- xi. The key governance and fishery management organisations for tuna and related species in the WCPO, and the tuna purse seine fisheries in particular include: The WCPFC; The Parties to the Nauru Agreement (PNA); Regional organisations that provide management services to the WCPFC and the PNA, in particular the Forum Fisheries Agency (FFA) based in Solomon Islands, and the SPC based in New Caledonia; and the PNA national governments. A number of WCPFC Commission Management Measures (CMMs) have been formulated in the annual sessions of the Commission. The PNA has also introduced a Vessel Day Scheme (VDS) for the Management of the Western Purse Seine Fishery, with Party Allowable Effort (PAE) days allocated to PNA countries, and agreed that a minimum fee of US\$5,000 / €3,450 per fishing day shall be applied to foreign fishing vessels from 2012 onwards.
- xii. Within Kiribati itself, the Kiribati Development Plan focus for fisheries includes maximizing the sustainable economic benefits from the tuna resource; conserving coastal resources in the face of rising demand for food and cash incomes; and managing the transition from government research to commercial production and export. Overriding governance priorities are identified as: maintaining close collaboration with the PNA and FFA and to obtain maximum sustainable EEZ access fees; promoting public-private partnerships with reputable foreign investors in catching and onshore domestic processing of tuna; conducting participatory education programmes with fishers and communities engaged with vulnerable species/stocks; and ensuring legal sanctions are observed to enforce the conservation regime and prosecute when necessary. Responsible for this is the Ministry of Fisheries and Marine Resources Development with a staff of 115. Kiribati has established the Phoenix Islands Protected Area (PIPA) which is one of the largest Marine Protected Areas (MPAs) in the Pacific at 408,250 km².

EVALUATION

- xiii. The Protocol provides for 4 purse seine fishing authorisations (1 for France and 3 for Spain), and 12 longline fishing authorisations, evenly split between Portugal and Spain. Apart from two longline fishing authorisations taken during the first year of the FPA there has been 0 % utilisation of the longline fishing authorisation possibilities, and no longline catches made during the FPA. On the other hand utilisation of the 4 purse seine fishing authorisations has been 100 % for each of year of the FPA, and utilisation of catch possibilities in excess of 100 % each year of the FPA. In 2011 catch utilisation is expected to exceed 200 % of the reference tonnage of 6,400 tonnes for the first time.
- xiv. Payments made to Kiribati during the FPA have averaged €1.2 mn per year, with 2/3 paid by the EU and 1/3 by vessel owners. The average payment over 2007 to 2011 was €3,350 / US\$4,675 a day i.e. close to the current PNA benchmark price of US\$5,000/day.
- xv. The covenants and obligations of the FPA and Protocol are generally being complied with by all parties. However some areas of concern include: the failure of the Joint Committee (JC) meetings to take place until 2011; the slow payments in recent years for the financial support for the sectoral policy; the failure by Kiribati to supply inspection certificates and observer reports to shipowners; and the lack of any real impetus towards joint enterprises or local landings for processing.
- xvi. The economic analysis of the Protocol shows that ex-vessel fish prices are lower than international standards, probably due to smaller fish sizes caught in the FAD fishery, but that fish prices have risen by around 50 % over the period of the evaluation. Given the increasing trend in catches made in Kiribati over the evaluation period, the landed value of fish caught under the Protocol also shows a rising trend and in 2010 exceeded €14 million.
- xvii. A total of €6.4 mn of value-added is accrued each year when considering the benefits to both the European Union and Kiribati. 75 % of this accrues to the EU and 25 % to Kiribati. EU value-added is most prominent in the catching and upstream sectors, and less marked in downstream processing. In Kiribati value-added is almost entirely focused in the upstream/input sub-sector, principally in the form of payments made to the Government for access and sectoral support, but also from vessel support services i.e. transshipment. Some small value-added is made through the employment of Kiribati crew and observers.
- xviii. In terms of costs and benefits, for the EU as a whole the Protocol generated an average annual benefit/cost (B/C) ratio of 4.0, demonstrating that the Protocol provides good value for money with every €1 invested by the EU and fleet owners generating €4.0 of benefit in terms of value-added. The cost of access for vessel owners (€35/tonne) represents 4.1-4.4 % of the average weighted sales prices received for catches made under the Protocol. Annual average catch values made under the Protocol are €9.5 mn, and vessel profits as a proportion of sales revenues range between 11 % and 23 % for the two vessel classes (84m and 100+m). The benefits to Kiribati were €1.2 mn per year on average from the EU, plus smaller benefits in the form of value-added made from port calls by EU vessels and from local crew and observers onboard EU vessels.
- xix. The contribution of catch made under the Protocol to the EU processing sector was small at around 2 % of loined imports to the EU in 2010, while fish caught under the Protocol and imported to the EU in canned form represented around 1 % of EU imports of canned tuna in 2010.
- xx. The employment generated by the Protocol is estimated at 98 Full-Time Equivalent (FTE) jobs. This employment generation represents 116 tonnes of fish caught under the Protocol for every job, and €23,810 of payments by the EU and vessel owners for every one job. Employment creation is divided roughly equally between the EU and Kiribati. The social clause elements of the Protocol in terms of wage levels, seamen having contracts, etc., are being fully complied with.

- xxi. With respect to effectiveness, the EU fleet plays only a small role in terms of overall fleet activity in both Kiribati and WCP. Its ability to impact on responsible fishing is therefore limited. However some concerns are noted in relation to responsible fishing in terms of high percentages of catches being comprised of bigeye tuna (which is assessed as being over-exploited), vessel discards, vessels exceeding high seas days limits, bycatch of pelagic sharks, and weaknesses in MCS capacity in Kiribati. The Protocol has been effective in supporting the EU catching sub-sector in particular, but not in creating any joint enterprises or any significant developments of the Kiribati fish catching or processing sub-sectors, due largely to the economics of doing so. As noted above, the Protocol has also been effective in creating some employment in both the EU and Kiribati.
- xxii. With respect to efficiency, the Protocol has been efficient for the EU in providing access at an affordable rate for EU vessels owners, and in generating a good benefit/cost ratio of 4.0. But the cost per EU job has been €23,810. For Kiribati, payments made by the EU under the Protocol have represented 4-7 % of national fishing licence revenue and 1-2 % of total annual government revenues.
- xxiii. The Protocol has significantly contributed to the viability and sustainability of the EU purse seine catching sub-sector operating in the Pacific and its related employment, but has made no contribution to the sustainability of the longline sector, and only small contributions to the sustainability of the EU upstream and processing sub-sectors. The Protocol does not appear to threaten the sustainability of the Kiribati fishing sector. The Protocol has not however been successful in resulting in any sustainable joint catching sub-sector operations, or in making any contributions to sustainable Kiribati processing sector operations, although has contributed to sustainable upstream/vessel support activities.
- xxiv. The EU is a Commission Contracting Member to the WCPFC, and the Protocol is consistent with both the CFP and WCPFC policies management measures, as well as with the Food and Agriculture Organisation's (FAO) Code of Conduct for Responsible Fisheries, and with the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work. There are no inconsistencies in the Protocol text or its implementation, and EU trade policy. The Protocol is also consistent with national Kiribati policy and national legislation. Perhaps the key issue of concern in relation to consistency however, is the fact that the Protocol is a tonnage-based Protocol, with payments for access made per tonne. National Kiribati policy, in line with evolving regional initiatives, is now strongly in favour of negotiating and providing access based on vessel days.
- xxv. All of the above comments mean that the Protocol is relevant to the needs of the EU, and in particular to its purse seine fleet (although not to the longline fleet). The generation of access fees means the Protocol is also relevant to the needs of Kiribati. The Protocol does not however satisfy the needs/desires of Kiribati as expressed to the consultants to have a Protocol which is structured around paying for access based on vessel days, although this desire has not been formally expressed to the EU. This is explained by the fact that the VDS was not in place when the Protocol was negotiated, but has evolved in recent years. In addition, while the Protocol has an objective for the creation of joint enterprises and support for local processing activity, which satisfies the needs of Kiribati, implementation of the Protocol has not managed to bring about any such activity or to satisfy these needs and aspirations.
- xxvi. Looking forward to a potential future Protocol, potential new management measures being considered in the region to improve the management regime (e.g. a one month extension of the Fish Aggregation Device (FAD) closure, an increase in minimum mesh sizes, closure of the Phoenix Island Protected Area to fishing, high seas closures around the Kiribati EEZ) would have a negative impact on the activities and profitability of EU purse seine vessels. Other changes which could have an impact if mandated by the WCPFC include potential changes in crewing requirements to 10 % and then 20 % being from PNA countries – this would require changes to the text of the Protocol to ensure coherence, as the text currently states a minimum of 6 crew on the fleet of purse seiners, which represents around 5 % of current vessel crew numbers (this figure is exceeded by the EU fleet, with around 9 % of total crew already sourced from Kiribati).

- xxvii. It is likely that a future Protocol would generate considerable levels of value-added to both the EU and to Kiribati, but few changes in employment or the balance of value-added creation between the EU and Kiribati. It would be in the interest of both the EU and Kiribati to have a new Protocol. For the EU fleet a 'no Protocol' would cause fishing rights as a proportion of sales revenues to rise considerably, while for Kiribati a failure to sign a new Protocol would eliminate the ear-marked funds for special sectoral support provided by the EU under the Protocol, and could result in under-utilisation of Kiribati's PAE days under the VDS.

RECOMMENDATIONS

- xxviii. The recommendations made in this report are necessarily brief, given that it is not the job of the consultants to present a strategy to the EU for negotiation, but rather to provide the EU negotiators with the economic data to prepare for the negotiations. Thus the principal recommendation made is to base the negotiations on the economic and social data provided in this report, and to ensure that there is indeed signature of a new Protocol.
- xxix. The ongoing CFP reform also means that there is as yet, not clear direction or guidance on changing the balance of access payments per tonne between the EU and fleet owners, and the current balance should therefore be retained.
- xxx. From a purely technical perspective, this evaluation recommends that the longline fishing opportunities be removed from the Protocol, given the fact that there have been zero catches made by the longline fleet under the Protocol. However a final decision on this issue would also need to reflect the political wishes and agreement by EU Member States.
- xxxi. Given the high level of juvenile bigeye tuna catches taken in the FAD fishery by the EU fleet, the evaluation also recommends that direct measures should be included in the Protocol (and Annex) to mitigate against this problem. Such measures should be agreed jointly by all parties, but could include the use of, and reporting on, FAD management plans.
- xxxii. The levels of payments in a future Protocol, and the basis on which they are paid (e.g. tonnage or vessel days), will be the subject of negotiation, but should be informed by recent catch levels, rates of utilisation, and fish prices.
- xxxiii. A recommendation is made for greater emphasis and recognition by all parties of the importance of the Joint Committee meetings. These meetings represent a vital monitoring mechanism for implementation of the FPA – a mechanism which has historically not been especially effective. The Joint Committee meetings must be yearly as required in the text of the FPA, and should be used both to review sectoral policy implementation, and to ensure ongoing compliance with the covenants and obligations laid out in the FPA and Protocol (and necessary action if such compliance is found to be lacking). Current areas of weakness in compliance with other covenants and obligations required in the FPA and Protocol should also be addressed as a matter of urgency.
- xxxiv. The evaluation recommends that focus be given to the issue of strengthening MCS capacity in Kiribati. For example, FPA sectoral funds, and other EU development support, could be used to enhance observer capacities so as to ensure mutual recognition by WCPFC and Inter-American Tropical Tuna Commission (IATTC) of each other's observers. The evaluation also recommends greater recognition by EU development projects of the important nature of the Kiribati FPA, and therefore for the use of funds to support Kiribati. The view of this evaluation is that there should be a special effort to better align sectoral policy support provided by the FPA with other EU development aid in a mutually enforcing manner, while being careful to avoid duplication. This could be supported by the appointment of a fisheries attaché to the EU Delegation in Fiji, and the EU is believed to be in process of recruiting someone to such a position.
- xxxv. Finally, the evaluation notes the importance of the EU continuing to engage actively with the WCPFC in efforts to ensure responsible fisheries in the WCPO. As part of this process, given some of the weaknesses identified in the evolving VDS system, the evaluation recommends that the EU supports the establishing of target and limit reference points for tuna stocks, so as to ensure the integrity of the scheme by linking stock status to the management system.

RÉSUMÉ

INTRODUCTION

- i. Ce rapport fournit une évaluation ex-post du protocole de l'Accord de Partenariat dans le secteur de la Pêche (APP) entre l'Union européenne (UE) et la République de Kiribati (ci-après citée 'Kiribati'). Il procure également une évaluation ex-ante et une analyse d'impacts en termes de durabilité d'un possible futur protocole. L'évaluation couvre la période de septembre 2006 à mars 2012. L'APP garantit des opportunités de pêche pour les senneurs et les palangriers de l'UE dans les eaux de Kiribati.

CONTEXTE DU PAYS

- ii. Kiribati est une nation éloignée du Pacifique, constituée de 33 îles fortement dispersées (dont 21 habitées) divisées en groupes d'îles (îles Gilbert, îles Phénix et îles de la Ligne) et chevauchant l'équateur. Alors que la superficie des terres émergées est de seulement 726 km², la Zone Économique Exclusive (ZEE) associée est la plus vaste ZEE des pays insulaires du Pacifique avec 3,55 millions de km². La population de Kiribati était de 103 280 habitants en 2011 et est presque exclusivement concentrée dans les Îles Gilbert. Au taux de croissance démographique actuel de 1,25 %, il est prévu que la population double dans les 20 prochaines années. Kiribati est une république démocratique souveraine parmi le Commonwealth.
- iii. L'économie de Kiribati fait face à des contraintes non négligeables communes à d'autres états atoll. Le Produit Intérieur Brut (PIB) est de 109 millions d'euros (2010), avec une croissance estimée de 2- 3 % par an. Le PIB par habitant par an est parmi les plus bas des Parties à l'Accord de Nauru, PAN (en anglais, PNA) à 1 047 € et Kiribati est classé dans les états ACP (Afrique, Caraïbes, Pacifique) les moins développés. Les contraintes limitant son développement économique incluent la taille de l'archipel, l'isolement et la fragmentation géographique, l'infertilité des sols, les ressources exploitables limitées et une population croissante. Un aspect majeur et distinct des ressources nationales est le fonds de réserve d'égalisation de revenu (en anglais, RERF) ayant une valeur d'environ 410 millions d'euros (en 2011). Établi initialement à partir des redevances issues des mines de phosphate, le fonds de réserve RERF est utilisé pour compenser les déficits fiscaux. Le Plan de Développement de Kiribati 2008-2011 se base sur la précédente Stratégie de Développement National 2004-2007 avec des actions ciblant la gestion fiscale, la croissance de la population et un accès amélioré aux marchés du travail internationaux. Alors que la mise en œuvre a été lente, la stratégie reste focalisée sur : (i) améliorer le contexte économique dans les îles périphériques, particulièrement Kiritimati (île Christmas) ; (ii) renforcer l'accès aux services de santé ; et (iii) gérer les effets de changement climatique.
- iv. Kiribati est fortement dépendante des droits de licences de pêches lointaines d'autres nations (valeur moyenne de 24,4 millions d'euros dans la période 2009 - 2011) qui procurent 23 – 30 % des recettes de l'état ainsi que des envois de fonds des citoyens de Kiribati employés à l'étranger, principalement en tant que marins. La pêche est aussi une activité de subsistance importante, avec plus de 80 % des foyers impliqués dans le secteur. La consommation annuelle de poisson par habitant est élevée selon les standards mondiaux et les standards du Pacifique (variant entre 72 kg et 207 kg dans l'ensemble du pays). Le secteur de la pêche contribue à 10 % du PIB. Kiribati a signé des accords de pêche bilatéraux avec l'Union Européenne, le Japon, Taiwan, et la République de Corée ainsi que des accords privés avec des navires venant d'Équateur et du Salvador. Kiribati reçoit aussi des revenus du traité multilatéral signé avec les États-Unis.
- v. Les relations de l'UE avec les états ACP du Pacifique, basées sur les Conventions de Lomé et les Accords de Cotonou visent à renforcer la stabilité suite à la décolonisation, tout en favorisant le progrès économique et social. Au niveau régional le 10ème Fonds Européen de Développement, FED (2008 - 2013) inclut en tant que priorité la gestion durable des ressources naturelles et de l'environnement, avec l'appui de programmes sous l'égide de l'Agence des Pêches du Forum des îles du Pacifique (communément nommé par son acronyme anglais FFA) et le Secrétariat Général de la Communauté du

Pacifique (SCP). Alors que Kiribati bénéficie d'initiatives régionales, les pêcheries restent exclues du Document de stratégie et du Programme Indicatif National du 10ème FED. L'appui spécifique aux pêcheries se fait plutôt à travers de la composante de l'APP d'appui de mise en œuvre d'une politique sectorielle. Le secteur de la pêche de Kiribati bénéficie aussi d'initiatives régionales par d'autres donateurs (notamment l'Australie, la Nouvelle Zélande et les États-Unis) ainsi qu'un soutien national sous le Partenariat pour le développement entre l'Australie et Kiribati.

- vi. En septembre 2004, l'Union européenne et 14 pays ACP du Pacifique, dont Kiribati, ont ouvert des négociations sur un Accord de Partenariat Économique, APE, qui devrait à terme remplacer le régime d'accès préférentiel, ayant expiré à la fin de 2007 et contenu dans l'Accord de Cotonou. Les négociations sur l'APE sont toujours en cours. Alors qu'il n'y a pas actuellement de transactions de produits de la pêche entre Kiribati et l'UE, le pays a des aspirations futures portant sur le commerce de longues de thon frais.

LA PECHE AUX THONS A KIRIBATI ET DANS LA REGION

- vii. L'Océan Pacifique occidental et central, OPOC est la zone de pêche principale pour le thon, représentant autour de 60 % des prises mondiales. La prise totale de thon au sein de l'OPOC pour 2010 a été estimée à 2,28 millions de tonnes, dont 80 % sont représentés par la pêcherie des thoniers senneurs, 6,5 % par les canneurs et environ 6 % par les palangriers. Les navires senneurs européens représentent 2 % des prises dans le Pacifique occidental et central, POC.
- viii. La pêche à la senne a connu un essor rapide dans les années 1980, principalement par le biais des opérations de flottes japonaises et américaines. Plus récemment la composition de la flotte s'est diversifiée, avec une augmentation, pour inclure d'autres nations de pêche asiatiques, la Nouvelle-Zélande et les navires européens. Les navires ciblent préférentiellement le listao (81 % de la capture totale) en parallèle avec l'albacore (17 %) et le thon obèse (2 %) ; la dépendance globale de la pêche sur banc libre a augmenté au fil des années. L'accès à la pêcherie par des navires de pêche lointaine à la senne prend la forme d'arrangements ou d'accords de partenariat de pêche régionaux ou bilatéraux, incluant : des accords bilatéraux intergouvernementaux, des APP avec l'UE, des accords commerciaux entre associations ou sociétés, des accords individuels entre pays Parties à l'Accord de Nauru (PAN) et le traité américain portant sur le thon (*US Tuna Treaty*).
- ix. La pêcherie palangrière capture principalement de l'albacore et du thon obèse, mais aussi du germon, des poissons à rostre (e.g. espadons) ainsi que d'autres espèces dont des requins pélagiques et de récifs. Le nombre total de navires impliqués dans les pêcheries tropicales de l'OPOC a généralement été de 3 000. Les palangriers européens opèrent principalement au sud de 20°S, en dehors de la zone tropicale et les navires palangriers de l'UE n'ont jamais pêché dans les eaux de Kiribati. Ensemble les palangriers européens représentent moins de 1 % des captures totales à la palangre dans l'OPOC.
- x. L'état des trois principaux stocks exploités dans la zone équatoriale du POC est surveillé par le Comité Scientifique installé sous la Commission des Pêches du Pacifique occidental et central, CPPOC (en anglais, WCPFC), organisation de gestion régionale des pêches thonières, ORGP, pour l'OPOC. Le listao est actuellement exploité à des niveaux modérés sans cas de surpêche. L'albacore est actuellement exploité pleinement avec une probabilité de 50 % que de la surpêche ait lieu. Des évaluations récentes montrent que la surpêche de thon obèse est avérée avec des niveaux de capture ayant peu de chance d'être durables.
- xi. Les organisations clés de gestion et de gouvernance pour le thon et les espèces associées au sein de l'OPOC, et pour les pêcheries à la senne en particulier, comprennent : la CPPOC, les PAN, en particulier la FFA basée aux Îles Salomon, le SCP basé en Nouvelle Calédonie et les gouvernements nationaux des PAN. Un certain nombre de Mesures de Gestion de la Commission (*Commission Management Measures*, CMMs) ont été formulées durant les sessions annuelles de la Commission. Les PAN ont aussi présenté un régime de contrôle par jours de mer par navire, *Vessel Day Scheme* (VDS) pour la gestion des pêches à la senne du Pacifique ouest, avec des jours d'effort autorisés par partie (*Party Allowable Effort*, PAE) alloués aux pays PAN, et se sont mises d'accord pour qu'un tarif minimum de 5 000 US\$/ 3 450 € par jour de pêche soit appliqué aux navires étrangers à partir de 2012.

- xii. À Kiribati même, les éléments centraux du Plan de Développement de Kiribati portant sur la pêche incluent la maximisation des bénéfices économiques durables issus des ressources thonières, la conservation des ressources côtières face à la demande croissante en revenus alimentaires et en espèces, et la gestion de la transition d'une recherche gouvernementale à une production commerciale et à l'exportation. Les objectifs majeurs de gouvernance sont identifiés comme étant : maintenir une collaboration étroite avec les PAN et la FFA, obtenir des droits durables d'accès à la Zone d'Exclusivité Économique (ZEE) à leur niveau maximum, promouvoir des partenariats public-privé pour les captures et la transformation domestique à terre du thon avec des investisseurs étrangers réputés, animer des programmes éducationnels participatifs avec des pêcheurs et des communautés engagées dans des pêches sur des espèces/stocks vulnérables, et s'assurer que des sanctions légales soient appliquées pour mettre en œuvre les mécanismes de conservation, en engageant des poursuites lorsque nécessaire. Cette responsabilité incombe au Ministère des Pêches et du Développement des Ressources Marines employant 115 personnes. Kiribati a établi l'Aire Protégée des Îles Phénix (*Phoenix Islands Protected Area*, PIPA), qui est l'une des Aires Marines Protégées (AMPs) les plus vastes du Pacifique mesurant 408 250 km².

EVALUATION

- xiii. Le protocole dispense de 4 autorisations de pêches à la senne (1 pour la France et 3 pour l'Espagne), et 12 autorisations de pêche à la palangre partagées équitablement entre le Portugal et l'Espagne. À part deux autorisations de pêche à la palangre prises durant la première année du protocole, il y a eu 0 % d'utilisation des possibilités de pêche à la palangre, et aucune capture à la palangre n'a été effectuée durant le protocole. D'autre part, chaque année du protocole, l'utilisation des 4 autorisations de pêche à la senne a été de 100 %, et l'utilisation des possibilités de captures en excès de 100 % chaque année du protocole. En 2011, l'utilisation des captures est prévue de dépasser les 200 % du tonnage de référence de 6 400 tonnes pour la première fois.
- xiv. Les paiements effectués auprès de Kiribati durant le protocole ont été en moyenne de 1,2 millions d'euros par an, dont les 2/3 payés par l'Union européenne (UE) et 1/3 par les armateurs des navires. Le paiement moyen entre 2007 et 2011 était de 3 350 €/ 4 675 US\$ par jour, proche du seuil actuel de prix des PAN de 5 000 US\$ par jour.
- xv. Les engagements et obligations de l'accord et de son protocole ont généralement été respectés par toutes les parties. Cependant, certains domaines de préoccupation comprennent l'échec de la tenue des réunions de Commission mixte jusqu'en 2011 ; la lenteur des paiements au cours des dernières années de l'appui financier à la politique sectorielle ; l'échec de la transmission par Kiribati de certificats d'inspection et de rapports d'observateurs aux armateurs ; ainsi que l'absence d'un élan réel vers des sociétés mixtes ou vers des sites de débarquement locaux pour la transformation.
- xvi. L'analyse économique du protocole montre que les prix de poissons en sortie navire sont plus bas que les standards internationaux, probablement en raison des tailles plus faibles de poissons capturés au sein des pêcheries sur DCPs (Dispositifs de Concentration de Poissons), mais les prix ont augmenté d'environ 50 % durant la période de l'évaluation. Étant donné la tendance à la hausse des captures réalisées à Kiribati durant la période de l'évaluation, la valeur au débarquement des poissons capturés dans le cadre de l'APP présente une tendance à la hausse et a dépassé 14 millions d'euros en 2010.
- xvii. Une valeur ajoutée totale de 6,4 millions d'euros est accumulée chaque année lorsque l'on prend en compte les bénéfices pour l'Union européenne et pour Kiribati. La valeur ajoutée est plus marquée pour l'UE en amont dans les secteurs de la capture, et moins marquée en aval de la transformation. À Kiribati la valeur ajoutée est presque entièrement concentrée dans le sous-secteur en amont, principalement sous forme de paiements au gouvernement de Kiribati pour l'accès et l'appui sous-sectoriel, mais dans les services d'appui aux navires, notamment le transbordement. Une petite plus-value est réalisée au travers de l'emploi d'équipages et d'observateurs de Kiribati.

- xviii. En termes de coûts et bénéfiques pour l'UE dans son ensemble le protocole a généré un ratio moyen bénéfiques/coûts (B/C) de 1:4,6, démontrant que le protocole fournit un bon rapport qualité/prix ; chaque euro investi par l'UE et les armateurs générant 4,60 € de bénéfice en termes de valeur ajoutée. Le coût d'accès pour les armateurs (35 €/tonne) représente 4,1 - 4,4 % du prix moyen des ventes à la pesée pour les captures réalisées sous le protocole. Les valeurs moyennes annuelles des captures réalisées dans le cadre du protocole sont proches de 9,5 millions d'euros, et les profits pour les navires en tant que proportion du revenu des ventes sont compris entre 11 % et 23 % pour les deux classes de navires (73 m et 100+ m). Pour Kiribati, les bénéfices en provenance de l'UE étaient de 1,2 millions d'euros par an en moyenne, s'y ajoutant des bénéfices plus faibles générés par la plus-value issue des escales portuaires des navires de l'UE ainsi des équipages locaux et des observateurs à bord des navires de l'UE.
- xix. La contribution des captures réalisées dans le cadre du protocole au secteur de transformation de l'UE a été faible à environ 2 % d'imports de longes par l'UE en 2010, alors que le poisson capturé dans le cadre du protocole et importé par l'UE sous forme de conserves a représenté autour de 1 % des imports de conserves de thons par l'UE en 2010.
- xx. L'emploi généré par le protocole est estimé à 98 emplois en équivalent temps plein. Cette génération d'emploi représente 116 tonnes de poisson capturés sous le protocole pour chaque emploi et 23 810 € en paiements par l'UE pour chaque emploi. La création d'emploi est divisée approximativement en part égale entre l'UE et Kiribati. Les clauses sociales du protocole en matière de niveaux de rémunération, de la nécessité pour les marins d'être sous contrat, etc., ont été complètement respectées.
- xxi. En ce qui concerne l'efficacité, la flotte de l'UE ne joue qu'un petit rôle sur le plan de l'activité de la flotte totale présente à Kiribati et dans le POC. Sa capacité à influencer une pêche responsable est donc limitée. Cependant, des préoccupations sont à noter en relation avec la pêche responsable. Elles portent sur le pourcentage élevé de captures composées de thon obèse (qui est estimé en surexploitation), les rejets des navires, les navires dépassant le nombre de jours autorisé en haute mer, les captures accessoires de requins pélagiques, et les faiblesses en capacité de suivi, contrôle et surveillance (SCS) de Kiribati. Le protocole a été efficace dans son appui au sous-secteur UE des captures en particulier, mais ne l'a pas été dans la création de sociétés mixtes ou dans le développement significatif des sous-secteurs de capture ou de transformation de Kiribati, largement pour des raisons de coûts. Ainsi qu'il a été mentionné précédemment, le protocole a aussi été efficace dans la création de l'emploi tant pour l'UE que pour Kiribati.
- xxii. S'agissant de l'efficacité, le protocole a été utile pour l'UE en fournissant un accès à un coût raisonnable pour les armateurs des navires de l'UE, et en générant un bon ratio bénéfice/coût de 4,6. Cependant le coût par emploi de l'UE a été de 23 810 €. Pour Kiribati, les paiements effectués par l'UE dans le cadre du protocole ont représenté 4-7 % du revenu national des licences de pêche et 1-2 % du revenu gouvernemental annuel total.
- xxiii. Le protocole a contribué de manière significative à la viabilité et à la durabilité du sous-secteur des captures à la senne de l'UE opérant dans le Pacifique et de ses emplois liés, mais il n'a aucunement contribué à la durabilité du secteur palangrier ; et a contribué faiblement à la durabilité des sous-secteurs en amont et de transformation de l'UE. Le protocole ne semble pas menacer la durabilité du secteur de la pêche de Kiribati. Le protocole n'a cependant pas eu de succès dans le développement d'opérations de captures par des sociétés mixtes, ni en contribuant durablement aux opérations du sous-secteur de la transformation de Kiribati, bien qu'il ait contribué aux activités durables en amont/de soutien aux navires.
- xxiv. L'UE est une partie contractante de la CPPOC, et le protocole est en cohérence avec à la fois les mesures de gestion politiques de la Politique Commune des Pêches (PCP) et de la CPPOC, ainsi qu'avec le Code de Conduite pour des Pêcheries Responsables de la FAO (*Food and Agriculture Organisation*), et avec la Déclaration de l'Organisation Internationale du Travail sur les Principes Fondamentaux et les Droits au Travail. Il n'y a pas d'incohérences entre le texte du protocole ou sa mise en œuvre et les politiques commerciales de l'UE. Le protocole est aussi cohérent avec les politiques nationales et les législations nationales de Kiribati. L'élément-clé de préoccupation au sujet de la cohérence pourrait cependant être que le protocole est basé sur le tonnage, avec des paiements par accès par tonne. La politique nationale

- de Kiribati, en accord avec des initiatives régionales en évolution, est maintenant fortement en faveur d'une négociation et de fournir des accès basés sur des jours de mer par navire.
- xxv. Tous les commentaires précédents signifient que le protocole est pertinent vis-à-vis des besoins de l'UE, et en particulier de ceux de sa flotte de pêche à la senne (bien que ne l'étant pas pour ceux de la flotte palangrière). La génération des droits d'accès signifie que le protocole est aussi pertinent aux besoins de Kiribati. Le protocole ne satisfait cependant pas les besoins/souhaits de Kiribati d'avoir un protocole structuré autour de paiements par accès basés sur des jours de mer, bien que ce souhait n'ait pas formellement été exprimé à l'UE. Ceci s'explique par le fait que le VDS n'était pas en place lorsque le protocole était négocié mais qu'il a évolué dans les récentes années. De plus, alors que le protocole a un objectif de création de sociétés mixtes et de soutien à l'activité locale de transformation, satisfaisant les besoins de Kiribati, la mise en œuvre du protocole n'a pas réussi à créer de telles activités ou à satisfaire ces besoins et aspirations.
- xxvi. En se projetant vers un éventuel futur protocole, de nouvelles mesures de gestion potentielles étant considérées dans la région pour améliorer le mode de gestion (ex : une extension d'un mois de la clôture des Dispositifs de Concentration de Poissons (DCPs), une augmentation des tailles minimales de maillage, la fermeture à la pêche de l'Aire Protégée de l'Île Phénix, les fermetures de zones de haute mer autour de la ZEE de Kiribati) auraient un impact négatif sur les activités et la rentabilité des navires senniers de l'UE. D'autres changements qui pourraient avoir un impact si mandatés par la CPPOC comprennent des changements potentiels dans les exigences d'équipages à 10 % puis 20 % d'origines des pays PAN – ceci nécessiterait des changements de texte du protocole afin d'assurer sa cohérence, puisque le texte actuellement cite un minimum de 6 hommes d'équipage dans la flotte de senniers, ce qui représente environ 5 % du nombre total de marins à bord (ce chiffre est dépassé par la flotte de l'UE avec environ 9 % de l'équipage total déjà originaire de Kiribati).
- xxvii. Il est probable que le futur protocole génère des niveaux conséquents de valeur ajoutée à la fois pour l'UE et Kiribati, mais peu de changements sur l'emploi ou la répartition de la création de valeur ajoutée entre l'UE et Kiribati. Il serait ainsi dans l'intérêt de l'UE et de Kiribati d'avoir un nouvel protocole. Pour l'UE, un « non protocole » signifierait une hausse importante des droits de pêche dans le revenus des ventes, pendant que pour Kiribati l'absence de signature d'un nouveau protocole éliminerait les fonds réservés à l'appui sectoriel spécial fourni par l'UE sous le protocole et pourrait résulter par une sous-utilisation des jours de PAE sous le VDS.

RECOMMANDATIONS

- xxviii. Les recommandations soumises dans ce rapport sont nécessairement brèves, puisque il n'est pas du rôle des consultants de présenter une stratégie à l'UE pour la négociation, mais plutôt de fournir à l'UE les données économiques pour préparer les négociations. C'est pourquoi la recommandation principale est de baser les négociations sur les données économiques et sociales fournies dans ce rapport afin de s'assurer qu'il y ait ainsi signature d'un nouveau protocole.
- xxix. La réforme en cours de la PCP signifie aussi qu'il n'y a pas encore de direction ou d'orientation sur un changement de ratio de droits d'accès à la tonne entre l'UE et les armateurs, et que le ratio actuel doit donc être maintenu.
- xxx. D'un point de vue purement technique, cette évaluation recommande que les possibilités de pêche à la palangre soient retirées du protocole, compte tenu du fait qu'il n'y ait eu aucune capture effectuées par la flottille palangrière au titre du protocole. Toutefois, une décision finale sur cette question devra également tenir compte des souhaits politiques et de l'aval des Etats membres de l'UE.
- xxxi. Compte tenu du niveau élevé de juvéniles de thon obèse capturés dans la pêche sous DCPs par la flotte de l'UE, l'évaluation recommande également que des mesures directes soient incluses dans le protocole (et son annexe) afin d'atténuer ce problème. Ces mesures devraient être adoptées conjointement par toutes les parties, mais pourrait inclure l'utilisation de, et des rapports sur des, plans de gestion des DCPs.

- xxxii. Les niveaux de paiements dans un futur protocole, et la base sur laquelle ils sont payés (ex. tonnage ou jours de pêche des navires), seront sujets à négociation, mais devront être renseignés des niveaux de captures récents, des taux d'utilisation et des prix du poisson.
- xxxiii. Une recommandation est exprimée pour une plus grande mise en évidence et reconnaissance par toutes les parties de l'importance des réunions de la commission mixte. Ces réunions représentent un mécanisme de suivi vital pour la mise en œuvre de l'APP – un mécanisme qui n'a pas été historiquement très efficace. Les réunions de la commission mixte doivent être annuels, tel que requis dans le texte de l'APP, et devraient être utilisés pour revoir à la fois la mise en œuvre des politiques sectorielles et pour s'assurer du respect des engagements et des obligations détaillées dans l'APP et le protocole (et les actions nécessaires à un tel respect sont insuffisants). Les zones de faiblesse actuelles dans le respect des autres engagements et obligations requises dans l'APP et le protocole devraient aussi être traitées en urgence.
- xxxiv. L'évaluation recommande que l'accent soit mis sur le renforcement de la capacité de suivi, contrôle et surveillance (SCS) à Kiribati. Par exemple, les fonds sectoriels de l'APP, et autres appuis au développement de l'UE, pourraient être utilisés pour augmenter les capacités d'observation afin d'assurer une reconnaissance mutuelle des observateurs de la CPPOC et de la Commission Inter-américaine du thon tropical (CIAT ; en anglais IATTC). L'évaluation recommande aussi une plus grande reconnaissance par les projets de développement de l'UE de l'importance de l'APP avec Kiribati, et donc pour l'utilisation des fonds d'appuis à Kiribati. Le point de vue de cette évaluation est qu'il devrait y avoir un effort particulier pour mieux aligner l'appui à la politique sectorielle fournie dans le cadre de l'APP avec d'autres projets de développement de l'UE de manière à se renforcer mutuellement tout en prenant garde à éviter des duplications. Ceci pourrait être appuyé par la nomination d'un attaché à la pêche à la délégation de l'UE aux îles Fidji, l'UE serait sous le processus de recruter pour pourvoir un tel poste.
- xxxv. Enfin, l'évaluation note l'engagement actif de l'UE à collaborer avec la CPPOC dans le but de garantir des pêches responsables au sein de l'OPOC. En tant que partie intégrante de ce processus, étant donné certaines des faiblesses grandissantes identifiées du système VDS en évolution, l'évaluation recommande que l'UE soutienne l'établissement de points de références cibles et de références limites pour les stocks de thons afin d'assurer l'intégrité du programme VDS en liant l'état des stocks au système de gestion.

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1 INTRODUCTION - PURPOSE AND SCOPE OF THIS EVALUATION

This evaluation provides a retrospective ex-post evaluation for the existing Protocol to the Fisheries Partnership Agreement (FPA) between the EU and the Republic of Kiribati (hereafter, Kiribati)¹. The evaluation considers the Protocol in terms of its relevance, coherence, effectiveness, efficiency and sustainability. It also provides a prospective analysis of impacts and ex-ante evaluation of a future Protocol, in order to provide sufficient data and information for the negotiation and implementation of a new Protocol.

The framework and scope of the evaluation are influenced by the Terms of Reference provided to the consultants, the Council Decision of 19th July 2004 on Fisheries Partnership Agreements (COM (2002) 637 final), the Specific Methodological Guidelines for Evaluation of Fisheries Partnership Agreements (Oceanic Developpement & Megapesca Lda, 2008), and the European Commission Impact Assessment Guidelines (2009). The period of the Protocol evaluated in this report is from 16th September 2006 until March 2012.

According to the Article 27(4) of the Financial Regulation and Article 21 of its Implementing Rules, Commission Services have to ensure that the spending activities they manage are subject of an ex-post and/or ex-ante evaluation in terms of the human and financial resources allocated and the results obtained in order to verify consistency with the objectives set. These evaluations must be proportionate to the resources mobilised for, and the impact of, the programme and activity concerned. The Commission requires the evaluation and analysis of impacts to support its focus on improving the quality and coherence of the policy development process.

Before the Commission begins negotiating a new Protocol with Kiribati, it requires:

- Factual information and an analysis of the general situation in Kiribati and its fishing sector, covering the economic, financial, political, institutional, social and environmental aspects, and likely developments in the short and medium term;
- A cost-benefit analysis for the European stakeholders, as regards both the conditions of access to the waters and resources for the European distant-water fleet, fishing authorisations and other elements provided for or to be provided for in the Protocol; and
- A cost-benefit analysis of a Protocol, and assess its impact on Kiribati, at the political, institutional, economic, financial, social and environmental levels.

This report presents information collected from various sources, including various Directorate Generals of the European Commission (EC), the Western Central Pacific Fisheries Commission (WCPFC), the Parties to the Nauru Agreement Office (PNAO), the Oceanic Fisheries Programme (OFP) of the Secretariat of the Pacific Community (SPC), the Forum Fisheries Agency (FFA) and the professional association groupings of European Union (EU) shipowners, Organización de Productores Asociados de Grandes Atuneros Congeladores (OPAGAC) and Organisation de Producteurs de Thon Congelé (ORTHONGEL), concerned with the utilisation of fishing possibilities. It also includes the findings of a mission in Kiribati that took place between 26th January and 5th February 2012 during which discussions were held with Kiribati stakeholders (government authorities, private sector).

¹ Throughout this report when referring to the 'FPA' we refer to the FPA, Protocol, and Annex. And when referring specifically to the 'Protocol' we refer to both the Protocol and the Annex.

2 GENERAL BACKGROUND AND SITUATION IN THE PARTNER COUNTRY

2.1 Country background

2.1.1 Geography

Kiribati is a remote Pacific nation made up of a large number of widely dispersed islands that straddle the equator (Figure 1). The country is made up of 33 islands, 21 of which are inhabited with a total land area of some 811 km². The related exclusive economic zone (EEZ) is equal in size to the continental United States and at 3.55 mn km² is the largest EEZ of the Pacific islands countries, lying within the tropical tuna range bounded by 20°N and 20°S. The islands are divided into three widely spread groups; the Gilbert Group, the Phoenix Group and the Line Group.

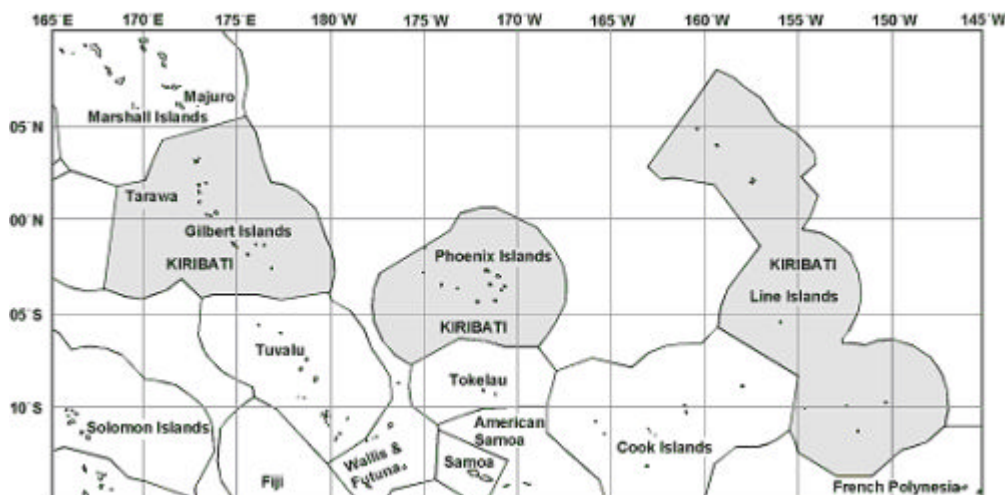


Figure 1: Kiribati Exclusive Economic Zone

Source: <http://www.searoundus.org/eez/296.aspx>.

The Gilbert Islands (or Tungaru Group) is a chain of 11 atolls and five other islands which have no lagoon but are of similar origin. Often considered alongside this chain is the isolated island of Banaba, a raised atoll reaching a height of some 81 meters similar to Nauru, and the only “high” island in the country. The Phoenix Islands include three atolls and five other islands with fringing reefs. There are also at least two other submerged reef structures (Winslow and Carondelet) which have no associated islands. The Line Islands in the east fall into a northern and southern group. The northern group includes the island of Teraina and the atolls of Tabuaeran and Kiritimati (Christmas Island). The southern Line Islands are mostly uninhabited and include the atoll of Millennium Island (formerly Caroline Island) and three other islands with fringing reefs, as well as at least one other submerged reef with no associated island. The total land area is only 726 km², of which over half (388 km²) is on Kiritimati (Christmas Island).

The capital (Tarawa) on South Tarawa is over 2,000 km to the west of Kiritimati. The islands are very low-lying with few places being more than two meters above sea level. This makes them particularly vulnerable to rises in sea level and also to pollution, unsustainable depletion of the underground water resources, and coastal erosion brought about by both man-made and external factors. The predominant climatic influence comes from the southeast trade winds which create a pronounced windward side to the reefs. The western islands are generally wetter, while the Line Islands lie in the dry equatorial zone. Rainfall is also significantly higher in all areas during El Niño Southern Oscillation (ENSO) events. Although tidal ranges tend to be low (less than 2 meters at spring tides) there is variation in sea level through the year (10-20 cm variation in mean monthly levels) which can increase by up to 40 cm during El Niño years. The atolls comprise a diversity of habitats, including channels, lagoon reefs and shallow reef flats as well as reef slope environments. There is a clear difference between windward and leeward sides, with the windward (eastern) sides typically having a continuous reef margin, narrow reef flat and well developed islands. The leeward reefs are typically much wider, but in some places show a more gradual slope with a less developed reef flat, often submerged at low tide.

2.1.2 Population

Kiribati's population was 103,280 in 2011, with an annual population growth rate of 1.25 %². At the current rate of growth, the population is expected to double in the next 20 years.

The population is almost entirely concentrated in the Gilbert Islands. The combination of high population growth and lack of employment on the outer islands is causing the population to drift to Tarawa, the capital. About 43.6 % of the population live on South Tarawa and the population density (2,558 people per square km) is high, especially on the islet of Betio. Rapid urban population growth, overcrowding and unsustainable development are taking their toll, particularly in South Tarawa - there are serious problems with potable water, sewerage and waste disposal, coastal erosion, over-fishing of coastal resources and health issues.

The Phoenix Islands are largely uninhabited, in the main because freshwater is not always available. Just over 3,000 people live on Kiritimati. 58 % of the population of Kiribati is under the age of 24. A major part of the young population has no skills or employment. 98.8 % are primarily Micronesians and speak a common local language, with Asian and European minority populations the remainder. English is the official government language.

2.2 Political, economic and social issues

2.2.1 Political and institutional aspects

Kiribati is a democratic republic within the Commonwealth. The constitution promulgated at independence establishes Kiribati as a sovereign democratic republic and guarantees the fundamental rights of its citizens.

The President is both the head of state and the head of government, and is elected by members of the parliament known as the Maneabani Maungatabu. The Maneabani Maungatabu is a 46-member unicameral parliament. After each general election, the new Maneaba nominates at least three but not more than four of its members to stand as candidates for president, locally referred to as "His Excellency Te Beretitenti." The voting public then elects the president from among these candidates. A cabinet of up to 10 members is appointed by the president from among the members of the Maneaba.

² National Statistics Office estimate

Although popularly elected, the president can be deposed by a majority vote in the Maneaba. In this case, a new election for President must be held. A person can serve as president for only three terms, irrespective of term duration.

The President appoints the cabinet, which comprises the President, Vice-President, Attorney-General and no more than 10 ministers.

Presidential elections were held on 13 January 2012. Anote Tong of the ruling Boutokaante Koaua (Supporting the Truth Party) was re-elected for a third term as President of the Republic of Kiribati, winning with an overall margin of almost 42 %. A new Fisheries Minister, Tinian Reiher was appointed on 20th January 2012. The Fisheries Minister is a member of the ruling party, and a former Fisheries Secretary.

2.2.2 General economic situation and outlook

Kiribati's economy faces significant constraints common to other island atoll states. These include its small size, remoteness and geographical fragmentation, a harsh natural environment with infertile soils, limited exploitable resources, and the need to create jobs and promote growth for an expanding population. Kiribati is classified as a least developed ACP State under Annex 6 of the Cotonou Agreement. There is little potential for agricultural development, and limited fresh water supplies. Low-lying atolls are threatened by any substantial rise in sea levels. There is minimal manufacturing sector activity and agriculture is predominantly subsistence in nature. The major commercial activity is the harvesting of coconuts for domestic consumption and for the export of copra and coconut oil. The main source of formal employment is the public sector. Notwithstanding the limited range of economic assets, Kiribati has largely had a solid record of financial stability since independence in 1979. Governments have traditionally adopted a cautious approach to domestic spending combined with a deliberate policy of accumulating offshore investments. A major distinctive feature of national resources is the Revenue Equalisation Reserve Fund (RERF), initially established from royalties from mining the Banaba phosphate deposits. The RERF has a value of around AUS\$554 mn/ € 410 mn (2011) and is used to fund the annual fiscal deficit. However, it recently suffered from exposure to failed Icelandic banks and the continuation of a high level of draw-downs to fund the budget deficit and distressed State-Owned Enterprise (SOE) reforms (Asian Development Bank [ADB] Pacific Economic Monitor Feb 2011). Concern has been raised as to the long term sustainability of the fund, and it has become even more urgent that the government constrain expenditures to a level in line with revenue. Privatisation of financially distressed SOEs is underway and these reforms are likely to create space for private sector development, reduce SOE's drain on the budget, and improve the government's future financial position.

The Kiribati Gross Domestic Product (GDP) stands at AUS\$147 mn / €109 mn (Table 1), expanding by an estimated 2-3 % per annum (IMF, 2011). GDP per capita is one of the lowest of the PNA nations at US\$1,518 / €1,047 (World Bank, 2011), and compares to GDP figures for Federated States of Micronesia of US\$2,883 / €1,988, Rep Marshall Islands US\$2,587 / €1,784, Papua New Guinea US\$1,383 / €954, and Solomon Islands US\$1,261 / €870. GDP growth is likely to be higher in 2012 as large donor-funded infrastructure development programmes commence. These include the upgrading of international airports in Tarawa and Kiritimati, upgrading of the South Tarawa Road, and the extension of Betio Port. Inflation was estimated at 2.5 % in 2011.

According to analysis carried out by the International Monetary Fund (IMF, 2011), key externally financed infrastructure projects are expected to spur growth over the next few years. The main challenge is to manage the investment boom underway without creating inflationary pressures. Risks to future economic growth are mainly external and relate to higher inflation pressures from a further escalation of international fuel and food prices and a stalled global recovery that would hit Kiribati's remittances and wealth funds. These are balanced by the potentially faster rebound in domestic demand driven by large public investments in the pipeline.

2.2.3 National budgetary and social objectives

The Government endorsed the Kiribati Development Plan (KDP) 2008–2011, prepared by Ministry of Finance and Economic Development (MFED) in April 2008, which specified actions to address the core weaknesses of fiscal management, addressing population growth, and improved access to international labour markets (to promote invisible earnings from national workers abroad). The KDP also builds upon the previous National Development Strategy 2004–2007, which had guided the previous strategic focus on (i) improving the economic environment in the outer islands, particularly Kiritimati Island (Christmas Island); (ii) strengthening access to health services throughout the country; and (iii) addressing climate change.

The Government's progress in implementing its development priorities has been slow, due in part to capacity limitations but also to lack of financial and skilled human resources (ADB, 2009).

2.2.4 Contribution of fisheries to national economy

Kiribati relies heavily on licence fees from distant water fishing nations and remittances from Kiribati citizens employed abroad, mainly as seafarers. The contribution of the fishing sector to the real GDP is around 10 %. Kiribati, like other FFA members, also receives revenue from a multilateral treaty signed with the United States. It has bilateral fisheries arrangements with the European Union, Japan, Taiwan, and the Republic of Korea, as well as some specific private company agreements with vessels operating from Latin America (Ecuador and El Salvador).

These licenses produced AUS\$30 mn / € 17.2 mn in 2009, AUS\$41.7 mn / €28.9 mn in 2010 and AUS\$26.9 mn / €19.9 mn in 2011 (Ministry of Finance, 2011). Variations in revenue are usually in response to El Niño events. There is a strong relationship between higher stock abundance/availability and environmental conditions in the eastern region (Langley *et al.*, 2008).

Revenues from fishing licences traditionally provide between 23-30 % of Kiribati's government revenue (IMF, 2011).

Table 1: Kiribati Gross Domestic Product by Economic Activity at Constant 2006 Prices, 2007–09 (€mns)

	2007	2008	2009
Agriculture	13.1	12.9	12.4
Fishing	8.7	8.5	8.2
Seaweed	0.1	0.1	0.1
Mining and Quarrying	0.1	0.0	0.0
Manufacturing	4.9	4.8	4.3
Electricity, Gas & Water Supply	0.3	0.3	0.3
Construction	1.9	1.3	1.4
Wholesale & Retail trade	4.7	4.8	4.5
Hotel & Restaurants	0.8	0.7	0.7
Transport and Storage	3.8	3.6	3.1
Communications	4.3	4.2	4.1
Financial Intermediation	6.4	6.2	5.8
Real Estate	1.7	1.7	1.7
Owner Occupied Dwellings	8.7	8.7	8.3
Business Services	0.8	0.7	0.7
Public Administration and Defence	16.7	16.8	14.8
Education	7.0	7.2	6.8
Health	3.0	3.2	2.7
Other Community, Social & Personal Services	1.5	1.3	1.3
Less Imputed Bank Service Charges	-3.6	-3.5	-3.3
Plus Taxes on Products	12.3	9.3	7.4
Less Subsidies	-5.1	-4.6	-2.5
	91.9	88.2	82.6
% fishing	9.4%	9.7%	10.0%

Source: IMF.

2.2.5 Balance of trade

Copra has historically been the leading export earner, but has now fallen to fairly low levels (less than AUS\$1 mn / €740,000 per year). Fish product exports are very small and include shark fins and seaweed, but not tuna, and there are no exports of fish products to the EU.

Table 2: Balance of external trade (€, mn)

	2007	2008	2009
Total exports	7.04	5.24	3.62
<i>Of which are fishery products</i>	0.38	0.24	0.34
Total imports	44.03	44.94	38.28
Balance of trade	-37.04	-39.70	34.66

Source: IMF, 2011.

2.2.6 Employment

The labour force comprises 37,000, 20,000 of whom are male, and the remaining 17,000 female. Fishing is also an important subsistence activity, and an estimated 80 % of households either make a living or survive through some involvement with fishing (IMF, 2011).

2.2.7 Food security

Fish and taro cooked in coconut cream, is the staple diet in Kiribati. According to the latest statistics published by the Food and Agriculture Organisation (FAO, 2011) on the food balance sheet of fish and fisheries products, consumption of such products in Kiribati is high by both global and Pacific standards (between 72 kg and 207 kg for the entire country). The FAO food security indicator reports an undernourishment rate of 5 %, with dietary deficiency of 5,420 persons. Fish is an important component of the diet as it is estimated to cover more than 85 % of animal protein consumption and 30 % of total protein consumption (UNICEF, 2008). All fisheries products consumed in Kiribati are derived from artisanal and subsistence fishing. There are no organised landings of tuna into the islands, but lower quality tunas or purse seine bycatch may be traded on occasions to islanders or the recognised SOE, Central Pacific Producers Limited (CPPL), which has four retail outlets on Tarawa. This practice is fairly common during transshipments from purse seiners to carrier vessels.

2.3 EU and Kiribati relationships in the regional context

This section considers DG DevCo support to Kiribati. In addition to the support outlined below, revenues from the FPA are drawn from the No 4 Development Account to support fisheries structural and policy development initiatives. The sectoral support programme under the FPA focuses on supporting a number of projects. Additional comment is provided in later evaluation sections of the report.

2.3.1 EU cooperation strategy

The EU relations with the Pacific ACP countries are structured, and have been so for decades, first on the basis of the Lome Conventions, and now by the Cotonou Agreement (EC, 2008). In political terms an important objective for the EU has been to underpin a successful stabilisation following decolonisation, while at the same time supporting economic and social progress. Considering the political volatility experienced in a number of Pacific ACP countries, the EU considers that this goal has not yet been convincingly attained (EC, 2006), and that a concerted effort needs to be made to accelerate progress to achieving the Millennium Development Goals (MDGs) (EC, 2010).

In 2006, the EU tabled a proposal for a strengthened partnership with the Pacific islands (document COM (2006) 248) further adopted by the Council. The strategy proposed consists of three components:

- Strengthened relationship between the EU and ACP Pacific States and region, to pursue a broad political dialogue mostly with and through the Pacific islands Forum, but also at national level with key Pacific ACP countries in accordance with the provisions of the Cotonou Agreement;
- More focused development action on three priorities: governance, regional integration and sustainable management of natural resources. Fisheries is seen as a sector with great potential for cooperation, including promotion of sustainable utilisation of resources and of good governance practices; and
- More efficient aid delivery: facilitation of donor coordination; a more efficient and effective cooperation with the smallest countries; and increased use of budget support, are the three axis identified by the EU.

In a resolution adopted in February 2007 (document P6_TA (2007) 0022), the European Parliament (EP) welcomed the initiative of the EU to develop the first EU integrated strategy for the Pacific after 30 years of cooperation. The EP emphasises the potentially positive role of fisheries in the development of the Pacific islands and supports the initiative of the EU to support monitoring, control and surveillance (MCS) and fight against illegal, unreported and unregulated (IUU) fishing. Interestingly, the EP has encouraged the EU to negotiate any future tuna agreements with the entire region, rather than with individual States, given the high degree of regional integration of fishery management functions adopted by Pacific island Countries.

The 2010 revision to the Cotonou Agreement (Article 23a: Fisheries) (EC 2010, *ibid*) also stresses the importance of the development and implementation of fisheries development strategies and management plans, the mainstreaming of fisheries into national and regional development strategies, the development of infrastructure and technical know-how to enable ACP countries to achieve maximum sustainable value from their fisheries, capacity building of ACP countries to overcome external challenges that hinder them from taking full advantage of their fisheries resources, and the promotion and development of joint ventures for investment in the fisheries sector of ACP countries. It is also stated that any fishery Agreement that may be negotiated between the EU and ACP States shall pay due consideration to the consistency with the ACP development strategies.

2.3.2 10th EDF commitments

At Kiribati level

The Country Strategy Paper and National Indicative Programme concluded between the EU and the Republic of Kiribati (Kiribati/EU 10th EDF), for the period covered by the 10th EDF (2008-2013) focuses on sectoral policy programmes for water sanitation and renewable energy (€10.8 mn), as well as an additional component (€1.9 mn) for a non-focal 'technical cooperation facility'. Fisheries remain outside the 10th EDF programme for Kiribati, with the reliance for fisheries specific support interventions being the sectoral policy support component of the FPA³. The remaining support under the 10th EDF (€1.1 mn) (The B-envelope) is allocated for unforeseen needs.

Under the 11th EDF, the EU is considering support for the development of Christmas Island.

At Regional level

At the regional level, the two main priorities under the 10th EDF 2008-2013 are detailed in the Regional Strategy Paper and the Regional Indicative Programme approved by the EU and the 15 ACP Pacific States, which include Solomon Islands, Micronesia and Kiribati (Pacific region – EU, 10th EDF (2008)). They are:

- Regional economic integration: €45 mn available for development of human resources, key industries and trade capacity, trade arrangements and integration into the world economy. Regional integration is seen as a way of bringing stability and development to the Pacific islands; and
- Sustainable management of natural resources and the environment: €50 mn to support measures to help low-lying atolls respond to rising sea-levels, protect biodiversity and support fishery development. The later includes *inter alia* initiatives to promote greater regional integration of fishery management, increase the efficiency and competitiveness of the local tuna processing industries, strengthen the region capacities to fight IUU fishing, including stock assessment and the development of the MCS strategy. These are encompassed by three programmes:
 - The Development of Tuna Fisheries in the Pacific ACP Countries Project (DevFish II, 2008), an €8.2 mn programme managed by FFA in collaboration with the South Pacific Commission (SPC);

³ Article 7(2) of the Agreement (the Community's financial support for promoting responsible fishing and the sustainable exploitation of fisheries resources in Kiribati waters)

- Scientific Support for the Management of Coastal and Oceanic Fisheries in the Pacific islands Region (SciCOFish, 2008), a €9 mn programme managed the Oceanic Fisheries Programme of the South Pacific Commission in collaboration with FFA ; and
- Sustainable Management of Aquaculture and Coastal Fisheries in the Pacific Region for Food Security and Small-scale Livelihoods (SMACFish, 2008), a €10 mn programme managed by the Coastal Fisheries Programme of SPC.

A brief synopsis of these programmes is summarised in Box 1.

Box 1: Summary of fisheries programmes covered under the 10th EDF

DEVFISH II: Focuses on support in development in national fisheries management plans; strengthening industry associations and artisanal fishers' representation in decision making; providing training and advice on fishing access agreements and licenses to national government staff; providing support to the EU-approved 'Competent Authority' to certify fish exports so as to meet EU export standards, and to comply with the IUU catch certification standards; to implement regional strategies, such as strengthening regional MCS capacity, supported by an coordination centre and training and technical assistance in each country - this also includes legislative reviews, providing advice for the implementation of FAO's Port State Measures, and supporting feasibility studies trialling new technologies, and planning for the acquisition of new enforcement asset; supporting regional integration of surveillance operations through strengthening of an electronic system for monitoring and surveillance of vessels at sea; and facilitating information exchange between national agencies and other surveillance partners such as the US, Australia, New Zealand and France.

SciCOFish: Focuses on: the strengthening of SPC's scientific capacity by strengthening observer training systems; extending the Tuna Fisheries Database Management System (TUFMAN) data base to all countries; improving the quality of bio-economic and ecosystem modelling to support stock assessments of all tuna, tuna like species and sharks; support to tuna tagging; developing management advice; and developing local capacity for implementing field monitoring protocols.

SMACFish: Focuses on: supporting coastal marine resource management through institutional strengthening and co-management; developing community based awareness training; reviewing vulnerability to long term climate change; and developing appropriate marine-based and other alternative livelihood programmes.

Source: EDF Concept notes.

In addition, there is an ACP Fish2 project, coordinated from Brussels, which commenced activities in 2010. This project provides technical support to ACP fisheries administrations. Kiribati is not eligible under ACP Fish II component 1 (policy/legal instruments) and 2 (MCS and enforcement) however because they benefit from a FPA⁴.

To date, aside from multilateral components of the EDF support programme, there has not been any specific support from these EDF funds allocated to support Kiribati⁵. This is perhaps surprising given the importance and high utilisation of the FPA as discussed later in this report, and may in part be explained by a lack of sufficiently robust engagement by Kiribati in the regional organisations managing fisheries-related EDF funds i.e. FFA and SPC.

⁴ DEVCO decided that countries having signed a FPA with the EU should not be supported by ACP Fish II under components 1 and 2 (except through a regional program). This was not foreseen in the ACP FISH 2 project document and is specific to ACP Fish II. The same countries were not excluded from the previous EC-funded SFP programme for instance (Strengthening Fishery Products Health Conditions in ACP/OCT Countries).

⁵ Director MFMRD, Pers. Comm., January, 2012

2.3.3 9th EDF commitments

Under the 9th EDF (2003-2007), the following projects were funded to support strengthening of fisheries management, including research and control:

- Pacific Regional Coastal Fisheries Development Programme (PROCFISH) signed with SPC (€10.2 mn), with a focus on management of certain coastal fisheries and oceanic fisheries, and with an extension (CoFISH, €2 mn) to cover ACP States not included under PROCFISH;
- Development of Tuna fisheries in the Pacific ACP countries (DEVFISH) signed with FFA (€3 mn in total) with a focus on development of locally based tuna industries, training to fisheries access negotiation, and support to fishery policy development in certain Pacific countries; and
- Scientific support to Oceanic Fishery Management in the WCP area (SCICOFISH) signed with SPC (€6.5 mn) with a focus on improvement of scientific advice (data collection, stock assessment) and pilot projects on control of fishing activities (e.g. use of modern technology, including satellite-based technology to detect IUU fishing).

Kiribati benefited from these in the following ways:

- SPC has supported high level research into stock assessment and management, providing the basis for the fishery management decisions that exist to date;
- FFA provides multinational support in capacity building across a range of management areas: licensing, statistics, observer training and MCS.

2.3.4 Millennium Development Goal Initiative

Under the EC-funded MDGS Initiative, Kiribati has been allocated €4.2 mn. These funds, which must be committed during 2012 and will probably be spent over the next three years, are to be used for water and sanitation improvements on Kiritimati (Christmas Island), subject to the government presenting the project prior to commitment of funds by the EU.

2.3.5 Trade relationships between Kiribati and the EU

In September 2004, the EU and 14 Pacific ACP countries, including Kiribati, opened negotiations on an Economic Partnership Agreement (EPA), which should eventually replace the preferential access scheme contained in the Cotonou Agreement that expired at the end of 2007. These negotiations target an ambitious and development-oriented arrangement, which should promote regional integration and economic development, policy reform, and sustainable management of resources, such as fisheries, and thus also help to reduce poverty. EPA negotiations entered a crucial phase during 2007, as the deadline jointly set by the ACP and EU in the Cotonou Agreement was approaching. Under time pressure, negotiations focused on preserving ACP market access and complying with the parameters for a World Trade Organisation (WTO) compatible free trade area (as per Article XXIV of General Agreement on Tariffs and Trade (GATT)). Papua New Guinea (PNG) was anxious to avoid trade disruption with the EU as of 1 January 2008 and to benefit from preferential tariffs as has historically been the case for canned tuna (HS code 1604) and new favourable rules of origin for canned tuna offered by the EU in such context, and signed the Interim Economic Partnership Agreement (EU/IEPA, 2008). Fiji also initialled the Interim EPA, however it has not so far ratified it. So far, this agreement has not been implemented by any other Pacific ACPs (PACPs). Negotiations for a comprehensive EPA with all PACP countries are still in progress.

Under existing rules, without the EPA, the six Pacific Least Developed Countries (LDCs) of the PACS, including Kiribati, fall back on the “everything but arms” preferential access to the EU market provided under the EU Generalised System of Preferences, although this is a unilateral and not a contractual arrangement and does not contain improved EPA rules of origin for processed fishery products. The other eight non-LDC PACPs, whose goods exports to the EU are relatively limited at present, are eligible for the EU’s Generalised System of Preferences (GSP) tariff reductions. So whilst the thrust towards regional economic integration of the PACPs has been accelerated by the IEPA initialled with Papua New Guinea and more recently Fiji, a regional Agreement still remains outstanding. Among the reasons for the delay is that the smallest PACPs are now seeking to expand the rules of origin concessions to include semi-processed seafood products, mainly fresh tuna loins (HS 0304 and 0305).

Both the PACPs and the EU remain committed to building a long-term partnership and concluding a comprehensive EPA supportive of development and regional integration.

Whilst there is presently no trade in fishery products between Kiribati and the EU, the country has some future aspirations in trading fresh tuna loins to the EU market, linked to a new joint venture arrangement in Tarawa, Kiribati Fish Limited, which is seeking to establish a loining operation linked to the Chinese longline fleet operations. So far, Kiribati is not among countries entitled to export fishery products to the EU as it is non-complying with the EU IUU and sanitary legislations.

2.4 Other donor relations

The EDF support notwithstanding, most donor support in the PACP fisheries sector is provided at the multilateral level, including institutional strengthening programmes (by Australia and New Zealand); aerial surveillance and surface patrol capacity to combat IUU fishing (by Australia, New Zealand, France, and USA); and various fisheries development projects (by Japan). These budgets are in some cases substantial; for example, to address IUU fishing issues Australia is expected to devote up to €330 mn to the on-going Pacific patrol boat project.

Kiribati is receiving support from the Australian Ministry of Foreign Affairs and Trade for support to develop human resource and workforce skills. This is a facility available to all national government administrations, and includes fisheries training support to the PNA Crewing Agency agreed to be based in Tarawa (approximately \$5mn / €3.4 mn, over 5 years), and support to develop the first ever Pacific purse seine training curriculum which is being trialled in Kiribati⁶.

Kiribati has also received support from the Australian-Kiribati Partnership for development, and Australian Aid funded an AUS\$1 mn / €0.74 mn ‘Fisheries Performance Incentive Fund’ to strengthen the fisheries administration to generate more revenue for government and new fishery legislation (see Box 2 for further details). The programme was for two years, 2010-2011. The fund comprised four milestones, each supported by AU\$250,000 / €185,185.

⁶PNA policy is to promote crewing (10%) on all Distant Water Fishing Vessels operating in the Pacific

Box 2: Fisheries Performance Incentive Fund (Aus Aid, 2010-2011)**Milestone 1: Legislative Drafting – Fisheries Act and Regulations**

Amending the Fisheries Act to include changes in Offences and Penalties under the Fisheries Ordinance, including coastal fisheries-related offences and penalties and to make provision for offences and penalties that are effective deterrents in modern commercial fishing.

Milestone 2: Review of Access and other Cooperative Arrangements

Independent review of access, licensing, joint venture and other cooperative arrangements, including those for coastal fisheries and potential targets for revenue generation. The review took into account implementation of obligations under the Parties to the Nauru Agreement Vessel Day Scheme and the Western and Central Pacific Fisheries Commission. The milestone will be complete when a review is presented to the Minister and the Cabinet, and the Government provides a response to the recommendations.

Milestone 3: Development of Policy, Operational Guidelines

Development of clear policy and operational guidelines and procedures for administration of access and licensing and joint venture arrangements by the Ministry of Fisheries and Marine Resources Development (MFMRD).

Milestone 4: MoU between Police Maritime Unit and MFMRD

Understanding between MFMRD and Police Maritime Unit on the operation of Kiribati fisheries monitoring, control and surveillance, including targets for active patrol days and other performance measures and the potential establishment of a government fund for costs associated with fisheries monitoring and surveillance.

Source: Aus Aid, 2011.

The United States Pacific Development Fund, a component of the US Multi-Lateral Agreement, also provides development assistance. This is used to support the Ministry of Fisheries and Marine Resources Development (MFMRD) development budget.

Non-fisheries sector support activity was provided in 2011 by Australia (AUS\$28 mn / €20.7 mn), Taiwan (AUS\$11 mn / €8.1 mn), New Zealand (AUS\$6 mn / €4.4 mn), the World Bank (AUS\$4 mn / €3 mn), and the Asian Development Bank. These donors support projects with a focus on wider fiscal and institutional support (human resource management, governance, health, education and law enforcement), urban development and addressing the issue of rural deprivation.

3 TUNA FISHERIES IN KIRIBATI AND THE REGION

3.1 Regional overview

World catches of the three major tuna species (skipjack, yellowfin and bigeye) for all types of gears combined totaled over 4 mn tonnes on average per year over the 2008-2010 period. The Western and Central Pacific Ocean is the main fishing ground for tunas, accounting for 57 % of world catches on average, ahead of the Indian Ocean (21 %), the Eastern Pacific (14 %) and the Atlantic Ocean (8 %) (Figure 2).

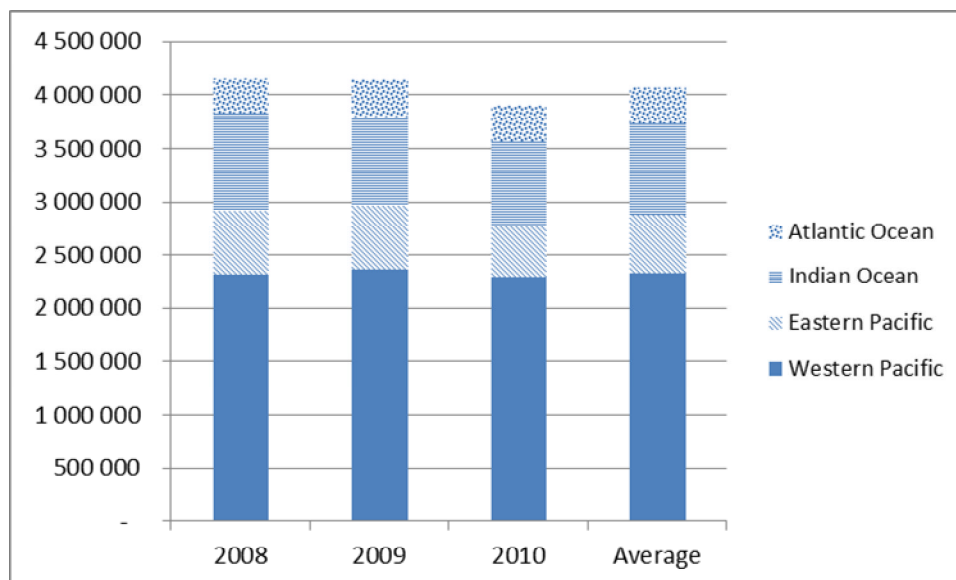


Figure 2: World tuna catch, 2008-2010 (tonnes)

Source: WCPFC⁷, IATTC, IOTC and ICCAT annual reports.

The total WCPO tuna catch for 2010 was estimated at 2.28 mn tonnes, slightly lower than the highest ever annual catch in 2009 at 2.37 mn tonnes. During 2010, the purse seine fishery accounted for an estimated 1.82 mn tonnes (80 % of the total catch), with pole-and-line fishing taking an estimated 150,000 tonnes (6.5 %), the longline fishery an estimated 135,000 tonnes (6 %), with the remainder taken by coastal handline, ring net, and troll fishing methods. These latter catches are mostly taken in eastern Indonesia, the Philippines and Japan. The WCP tuna catch (2.28 mn tonnes) for 2010 represented 82 % of the total Pacific Ocean catch of 2.8 mn tonnes. Figure 3 presents the distribution of catches in the WCP area. Most of the WCP tuna fisheries are concentrated in the tropical area bound by 20°N and 20°S. SPC data show that the waters under the jurisdiction of PNA account for 76 % of the overall tropical tuna catch of the equatorial purse-seine fleet in the WCP, and 22 % of the yellowfin/bigeye longline fleet. The latter catches 44 % in the WCPO High Seas (HS) zones, and the remaining 44 % from other non PNA zones.

⁷Data from WCPFC extracted from SPC 'catch by EEZ for distribution, SPC, Nov, 2011'.

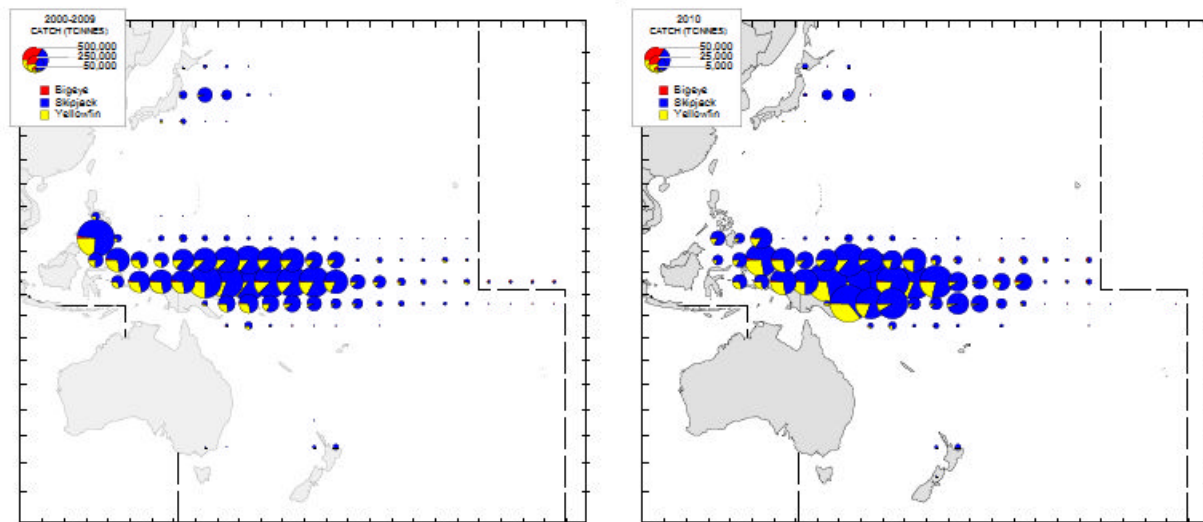


Figure 3: Distribution of catches of tunas in the WCP area by gear over the 2000-2009 period, and 2010.

Source: Tuna Fishery Yearbook, 2010.

The following sections review the two main fisheries in which EU operators have some interests, namely the purse seine fishery and the longline fishery.

3.2 The purse seine fishery

3.2.1 Fleet evolution

The purse seine fishery of the Western Central Pacific evolved from a series of trials largely sponsored by the Japanese during the late 1960s and early 1970s (Gillett, 2007). The purse seine technique evolved from other regional fisheries, namely eastern Pacific and off Japan, but faced particular development problems in the Pacific because of characteristically clear water and a deep thermocline in the equatorial Pacific which created unfavorable conditions for purse-seining – the tuna schools tend to be smaller, faster-moving, and diving deeper than those in the Eastern Pacific Ocean. By the late 1970s there were several fully commercial Japanese and American purse seine operations in the western equatorial area of the Pacific islands. The number of purse seine vessels operating in the Pacific islands increased rapidly during the early 1980s. The USA purse seine fleet moved in quickly from the eastern Pacific, due partly to the very strong El Niño event of 1982–83 and partly in response to pressure to reduce dolphin mortality in their traditional fishing grounds. In 1983, 62 USA seiners caught 179,000 tonnes of tuna in the Pacific islands area. During the period from the mid-1980s to 2003, the regional purse seine fleet expanded, albeit at a slower rate, and the national composition of the fleet became more diverse (Table 3), with an expansion to include other Asian fishing nations, firstly Taiwan, Korea, and the Philippines, followed by China and New Zealand. The EU, along with Latin American vessels from El Salvador and Ecuador, beneficially owned in Spain, represent a more recent group of entrants to the fishery. Access for all groups of vessels takes the form of regional or bilateral fisheries partnership arrangements or agreements, including:

- Bilateral intergovernmental agreements between individual fishing states and individual PNA Parties;
- European Union FPAs (between the EU, and Solomon Islands, Kiribati and Federated States of Micronesia (FSM));
- An assortment of commercial agreements between associations or companies and individual PNA Parties; and
- The US Treaty (between the Governments of certain Pacific States and the USA).

Pacific island countries have also sought to promote investment in their countries by encouraging reflagging, chartering, joint ventures or similar arrangements between Island states and foreign investors. This has led to growth in Pacific island fishing capacity, with agreed access to PNA EEZs through the FSM Arrangement⁸. Table 3 below highlights the evolution of the different purse seine fleet groupings.

Table 3: Breakdown of purse seine distant water vessels (EEZ and high seas) fishing in the Western Pacific, 31 June 2010 and at three prior times in the fishery

Country grouping	1988	1995	2003	2010
Korea	23	30	27	28
Taiwan	1	42	38	39
Japan	39	35	34	36
New Zealand	0	0	4	4
Vanuatu	0	2	15	5
China	0	0	4	12
Philippines	9	13	22	22
Spain (EU)	0	0	1	4
Ecuador	0	0	0	7
El Salvador	0	0	0	2
Indonesia	3	0	0	0
Other (now non active)	8	0	2	0
Total DWFN	83	122	147	159
FSMA	4	12	24	36
Domestic to Pacific islands	n/a	n/a	n/a	37
Total DWFN FSMA and Domestic	119	177	191	232
USLMT	32	43	20	36

Source: Gillett, 2007 and updated from PNAO vessel records, 2010. Note: Indonesian industrial purse seiners (>30 GT) are excluded from the above table, but are reported at 18 vessels fishing within the Indonesian EEZ. DWFN: Distant Water Fishing Nations; FSMA Federated States of Micronesia FPA; USLMT: United States Multi-Lateral Treaty.

3.2.2 Purse seine catch by species

The WCPO 2010 purse-seine catch of 1.8 mn tonnes (Williams *et al.*, 2011) was the third highest on record for this fishery, at 80,000 tonnes lower than the record attained in 2009. The majority of the historic WCP purse seine catch has come from the four main distant-water fleets (see Table 4). Additional data for other years is provided in Appendix F.

⁸The FSM Arrangement was developed as a mechanism for domestic vessels of the PNA to access the fishing resources of other parties. It came in force in 1995. Signatories are Kiribati, Federated States of Micronesia, Marshall Islands, Nauru, Palau, Papua New Guinea and Solomon Islands. The FSM Arrangement aims to: provide access for Domestic Vessels to parties' waters on terms no less favourable than those granted to distant water fishing nations; secure maximum sustainable economic benefits from tuna resources; promote greater participation by nationals of Parties in fisheries and assist in development of national fisheries industries; and allow access to vessels on terms consistent with the Palau Arrangement.

Table 4: Purse seine catch (tonnes) by tropical tuna species in WCPO, 2010.

	Yellowfin	Bigeye	Skipjack	Total	Per cent
Japan	38,544	2,679	200,011	241,233	13%
Korea	58,314	2,972	216,026	277,312	15%
USA	25,686	4,251	215,587	245,524	13%
Taiwan	29,203	3,437	166,211	198,851	11%
<i>Early DWFN entrants</i>	151,747	13,339	797,835	962,920	53%
China	10,513	948	42,255	53,716	3%
European Union	4,890	6,666	26,363	37,919	2%
El Salvador	707	1,203	5,461	7,371	0%
New Zealand	765	131	23,615	24,511	1%
<i>Recent post 2000 DWFN entrants</i>	16,875	8,948	97,694	123,517	7%
FSM	2,673	380	19,395	22,448	1%
Kiribati	4,686	3,593	23,153	31,432	2%
Rep Marshall Is	7,028	1,546	47,387	55,961	3%
Papua New Guinea	48,174	4,473	149,780	202,427	11%
Solomon Is	4,212	546	8,207	12,965	1%
Tuvalu	1,996	99	8,459	10,554	1%
<i>FSMA and domestic</i>	68,769	10,637	256,381	335,787	18%
Vanuatu	2,452	237	21,031	23,720	1%
Philippines	39,789	3,722	123,679	167,190	9%
Indonesia	20,670	6,201	179,826	206,697	11%
<i>Other Pacific</i>	62,911	10,160	324,536	397,607	22%
Grand total	300,302	43,084	1,476,446	1,819,831	100%

Source: SPC, 2011.

These groups are divided into the following:

- *The early entrants*: Taiwan, Japan, USA and Korea, which numbered 95 vessels in 1988, but which have gradually increased vessel numbers to 139 vessels in 2010. This group of vessels caught 53 % of the total catch in 2010 (almost 1 mn tonnes). Fourteen of the US vessels are beneficially owned in Taiwan;
- *Vessels from Pacific islands fleets*: These totalled 54 vessels in 2010, with a catch of 336,000 tonnes, or 18 % of the total. PNG represents the largest contingent of this fleet. Vessels from this group are divided into two groups, domestic (21) allowing access to only respective national flag EEZs and their archipelagic waters, and PNG FSMA vessels (33 vessels). The ownership structure within the FSMA group of vessels comprises predominantly Taiwanese and some other foreign beneficial owners including 1 Spanish owned vessel in Kiribati. Non-FSMA vessels, defined as 'domestic' vessels are registered in the Solomon Islands, PNG, FSM, and two in Kiribati. These are owned by a combination of foreign and domestic owners, but in most cases, fishing activities directly support domestic investments in the onshore processing and servicing sectors.
- *New distant-water entrants*: This group includes the European Union (Spain), New Zealand and China, as well as a more recent increase of vessels from Ecuador and El Salvador. This group of vessels was not present in the Pacific before 2000. Catches are now collectively around 124,000 tonnes (7 % of the total). The Latin vessels (Spain and South America) fish in both the Western and Eastern Pacific Ocean.

- *Other Pacific*: Philippines and Vanuatu, as well as a number of Indonesian vessels. The Vanuatu fleet comprises vessels chartered through Vanuatu but beneficially owned in Taiwan, and these vessels fish through bilateral arrangements with specific countries. Filipino vessels fish both inside their own EEZ, as well as through specific bilateral arrangements, whilst Indonesian vessels (18 in number) fish inside their EEZ and in Indonesian archipelagic waters.

It is noteworthy from the above table that the fleets predominantly target skipjack (*Katsuwonus pelamis*), accounting for 81 % of the total catch. However, yellowfin tuna (*Thunnus albacares*), accounting for 17 %, may be caught in large numbers. The other target species, bigeye tuna (*Thunnus obesus*), accounts for 2 % of the total catch and is often caught in large numbers when using Fish Aggregation Devices (FADs). The EU fleet, which is particularly reliant of FADs, has a much higher dependency on bigeye tuna (18 %) than the other fleets.

3.2.3 Purse seine effort

Figure 4 below summarizes the historic levels of purse seine effort by the major countries/groups in WCPO waters. The data show the significant growth in effort by Pacific island based vessels, whilst most other groups have remained stable. However, there are two other notable changes with the decline and resurrection of the US Multilateral fleet (USMLT), following a transfer of 14 Taiwanese vessels to the US register in 2007, and an increase in other vessel catches, mostly from China, Philippines and Vanuatu.

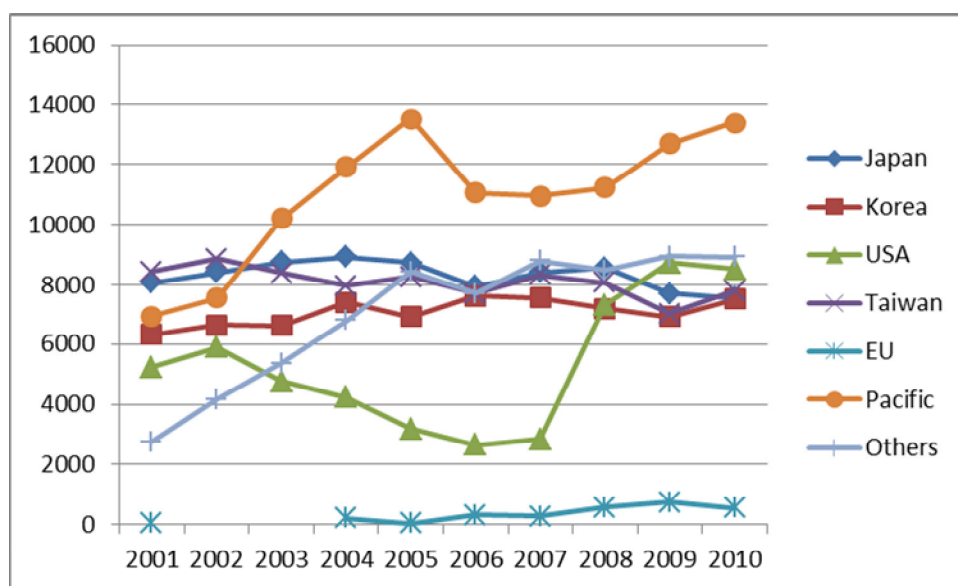


Figure 4: Trends in annual effort (days at sea) for the top four purse seine fleets, FSMA/domestic and others operating in the tropical WCP, 2001–2010

Source: SPC.

The above figures do not contain any adjustment for weighting against effort as set out in the VDS weighting scheme. Details of this are provided in Section 3.6.

3.2.4 FAD and free school set dependencies

Whilst different fleets demonstrate different dependencies on set types, the overall dependency on free school fishing has increased over the years. Fishing on drifting FADs evolved from a traditional dependency on log sets in the mid-1990s. The current distribution (2011) between set types shows 79 % on free schools (no doubt partly a response to the three month closure from 1 July to 30th September), 14 % on set FADs, and 7 % on drifting FADs. Table 5 shows that EU purse seine vessels have the highest dependency on drifting FADs of all the main fleets operating in the region.

Table 5: PNA catch by set type (average 2005-2009)

	Free school	Log	Drifting FAD	Anchored FAD	Other	Total
Korea	63%	18%	19%	0%	1%	100%
Taiwan	42%	40%	18%	0%	0%	100%
Japan	41%	42%	16%	0%	0%	100%
USA	14%	9%	77%	0%	0%	100%
New Zealand	27%	4%	69%	0%	0%	100%
Vanuatu	50%	20%	22%	9%	0%	100%
China	58%	8%	33%	1%	0%	100%
Philippines	28%	30%	9%	32%	0%	100%
Spain (EU)	11%	0%	89%	0%	0%	100%
Ecuador	11%	1%	88%	0%	0%	100%
El Salvador	13%	0%	87%	0%	0%	100%
Total DWFN	48%	28%	22%	2%	0%	100%
FSMA and Domestic	43%	25%	24%	7%	1%	100%

Source: SPC / Williams *et al.*, 2010.

3.3 The Longline fishery

3.3.1 The fleet

The longline fishery fishing in the WCPO accounts for around 6 % of the catch of total tropical tuna species caught inside the range in the tropical area bounded by 20°N and 20°S, mostly yellowfin and bigeye tunas, but also albacore (*Thunnus alalunga*), and a range of billfish including three species of marlin (blue marlin, striped marlin and black marlin), swordfish (*Xiphias gladius*), pelagic and reef sharks (mostly blue shark, shortfin mako, silky shark, oceanic whitetip and hammerhead) and a bycatch of other species.

There are four types of fisheries that occur using longline within the area of the Pacific islands:

- Fisheries for yellowfin and bigeye, targeted by large distant sashimi freezer longliners (typically >250 GRT). These vessels almost exclusively operate from Japan and Korea and fish long voyages, transshipping at sea, exclusively supplying the sashimi market in Japan and Korea. They fish in the HS, in the HS Pockets (HSPs) and within national EEZs, the latter under bilateral agreements.
- Fisheries for albacore, targeted by smaller (typically <100 GRT) offshore vessels, undertaking trips of less than one month, with freezer, ice or chill capacity, and serving frozen markets, with product transshipped or landed direct into one of a small number of regional hubs including Fiji, American Samoa and French Polynesia. Most product is destined for canneries, specializing in albacore (which provides 'white meat tuna' for the US market), but may also be sold fresh, frozen and or as cooked loins to EU and Japanese markets. The largest component of these fleets are Taiwanese and Chinese, operating through bilateral or domestic charter agreements with Western Pacific islands including Solomon

Islands, Vanuatu, Fiji, FSM, Republic of the Marshall Islands (RMI) and Kiribati. In addition, there are some 200 vessels domestically owned and operated from a number of Western, Central and South Pacific countries and territories including French Polynesia, Fiji, New Caledonia, Cook Is, Samoa and PNG.

- A South Pacific distant water fishery, which is a new fishery comprising distant water vessels. These vessels exclusively target swordfish, in the HS South of 20°S.
- Domestic fisheries in sub-tropical and temperate waters comprising vessels targeting different species in sub-tropical and temperate waters. Fleets include those from Japan, Australia, New Zealand and USA.

The total number of vessels involved in the tropical WCPO fisheries has generally been around 3,000, but around 780 vessels operate in the Pacific island waters, with a further 500 or so operating specifically on the high seas. Of the vessels known to be fishing in the island EEZs, the group has seen an increase by around 180 vessels in the last 5 years, with new entrants joining the fishery from the Indian Ocean⁹ (FFA, 2011). The bulk of this increase has taken place post Conservation and Management Measure (CMM) 2008-01.

SPC data (WCPFC, 2010) show that the number of EU longliners from Spain operating for at least part of their fishing time in the WCP area has declined from 18 vessels in 2008 to 5 in 2010. The Spanish vessels operate on the South Pacific distant-water swordfish fishery, which is a relatively new fishery and lies outside the EEZs of Pacific island countries. This fishery is very distinct from the longline fisheries exploiting tropical tunas and albacore.

3.3.2 Longline catch by species

The WCPO catch by the longline fleet amounted to 232,000 tonnes in 2010. Table 6 shows the total catch of Pacific island and distant water fleets by species for 2010. Additional data for other years are provided in Appendix G.

⁹ A representative from the Taiwanese fishing vessel company, Yuh Yow, stated that this was largely in response to piracy in the Indian Ocean (Pers. Comm., December, 2011).

Table 6: Longline catches in the WCPO, tonnes, 2010.

Group	Pacific island EEZs					
	Yellowfin	Bigeye	Albacore	Billfish	Total	% dependence on Island EEZs
Japan	5,486	1,785	1,499	562	9,332	31%
Korea	3,578	3,145	665	1,035	8,423	26%
Taiwan	3,383	1,057	10,839	685	15,964	28%
China	982	1,212	1,158	289	3,641	24%
Pacific islands	8,398	2,706	21,003	1,834	33,942	100%
EU	0	0	0	0	0	0%
Total	21,826	9,906	35,165	4,405	71,302	42%
	High Seas					
	Yellowfin	Bigeye	Albacore	Billfish	Total	% dependence High Seas
Japan	5,698	5,749	4,064	5,627	21,138	69%
Korea	4,887	11,591	4,887	2,247	23,613	74%
Taiwan	11,656	10,600	11,656	7,156	41,068	72%
China	1,081	7,653	1,081	1,864	11,680	76%
Pacific islands	0	0	0	0	0	0%
EU	2	8	7	1,001	1,018	100%
Total	23,325	35,602	21,695	17,895	98,517	58%
Grand total	45,150	45,508	56,861	22,300	169,818	45,150
% by species	27%	27%	33%	13%	100%	27%

Source: SPC.

However, when excluding the fisheries in non-Pacific island Country EEZs, and associated HS, the total catch of the principal species amounted to 169,000 tonnes. Several countries have bilateral longline agreements with Kiribati (China, Korea, Taiwan, Japan, Indonesia, Vanuatu, Fiji, FSM, Philippines and Indonesia). The Korean catch was the largest at 5,300 tonnes in 2010, 50 % of which was comprised of bigeye tuna. The EU longline fleet has never fished in Kiribati waters.

3.4 Status of Fish stocks in the region

The status of the three main stocks exploited in the WCP equatorial area is monitored by the Scientific Committee installed under the WCPFC. The following text summarises the latest scientific advice produced by this Committee. The status of stocks in the Eastern Pacific Ocean (EPO), as stated by the IATTC, is provided in Section 3.7.

Skipjack

Skipjack tuna is a fast growing, short-lived species (maximum age ~3 years) that has a rapid population turnover. It has high resilience to fishing and can support annual catches at the current level (1.7 mn tonnes). The majority of exploitation occurs on fish that have already reached reproductive maturity (age 1+). Most skipjack therefore have the opportunity to reproduce before they are exposed to intensive fishing. According to the key conclusions of the models presented in 2011 (Hoyle *et al.*, 2011), the skipjack species is being exploited to moderate levels, overfishing is not occurring and the stock is not in an overfished state. The high recent catches (2009-2011) are considered to be sustainable unless recruitment falls persistently below the long-term average. The Summary Record of the WCPFC 7th Scientific Committee notes that: current

high catches can result in range contractions of the stock (para 224); WCPFC should consider developing limits on fishing for skipjack (para 225); and catches are specially high in the western equatorial region and additional purse seine effort will yield only modest gains in long-term skipjack catches and may result in a corresponding increase in fishing mortality for bigeye and yellowfin (para 226).

Yellowfin

Yellowfin tuna has a life span of up to ~7 years of age, grows rapidly and has a moderate population turnover. Yellowfin begins spawning at ~1.5-2 years of age (~100 cm fork length or 20 kg). Yellowfin are taken by a variety of gears - purse seine (>50 % of the WCPO catch by weight, with a wide size range of fish), longline (16 %, mostly adults), pole-and-line (4 %), plus a range of gears in the domestic fisheries in Indonesia and Philippines, taking mostly smaller fish (25-30 %). The total WCPO yellowfin catch has been between 270,000 and 440,000 tonnes since 2000, but reached a record 543,000 tonnes in 2008 before falling back to 350,000 tonnes in 2010. Langley *et al.* (2011) undertook the most current yellowfin assessment on a regional basis across 6 regions within the WCPO (Figure 5), where Kiribati falls into region 4. The assessment (Langley *et al.*, 2011) concludes that the WCPO yellowfin stock is not in an overfished state, but that depletion has increased steadily over time and is considerably higher in equatorial region 3. Recent depletion levels in region 3 are approximately 0.30 for total biomass (i.e. a 70 % reduction from the unexploited level). Impacts are moderate in region 4 (37 %), lower (about 15-25 %) in regions 1, 5, and 6 and minimal (9 %) in region 2. If stock-wide over-fishing criteria were applied at the level of the stock assessment model regions, region 3 would be fully exploited and the remaining regions are under-exploited. The Langley *et al.* (2011) stock assessment for yellowfin indicates that the stock is at least fully exploited and that there is a 50 % chance that overfishing is occurring. The WCPFC Scientific Committee has recommended that fishing mortality be reduced.

The attribution of depletion to various fisheries or groups of fisheries indicates that the associated purse-seine fishery and Philippines/Indonesian domestic fisheries have the highest impact, particularly in region 3, while the unassociated purse seine fishery has a moderate impact.

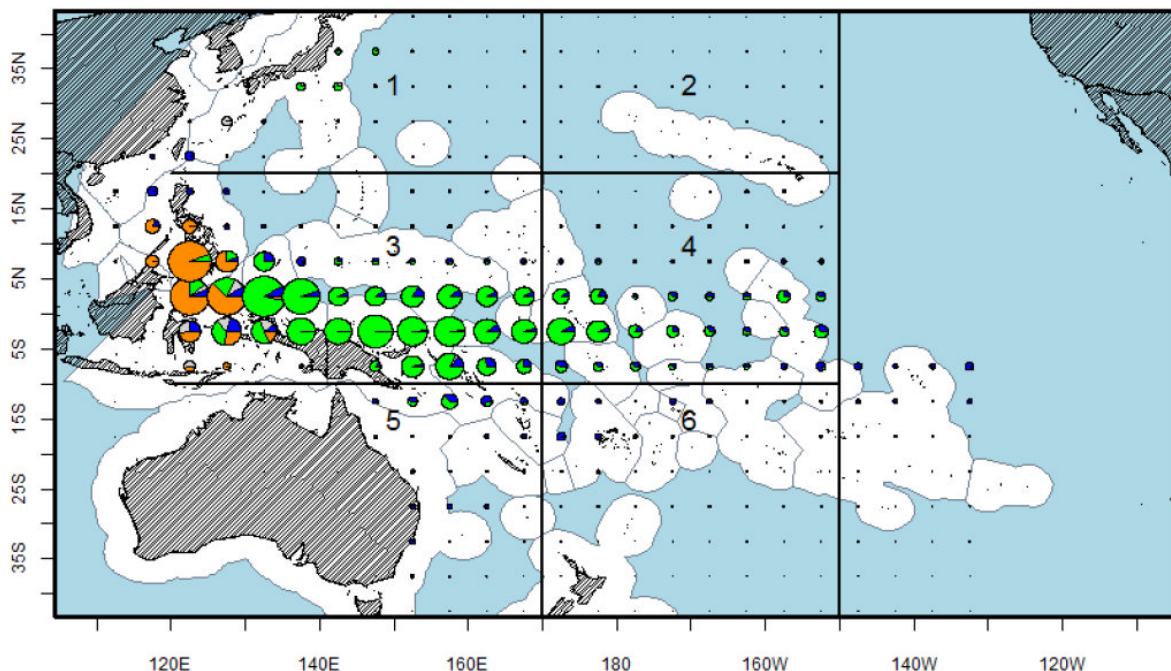


Figure 5: Distribution of cumulative WCPFC yellowfin tuna catch from 2000-2009 by 5 degree squares of latitude and longitude and fishing gear;

Source: Langley *et al.*, 2011. Longline (blue), purse-seine (green), pole-and-line (grey) and other (principally Indonesia and Philippines, dark orange). The grey lines indicate the regional spatial stratification of the assessment models.

Bigeye

Bigeye tuna lives to at least 12 years of age, grows more slowly than yellowfin, has lower natural mortality, and a smaller stock size. Bigeye reaches a maximum size of ~120 kg, and begins spawning at ~3-4 years of age (~110 cm fork length or 30 kg). Bigeye is caught in large quantities by both the longline and purse seine component of the catch (Harley, 2010). Purse seine and other surface fisheries have an equal or greater impact on the spawning stock biomass than longliners (WCPFC, 2011). This is because a significant exploitation of juveniles occurs in the purse-seine FAD fishery¹⁰, as well as in the domestic fisheries of Philippines and Indonesia. These juvenile catches have high impact on the subsequent adult population, and at the same time, the adult spawning stock continues to decline (Davies *et al.*, 2011). Recent assessments show that overfishing of bigeye tuna is currently occurring. Catches are still around 7 % higher than the Maximum Sustainable Yield (MSY) of 131,400 tonnes. This is despite current high levels of recruitment into the fishery. Therefore, the current levels of catch are unlikely to be sustainable (WCPFC SC 7, 2011). The WCPFC Scientific Committee has recommended that fishing mortality be reduced by a minimum of 28 % from the average levels for 2001–2004. These years are the set reference years for effort restrictions applied under CMM 2008-01 (See Section 3.6.1).

3.5 Ecosystem issues associated with tuna fisheries

The purse seine bycatch species varies according to whether sets are associated (FAD fisheries) or unassociated (i.e. free swimming schools). Molony (2007) estimated retained catch of non-target species (i.e. other than skipjack, bigeye and yellowfin tuna) to be around 1.8 % by weight of the total purse seine catch in the WCPFC Convention Area, equating to approximately 36,000 tonnes in 2008.

Langley *et al.* (2008), analysed fishery observer data from the equatorial purse-seine fishery for the period 2001–2006 to determine the species composition of catches (by weight) from unassociated (free-school) and associated (log, drifting FAD and anchored FAD) sets (Figure 6).

Apart from skipjack tuna, yellowfin and bigeye tuna are clearly the main species taken in the purse seine fishery. Langley *et al.* (2008) found that all set types were dominated by catches of skipjack tuna and yellowfin, with these two species accounting for 99 % of the unassociated sets and 91 % of the catch from the associated set types.

Other species represented less than 0.2 % of the catch from unassociated sets, and 1–2 % of the catch from associated sets, of which rainbow runner (*Elegatis bipinnulata*) was the most significant component. The remainder of the catch from associated sets is comprised of surface-orientated species that are principally oceanic in habitat (e.g. mackerel scad (*Decapterus macarellus*), frigate tuna (*Auxis thazard*) and mahi-mahi (*Coryphaena hippurus*)) or occupy both reef and oceanic habitats (e.g. rainbow runner; oceanic triggerfish (Balistidae), silky shark (*Carcharhinus falciformis*) and oceanic whitetip shark (*C. longimanus*)).

Kirby (2006) attributed fishing mortality by purse seine set type and ranked by productivity risk. Of the main bycatch species identified as taken in FAD fisheries, frigate tuna, spotted and black triggerfish, mahi-mahi and mackerel scad were assessed as relatively low risk, whilst silky shark was assessed as having the highest relative risk. The rate of shark bycatch is significantly greater in FAD fisheries, recording 88 % and 93 % of the sharks respectively in regions 3 and 4 respectively (Clarke *et al.*, 2011), with an estimated 1-10 silky sharks caught per day, amounting to between 48,000 to 84,000 silky sharks, 1,000 oceanic whitetip sharks caught per annum (Lawson, 2011). Oceanic whitetip sharks are found throughout the WCPO between 30° N and S latitude. This species is also commonly encountered in the purse seine fishery, particularly in areas just south of the equator. Silky sharks have a similar distribution to oceanic whitetips but appear to be concentrated in a

¹⁰Catches of bigeye tuna in the free school fishery and 0.8% (Hampton, 2009), whilst in FAD fisheries catches are upwards of 5 % or greater

narrower latitudinal band between 20° N and S latitude. Silky sharks interact with purse seine fisheries over nearly the entire geographic range of the fishery. Silky sharks were particularly skewed toward juveniles in tropical waters. However, both species have experienced progressive reductions in Catch Per Unit Effort (CPUE) since 1999 (Lawson, 2011). As part of the current shark research programme (WCPFC SC7), preliminary results show that silky sharks are in an overfished state.

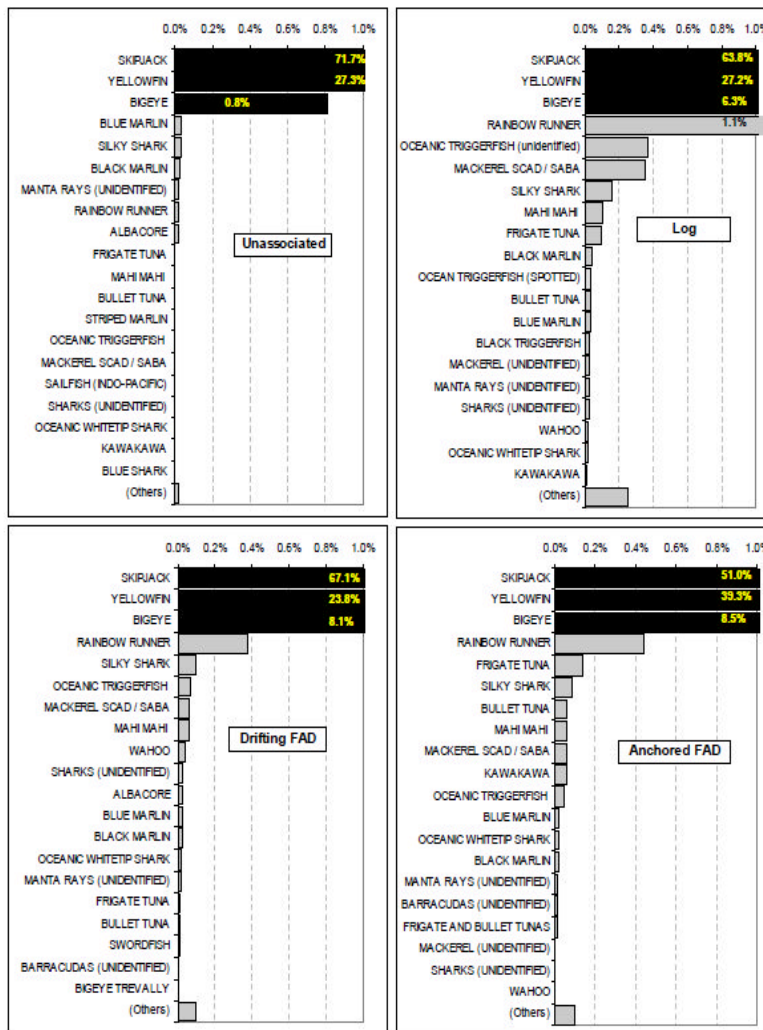


Figure 6: Percentage composition of the 20 main species caught by unassociated, log-drifting FAD and anchored FAD purse-seine sets (by weight) in the WCP–CA determined from recent observer data (2001–2006).

Source: Langley *et al.*, 2008.

3.6 Management agreements in the WCP and their implications

The key components of the governance and fishery management framework for tuna and related species in the WCPO, and the tuna purse seine fisheries in particular include:

- i) The Western and Central Pacific Fisheries Commission (WCPFC), the tuna RFMO for the WCPO;
- ii) The Parties to the Nauru Agreement, known as PNA or the Nauru Group;
- iii) Regional organisations that provide management services to the WCPFC and the PNA, including and in particular the FFA and the SPC; and
- iv) The PNA national governments.

3.6.1 *The Western and Central Pacific Fisheries Commission (WCPFC)*

The WCPFC is the one of the newest and one of the largest RFMOs. The Commission has 25 members, comprising Australia, Canada, People's Republic of China, Cook Islands, European Union (EU), Federated States of Micronesia (FSM), Fiji, France, Japan, Kiribati, Korea, Republic of the Marshall Islands (RMI), Nauru, New Zealand, Niue, Palau, Papua New Guinea (PNG), Philippines, Samoa, Solomon Islands, Chinese Taipei, Tonga, Tuvalu, United States of America (USA) and Vanuatu (WCPFC, 2009a).

Several other states are granted cooperating non-member (CNM) status on an annual basis, agreeing to comply with WCPFC measures, participating as observers, and entitled to authorise their vessels to fish in the WCPO within set limits. At WCPFC6, the CNM status of Belize, El Salvador, Indonesia, Mexico and Senegal was renewed, and CNM status was extended to Ecuador and Vietnam (WCPFC, 2009b, (paras 22-49).

WCPFC Commission Management Measures (CMMs) have been formulated in the annual sessions of the Commission (Table 7) by consensus¹¹ (WCPFC, 2004), with the support of Scientific (SC) and Technical and Compliance (TCC) committee meetings. The SC meetings deal with collection and validation of data from the fishery, monitoring and assessment of stocks, monitoring and assessment of the ecosystem and evaluation of management options. However, proper scientific work such as stock assessments is conducted by an external body (scientific services provider) – the SPC's Oceanic Fisheries Programme. Only since 2011 has the TCC dealt in a substantial manner with assessing compliance with the CMMs based on a trial Compliance Monitoring Scheme (CMM 2010-03). Unlike compliance committees in most RFMOs, the WCPFC TCC has a broad agenda similar to that of the Annual Commission Session and works as a pre-plenary for discussion on all items to be tackled at the Annual Meeting. Small Pacific islands often are represented by the same delegates to SC, TCC and Annual Meetings, partly due to insufficient numbers of technically qualified personnel in national administrations. The WCPFC Secretariat undertakes a number of compliance duties which relate to monitoring, control and surveillance (MCS) on the HSPs and collation of specified reports on compliance from the members. These reports include details on: the WCPFC vessel monitoring system (VMS), high seas boarding and inspection, the regional observer programme, transshipment verification and Port State Measures.

¹¹ The WCPFC has a consensus-based decision-making process, with provision for a two-chambered voting process requiring a 75% majority in both chambers if all efforts to reach a decision by consensus have been exhausted, (WCPFC, 2004), (Rule 22). From the meeting records, it is evident that the voting provision has not been used for deciding on conservation and management measures, Rules of Procedure for the WCPFC. Available from <http://www.wcpfc.int/doc/commission-01/rules-procedure>

Table 7: WCPFC measures relevant to the fisheries under assessment

Measures	Key Relevant Features
CMM 2007-02 ¹² : VMS	Ensure vessels have Automatic Location Communicator (ALC) on in high seas
CMM 2008-01 ¹³ Yellowfin and Bigeye	Not undermine measure by transferring purse seine effort to areas N of 20N or S of 20S. Within 20N to 20S: <ul style="list-style-type: none"> • Limit high seas purse seine effort to 2004 levels or average 2001-04; • Limit EEZ effort to 2004 levels (PNA) or take compatible measures; • FAD closure – 3 months from 2010; • Closure of 2 high seas pockets; • 100% catch retention/no discards (for tuna species); • 100% observer coverage; and • capacity of “other fisheries” generally limited to 2004 levels or average 2001-04.
CMM 2008-03 ¹⁴ Sea Turtles	<ul style="list-style-type: none"> • Implement FAO Guidelines; • Comatose turtles to be brought on board and resuscitation attempted; • Proper handling and release techniques and equipment to be applied as per WCPFC Guidelines; • Purse seine operators to follow specific procedures to avoid /release turtles; and • Purse seine operators to report all interactions and provide reports to WCPFC.
CMM 2009-02 ¹⁵ : FAD Closure and Catch Retention	Specific rules for FAD closure and catch retention, including prohibiting, during the FAD closure, conducting any part of a set within one nautical mile of a FAD.
CMM 2009-06 ¹⁶ : Regulation of Transshipment	No purse seine transshipment at sea, except in designated special cases.
2010-03 ¹⁷ : Compliance monitoring	Monitoring and reporting systems implemented to ensure that members implement: <ul style="list-style-type: none"> • Catch and effort limits; • Catch and effort reporting; • Spatial and temporal closures and gear restrictions; • Observer and VMS requirements; and • Scientific data provision, reporting and handling.

¹²WCPFC, CMM 2007-02, Commission Vessel Monitoring scheme. <http://www.wcpfc.int/doc/cmm-2007-02/commission-vessel-monitoring-system>

¹³WCPFC CMM 2008-01, Conservation and management measure for yellowfin and bigeye tuna in the WCPO, <http://www.wcpfc.int/doc/cmm-2008-01/conservation-and-management-measure-bigeye-and-yellowfin-tuna-western-and-central-pa>

¹⁴ WCPFC CMM 2008-03, Conservation and management of sea turtles, <http://www.wcpfc.int/doc/cmm-2008-03/conservation-and-management-sea-turtles>

¹⁵ WCPFC 2009-02, High Seas FAD closure and catch retention, <http://www.wcpfc.int/doc/cmm-2009-02/conservation-and-management-measure-application-high-seas-fad-closures-and-catch-ret> WCPFC CMM 2008-03, Conservation and management of sea turtles, <http://www.wcpfc.int/doc/cmm-2008-03/conservation-and-management-sea-turtles>

¹⁶WCPFC CMM 2009-06, Conservation and management measure on the regulation of transshipment, <http://www.wcpfc.int/doc/cmm-2009-06/conservation-and-management-measure-regulation-transshipment-0>

¹⁷WCPFC CMM 2010-03, Conservation and management measure for compliance monitoring scheme, <http://www.wcpfc.int/doc/cmm-2010-03/conservation-and-management-measure-compliance-monitoring-scheme>

Measures	Key Relevant Features
2010-07 ¹⁸ : Sharks	Members comply with reporting systems confirming confirmation of the Implementation of the National Plan of Action on Sharks <ul style="list-style-type: none"> • Require full utilisation through retention of carcass; and • Implement 5% fin to weight ratio. • Prohibit retention, transshipment or trading in fins caught in contravention • Encourage live release of sharks in non-target fisheries

Source: WCPFC.

The WCPFC has adopted a core package of measures in CMM 2008-01 (WCPFC, 2010) for the Pacific purse seine (and longline) fisheries with the objectives to:

- Ensure through the implementation of compatible measures for the HS, HSPs and EEZs that bigeye and yellowfin tuna stocks are maintained at levels capable of producing their maximum sustainable yield; as qualified by relevant environmental and economic factors including the special requirements of developing States in the Convention area as expressed by Article 5 of the Convention;
- Achieve, through the implementation of a package of measures, over a three-year period commencing in 2009, a minimum of 30 % reduction in bigeye tuna fishing mortality from the annual average during the period 2001-2004 or 2004;
- Ensure that there is no increase in fishing mortality for yellowfin tuna beyond the annual average during the period 2001-2004 average or 2004; and
- Adopt a package of measures that shall be reviewed annually and adjusted as necessary by the Commission taking account of the scientific advice available at the time as well as the implementation of the measures. In addition, this review shall include any adjustments required by Commission decisions regarding management objectives and reference points.

CMM 2008-01 is a complex measure which imposes purse seine effort limits and longline catch limits, a closure relating to purse seine fishing using FADs, the closure of two HSPs to purse seine fishing, and measures relating to observer coverage, development of FAD management plans, catch retention, and juvenile tuna catch mitigation research, to be progressively implemented during the period 2009-2011.

For 2009, for the purse seine fishery, effort in PNA EEZs and the HS was limited to 2004 reference levels; the FAD closure was applied from August 1st to 30th September, with mandatory observer coverage during that time; and bigeye, skipjack and yellowfin tuna were required to be retained, and not discarded; and the purse seine fishery on the high seas was also subject to the FAD closure, an effort limit, catch retention and mandatory observer coverage.

The 2004 reference levels for the purse seine effort limits included effort obligated under existing agreements, which had been registered with the Commission (para 7). Twelve agreements have been registered with the Commission (WCPFC, 2008). In most cases, the effort provided for in these agreements was fully subscribed in 2004, but in the case of the United States Multi-Lateral Treaty (USMLT), only 21 of the 40 vessels provided for in the Treaty were active in 2004. Vessels of Small Island developing State Members are exempt from the purse seine effort limits.

As an incentive to encourage exploration of innovative arrangements to mitigate bigeye bycatch, Commission Cooperating Members (CCMs) meeting certain conditions were authorised to apply a 10 % reduction in purse seine bigeye bycatch as an alternative arrangement to the high seas FAD closure (para 15).

¹⁸ WCPFC CMM 2010-07, Conservation and management measure for sharks, <http://www.wcpfc.int/doc/cmm-2010-03/conservation-and-management-measure-compliance-monitoring-scheme>

For the second two years of the measure applying (2010-2011), effort limitation continues to apply, the FAD closure is extended to cover the period July 1st to 30th September each year (3 months), and the closure of two HSPs wholly enclosed by the EEZs of CCMs (and one Commission Non Cooperating Member (CNM)), as shown in Figure 7, applies from 1st January 2010. From January 1st 2010, and 100 % observer coverage from the Commission's Regional Observer Programme has been required.

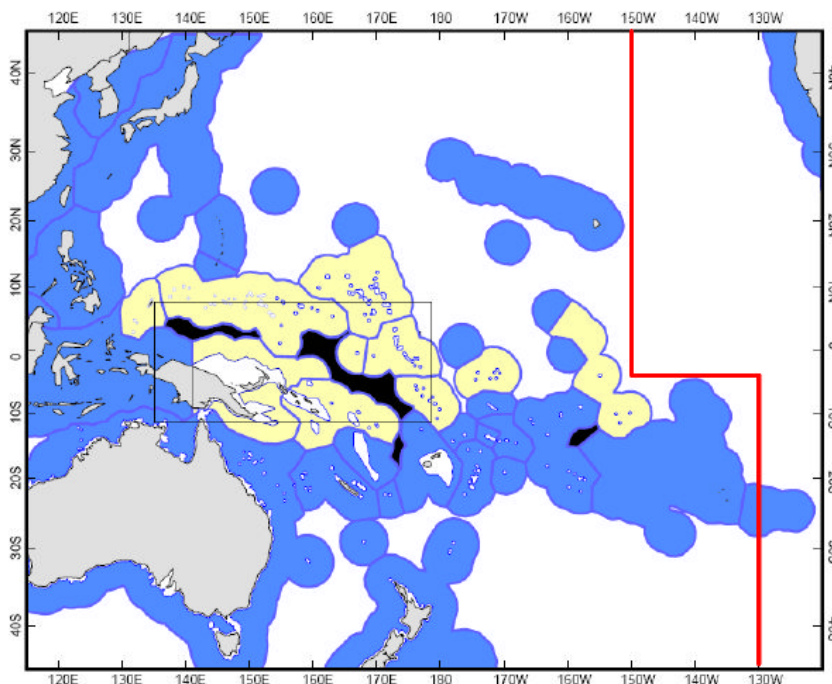


Figure 7: WCPFC High Sea pockets

Notes: The WCPFC Convention Area, with the two HSPs wholly enclosed between 20°N and 20°S are shown in black. The PNA EEZs are shown in yellow, and the archipelagic waters of PNG, Solomon Islands, Fiji and Vanuatu are in white (CMM 2008-01).

For the longline fishery, the total catch of bigeye by longline gear will be subject to phased reduction such that by January 2012, the longline catch of bigeye tuna is 70 % of the average annual catch in 2001-2004 or 2004, with a phased 30 % reduction for CCMs, with 10 % in the first year, 20 % in the second and 30 % in the third year. Exemptions apply to CCMs which caught less than 2,000 tonnes in 2004, provided that their catch does not exceed 2,000 tonnes in each of the years 2009-2011, with other exemptions applying to small island developing states (SIDS) and longline fleets catching less than 5,000 tonnes of bigeye and landing exclusively fresh fish.

All CCMs are required to report to each regular session of the Technical and Compliance Committee on the implementation of CMM 2008-01 measure (para. 45), and the measures are reviewed annually in conjunction with the scientific advice to measure the impact and compliance with the measure (para. 46).

Information on the effectiveness of CMM 2008-01 is discussed below.

WCPFC CMMs also place an increasingly important emphasis on ecosystem management. CMM 2010 now places binding obligations on CCMs to implement national plans of action on shark management. The current focus is to minimise shark retention, but it is also likely that shark mitigation measures will form the basis of CMMs in the near future, pending the outcome of research into the status of silky sharks.

Additional comment is also relevant on the issue of observers. Appendix C highlights the failure of Kiribati observers to regularly supply observer reports as reported by EU fleet owners, and this can only compromise efforts aimed at effective management and responsible fisheries. This assertion is backed up by the 2011

WCPFC 3rd Annual report for the regional observer programme, which highlighted that 57 % of observer trip reports due had not been submitted. Section 3.7 provides additional comments on the issue of observers pertaining to WCPFC and IATTC requirements.

With respect to fisheries management in archipelagic waters, these waters can be important spawning areas for tuna, however the majority of spawning probably takes place widely throughout the western and central tropical Pacific where suitable habitat exists and is not just restricted to archipelagic waters. For skipjack, yellowfin and bigeye tuna, this is where the sea surface temperature is greater than about 26°C and productivity is suitable to enable adult tuna to enter spawning condition. Modelled distribution of skipjack tuna larvae by Lehodey *et al.* (2011) based on the Spatial Ecosystem and Populations Dynamics Model (SEAPODYM) shows very wide distributions across the Pacific (<http://www.wcpfc.int/node/3633>).

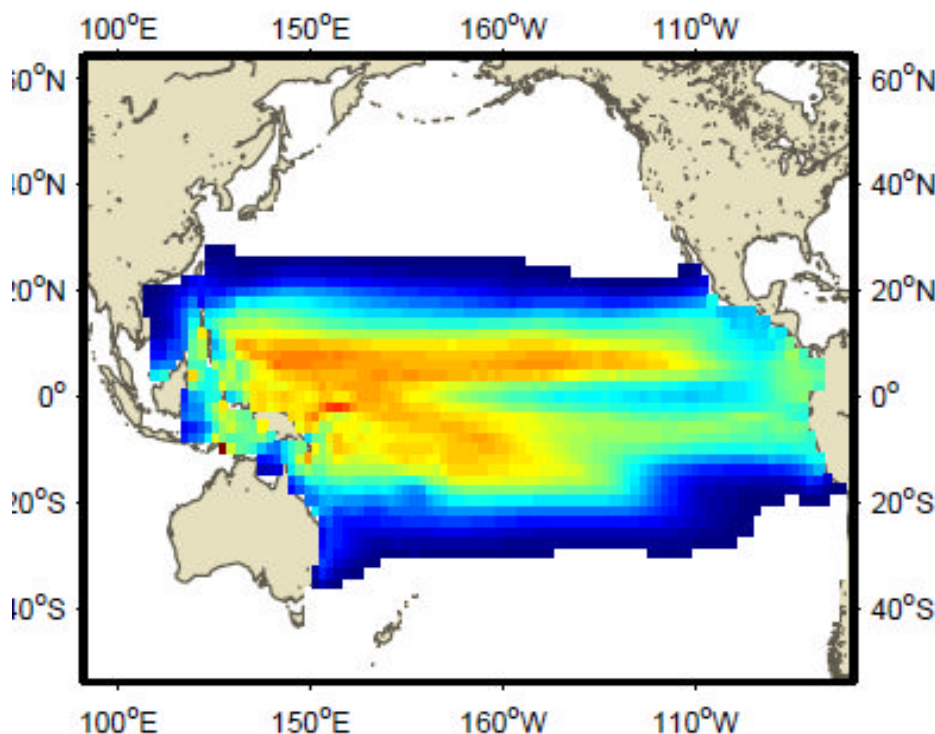


Figure 8: Mean distribution of skipjack larvae, 1st quarter for the decade 1990-1999

Source: Lehodey *et al.*, 2011.

3.6.2 Parties to the Nauru Agreement (PNA) and related management arrangements

The PNA is an alliance of Pacific island states whose EEZs collectively account for a significant bulk of the region's tuna catch and 54 % of the purse seine catch. The Nauru Agreement is a regional Agreement concerned with Cooperation in the Management of Fisheries of Common Interest (see Box 3 for further details). The Agreement is a binding Treaty-level instrument considered to be a sub-regional or regional fisheries management arrangement for the purpose of the United Nations Fish Stocks Agreement (UNFSA) and the WCPFC Convention. The countries of Solomon Islands, Tuvalu, Kiribati, Marshall Islands, Papua New Guinea, Nauru, Federated States of Micronesia and Palau, have worked collaboratively since 1982 to manage the tuna stocks within their national waters through the Agreement. PNA coordinate the implementation of management measures with a view to enhancing economic benefits from the fishery (PNA, 1982), including:

- Harmonizing the terms and conditions of access for distant water fishing vessels/fleets; and
- Granting preferential access to vessels of the Parties in order to encourage domestic participation in the fishing industry.

The Organisation operates its secretariat from the Marshall Islands. Its objectives are to:

- Enhance regional solidarity; and
- Promote economic control and participatory rights over the tuna resources in PNA waters.

Its primary focus is to:

- Maximise the profitability of the fishery and ancillary industries within the PNA;
- Develop initiatives to maximise the sustained direct and indirect economic benefits to the Parties; and
- Develop strategic fisheries conservation and management initiatives.

The PNA countries operate an access and management regime, which optimises revenue collection for the parties, as well as promoting the development of the Parties' indigenous fishery sector.

Box 3: Contents of the Nauru Agreement

Article I The Parties shall seek to establish a co-ordinated approach to the fishing of the common stocks in the Fisheries Zones by foreign fishing vessels and in particular:

(a) shall establish principles for the granting of priority to applications by fishing vessels of the Parties to fish within the Fisheries Zones over other foreign fishing vessels;

(b) shall establish, as a minimum, uniform terms and conditions under which the Parties may licence foreign fishing vessels to fish within the Fisheries Zones regarding:

- (i) the requirement that each foreign fishing vessel apply for and possess a licence or permit; the placement of observer on foreign fishing vessels;
- (ii) the requirement that a standardized form of log book be maintained on a day-to-day basis which shall be produced at the direction of the competent authorities;
- (iii) the timely reporting to the competent authorities of required information concerning the entry, exit and other movement and activities of foreign fishing vessels within the Fisheries Zones; and
- (iv) standardized identification of foreign fishing vessels.

(c) seek to establish other uniform terms and conditions under which the Parties may licence foreign fishing vessels to fish within the Fisheries Zones, including:

- (i) the payment of an access fee, which shall be calculated in accordance with principles established by the Parties;
- (ii) the requirement to supply to the competent authorities complete catch and effort data for each voyage;
- (iii) the requirement to supply to the competent authorities such additional information as the Parties may determine to be necessary;
- (iv) the requirement that the flag States or organisations having authority over a foreign fishing vessel take such measures as are necessary to ensure compliance by such vessel with the relevant fisheries laws of the Parties; and
- (v) such other terms and conditions as the Parties may from time to time consider necessary.

Article II: The Parties shall seek to establish a co-ordinated approach to the fishing of the common stocks in the Fisheries Zones by foreign fishing vessels and in particular:

(a) shall establish principles for the granting of priority to applications by fishing vessels of the Parties to fish within the Fisheries Zones over other foreign fishing vessels;

(b) shall establish, as a minimum, uniform terms and conditions under which the Parties may licence foreign fishing vessels to fish within the Fisheries Zones regarding:

- (i) the requirement that each foreign fishing vessel apply for and possess a licence or permit;
- (iii) the requirement that a standardized form of log book be maintained on a day-to-day basis which shall be produced at the direction of the competent authorities;
- (iv) the timely reporting to the competent authorities of required information concerning the entry, exit and other movement and activities of foreign fishing vessels within the Fisheries Zones; and
- (v) standardized identification of foreign fishing vessels.

(c) seek to establish other uniform terms and conditions under which the Parties may licence foreign fishing vessels to fish within the Fisheries Zones, including:

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- (ii) the requirement to supply to the competent authorities complete catch and effort data for each voyage;
- (iii) the requirement to supply to the competent authorities such additional information as the Parties may determine to be necessary;
- (iv) the requirement that the flag States or organisations having authority over a foreign fishing vessel take such measures as are necessary to ensure compliance by such vessel with the relevant fisheries laws of the Parties; and
- (v) such other terms and conditions as the Parties may from time to time consider necessary.

Article III: The Parties shall seek to standardise their respective licensing procedures and in particular:

- (a) seek to establish and adopt uniform measures and procedures relating to the licensing of foreign fishing vessels, including application formats, licensing formats and other relevant documents; and
- (b) explore the possibility of establishing, without prejudice to the respective sovereign rights of the Parties, a centralised licensing system of foreign fishing vessels.

Article IV: The Parties shall seek the assistance of the South Pacific Forum Fisheries Agency in establishing procedures and administrative arrangements for the exchange and analysis of:

- (a) statistical data concerning catch and effort by fishing vessels in the Fisheries Zones relating to the common stocks of fish; and
- (b) information relating to vessel specifications and fleet composition.

Source: Nauru Agreement (PNA 1982).

The Nauru Agreement is implemented through binding Implementing Arrangements and associated Arrangements, which include:

- **1st Implementing Arrangement (PNA, 1983)**, setting minimum licensing standards, including reporting, inspection and onboard observation, vessel identification and “good standing” on the FFA regional register;
- **2nd Implementing Arrangement (PNA 1990)**, adding additional conditions relating to VMS, high seas reporting and a prohibition on transshipment at sea;
- **FSM Arrangement (PNA 1994)**, establishing arrangements for preferential access among the parties for vessels meeting certain standards for the provision of domestic economic benefits;
- **Palau Arrangement (PNA, 1995)**, limiting the purse seine fishery, initially by limiting vessel numbers, but now through the VDS which is described separately in more detail below;
- **3rd Implementing Arrangement (3IA) (PNA, 2008)**, applying a FAD closure, 100 % observer coverage and catch retention/no tuna discards in PNA EEZs, and prohibition of fishing in HSPs for licensed vessels¹⁹. The high seas closures were extended (PNA, 2010) to run from 1 January 2011, applicable to purse seine vessels licensed to fish in PNA EEZs.

These arrangements apply to all vessels, with the only differential applied in the amendment to the 3IA, with a derogation to allow domestic vessels to introduce large mesh size. The proposed extension of a four month FAD closure is to be applied to DWFN only.

The present management measures are also in the process of amendment to include additional elements of the PNA 3IA, including:

- A ban on the setting of whale sharks (PNA, 2010);
- Introduction of additional HS closures (high seas areas between 10°N and 20°S and 170°E and 150°W 20°S and 170°E and 150°W)²⁰(which is not scientifically supported and which would have a major impact on EU vessels fishing in Kiribati waters and high seas areas outside the EEZ); and
- An increase in the minimum mesh size for purse seine nets to 90 mm (3.5ins) measured from knot to knot in the bunt and 240 mm (9ins) in 70 % of the body of each purse seine net.

References to the Palau and Nauru agreements are usually explicit in each of the Party's national fishery acts, and as such adoption of PNA Agreements are binding on the Parties.

The PNA also collaborate to achieve the objectives of the Nauru Agreement and other regional and international instruments through a coordinated approach to their participation in broader groups, including the FFA, SPC and the WCPFC and to their relationships with fishing access partners. In this respect, the First and Second Implementing Arrangements provide the basis for the FFA Harmonised Minimum Terms and Conditions (see Box 4) and for many of the compliance elements of the WCPFC Convention and the WCPFC compliance programmes, and the 3IA provides the major purse seine elements of WCPFC CMM 2008-01. The amendments to the third implementation Agreement (PNA, 2010) will formulate the PNA's proposals for change to CMM 2008-01, but are already binding on the parties and will be applied to the DWFNs through the Minimum Terms and Conditions (MTCs).

²⁰ The closure of additional High Seas areas between 10N and 20S and 170E and 150W, effective 1 January 2011, PNA Circular 2010-01, 24 May 2010, Outcomes of the 29th Annual Meeting of the Parties to the Nauru Agreement (PNA29), 19-23 May 2010, Majuro, Marshall Islands. It was noted that this had not been introduced as part of the Kiribati Minimum Terms and Conditions (MTCs).

Box 4: The Harmonised Minimum Terms and Conditions for Foreign Fishing Vessel Access

- Common Regional Licence Form to be carried on board at all times;
- Good Standing on the FFA Vessel Register: that the vessel and its operator to have good standing on the FFA Vessel Register; and vessel to be registered on the WCPFC Record of Fishing Vessels;
- Transshipment: no purse seine vessel, except for group seiners, to transship at sea; 72 hours' notice; submit full reports on transshipping;
- Pay all fees required;
- Maintain and Submit Catch Logs in Zones and High Seas;
- Reporting: each Wednesday; within a reasonable time of entry into and departure from the zone, and entry into a port. Out-turn documentation, and landing and dock receipts to be provided;
- Observers to be allowed and assisted to undertake their duties, every effort to be made to achieve 100 % coverage ;
- Agent to be appointed to receive and respond to any legal process ;
- Vessels in Transit to have fishing equipment stowed or secured for fishing;
- Port State Control: FFA members to exercise powers of port State over fishing vessels in their ports;
- Inspection/Enforcement: operators to comply instructions and directions given by an authorised and identified person;
- Copy of the International Code of Signals (INTERCO) to be accessible at all times;
- Vessels to be identified in accordance with FAO Standards;
- Flag States or Fishermen's Associations to be required in agreements to take measures to ensure compliance by their vessels;
- Vessel Monitoring System to be implemented;
- Fish Aggregating Devices to be clearly marked and identified; and
- Compulsory pre-fishing inspections to be carried out.

Source: FFA, 2010.

Hampton *et al.*, (2011) drew a number of conclusions in assessing the WCPFC CMM 2008-01 and PNA third party implementation arrangements:

- Purse seine effort has expanded since the introduction of CMM 2008-01, with effort (excluding domestic purse seiners based in Indonesia and Philippines) in 2010 estimated to have increased by approximately 18 % compared to effort in 2004. VMS data to 30 September 2011 indicates a further increase in effort of approximately 7 % over the same time in 2010;
- Catches of skipjack and yellowfin were moderately reduced during the closures, but bigeye catches were strongly reduced. In 2010, the proportions of effort associated with FAD usage outside the closure period, particularly the months immediately before and after the FAD closure, had lower FAD usage than is typically the case. While catches were reduced during the closures, the average size of the catch was higher for all species, particularly yellowfin, during the closures because of the larger average size of fish caught in unassociated sets. These larger average sizes have higher unit values;
- Available data from all sources indicate that the HSP closure since 1 January 2010 has largely been respected. Since January 2010, effort has been concentrated mainly in the EEZs, with no apparent re-distribution of effort to the eastern high seas;
- The 2010 longline catch of bigeye tuna of 61,676 tonnes (as reported by CCMs) is approximately 74 % of the average catch for 2001-2004.
- The reduction in purse seine FAD effort in 2010 had the greatest effect in terms of removing overfishing (67.4 % of overfishing removed on bigeye tuna) followed by the reduction in longline catch in 2010 (34.7 % of the overfishing removed). For purse seine closures, there was a relatively small incremental reduction in fishing mortality (F)/FMSY compared to that achieved by a FAD closure; and
- It was estimated that if the CMM was implemented without exemptions, approximately half of the overfishing that is estimated could occur under the CMM, could be removed (reduction of bigeye tuna F/FMSY from 1.35 to 1.17).

Sibert *et al.* (2011) applying the Spatial Ecosystem and Populations Dynamics Model (SEAPODYM) found that:

- Simply closing areas to purse-seine fishing, produces only very small increases in bigeye biomass. Area closures could even be counter-productive in some cases if fishing effort is simply displaced and the closure is used as a justification to increase fishing effort outside of the closed areas. Provisional analysis of the 2010 purse seine closure of areas alone shows that the closure was fairly well respected by the purse seine fleets, but total purse seine effort increased by 10 % and was deployed in the EEZs surrounding area. This outcome suggests that the response of the purse seine fleets to the closures was not only to deploy effort in areas adjacent to the closed areas but also to increase effort in these areas. The 2010 situation almost certainly increased fishing mortality of juvenile bigeye. However, closed areas for highly migratory species can be useful fishery management tools, if the displaced effort is eliminated, i.e. when combined with an overall reduction in effort, as opposed to transferring effort elsewhere;
- FAD prohibition with redistributed effort to free school sets resulted in a significant improvement in the adult bigeye biomass in the WCPFC convention area with a strong positive impact on bigeye stock conservation; and
- Benefits from any bigeye conservation measure will only be detectable after 10 years and be fully realized after two decades, i.e. in the 2030s assuming timely implementation.

3.6.3 *The Palau Arrangement and Vessel Day Scheme (VDS)*

The VDS is a scheme under the Palau Arrangement for the Management of the Western Purse Seine Fishery (PNA, 2004), which establishes a system of tradable fishing days allocated to the Parties as Party Allowable Effort (PAE). The Arrangement was established to

- Regulate the number of purse seine vessels to be licensed by the Parties at any one time, in response to scientific advice on resource sustainability and the rapid influx of foreign purse seine vessels into the WCPO; and
- Provide a basis for increasing economic benefits to resource-owning states and economic returns to participating vessel owners.

Prior to the coming into force of the Palau Arrangement, the PNA had already set in 1990 a provisional limit of 164 purse seine vessels to be licensed by the Parties. The license allocation limit under the Palau Arrangement in 1995 was for 205 purse seine vessels until the license allocation management scheme was replaced by the VDS in December 2007. The introduction of the VDS was the result of an external review commissioned by the Parties in 2000 (Geen, 2000) to assess the effectiveness of the license allocation management scheme in achieving its objectives under the Palau Arrangement. The review by Geen (2000) recommended the adoption of the VDS to regulate the number of fishing days by purse seine vessels as a long term approach to the management of the purse seine fishery. The Parties adopted the VDS in 2006 following the completion of the signing by all Parties of the MoU for the provisional application of the amendments to the Palau Arrangement to facilitate the implementation of the VDS.

The VDS scheme is managed by the PNA Office (PNAO). The VDS is overseen and reviewed by an Inter-Party VDS Committee (VDSC), and reports to the annual meeting of the Parties to the Palau Arrangement. The role of the VDSC is to have oversight on the operational aspects of the VDS and provide recommendations as appropriate to the plenary meetings of the Parties to the Palau Arrangement, unless mandated to decide on certain operational aspects of the VDS.

A Total Allowable Effort (TAE) was set at 28,469 days based on the 2004 TAE in PNA waters, and specific Party Allowable Efforts (PAE) were decided based on a combination of two factors: the average level of purse seine effort in the waters of the Parties for the period 2001 to 2004 (50 %); and the relative biomass within each Party EEZ (50 %).

Other important factors include the following elements:

VDS PAE management: The sequence of events leading to the present PAE management arrangement was:

As from 2008-2009 (MY 1-MY2):

- Parties could transfer days between Management Years of the same Management Period, and between Management Periods;
- Parties could seek temporary increases subject to the approval of the Parties;
- VDS applied a rolling three year over Management Period; and
- Exchanges between parties were allowed to make up for any excesses and shortfalls.

As from 2010 (MY 3):

- The ability to transfer days from one year to the next ceased;
- Exchanges between parties allowed in order to avoid over excesses in individual PAEs, or corresponding shortfalls;
- A hybrid adjustment was introduced to the original allocation allowing for 50/50 % or 100/0 % historical effort/biomass formulation and applying whichever ratio results in a higher PAE for each Party; and
- The resultant adjusted TAE based on the hybrid PAE formulation was 33,798 days. The Parties agreed in the same meeting in June 2009 to strictly apply a limit of 28,469 days for MY3 (2010) irrespective of the hybrid Adjusted TAE total of 33,798 days, which meant that each Party could use up their hybrid PAE provided that the agreed limit of 28,469 days was not exceeded.

As from 2011 (MY 4):

- In determining the TAE/PAEs for 2011, the Parties adopted the approach of applying the higher PAE of the hybrid 50/50 % and 100/50 % effort/biomass formulation and this time to standardize the PAEs such that the total of the standardized PAEs equate to the agreed limit of 28,469 days;
- In agreeing to apply a hard limit of 28,469 days in MY4 (2011), the Parties agreed to further amend the VDS Management Scheme (Attachment C), not to allow transfer days between Management Years and between Management Periods and not to allow temporary increases for special circumstances;
- In enforcing the hard limit of 28,469 days, each Party thus needed to ensure that its agreed respective PAE was not exceeded by enabling the transfer/trading of days from other Parties which have surplus days available for transfer/trading, provided the agreed overall limit of 28,469 days was not exceeded, otherwise for the Party that has reached its PAE to close off its EEZ to foreign fishing vessels under bilateral access agreements and to FSMA vessels of other Parties; and
- With respect to PAE overruns in 2010, if the level of fishing in the EEZ of a Party exceeds its PAE for a Management Year, that Party's PAE for the following Management Year shall be adjusted by deducting in the case of the overrun 120 % of the excess. In this case the Administrator alerted the Parties and those who were likely to exceed their PAEs by the end of the year of the possibility. In agreeing to apply the hard limits in 2011, and also in standardizing the hybrid model as adjusted by the Parties in April 2010, the Parties effectively reduced their individual PAEs by 18 % in order to arrive at the Hard Limits of a PAE of 28,469 days.

Definition of a Fishing Day: For the purpose of the Scheme, a fishing day is defined as any calendar day, or part of a calendar day, during which a purse seine vessel is in the waters of a Party outside a port, but does not include days for which advance notice has been given that a vessel will be in the waters of a Party but will not be undertaking fishing activities, such as when a vessel is in transit. Vessel days involving fishing in more than one zone in a day shall be apportioned according to the distribution of reported positions in a day between zones. This principle also applies to days involving reporting from the waters of non-parties and the High Seas.

Fishing Power: Recognising that the fishing power of vessels varies, particularly with the size of vessels, the Parties decided that fishing days by vessels of different sizes should be accounted for as follows:

- Small vessels of less than 50 meters in length: 0.5 days;
- Vessels in the 50 to 80 meters range as equal: 1 day; and
- Vessels over 80 meters: 1.5 days.

Allowance for FSM and the Multilateral Treaty: In order to meet their obligations under the FSM arrangement and the Multilateral Treaty with the US, the Parties have set aside pools of fishing days to provide for fishing effort by FSM Arrangement vessels fishing outside the waters of their Home Parties and US Treaty vessels. The number of days in these pools has been calculated as the average fishing days based on the 2004 TAE in PNA waters. These determined the allocations for vessels fishing under the FSM Arrangement and the US Treaty. These were originally set at 2,670 and 3,540 but subsequently adjusted to 3,122 and 5,838 days to take account of adjustments in fishing effort and revisions made in CMM 2008-01. Both these limits have been consistently exceeded. The US to 5,838 days, 7,477 days, 8,920 days in 2008, 2009 and 2010; and FSMA by 3,122 days, 3,435 days and 5,592 days in 2008, 2009 and 2010. Under the current USMLT negotiations the US is seeking an allocation of 9,000 days, which will include 1,000 days from non-PNA parties.

Bringing the US fleet under the VDS scheme will reduce the Parties' individual PAEs and limit their development aspirations and ability to maintain existing fisheries arrangements. Negotiations reconvene in February 2012. However, based on recent communiqués between FFA and the US, it appears likely that PNA may well agree on a limit of 7,000 days.

Figure 6 shows the adjustments to vessel days, following the application of the weighting system.

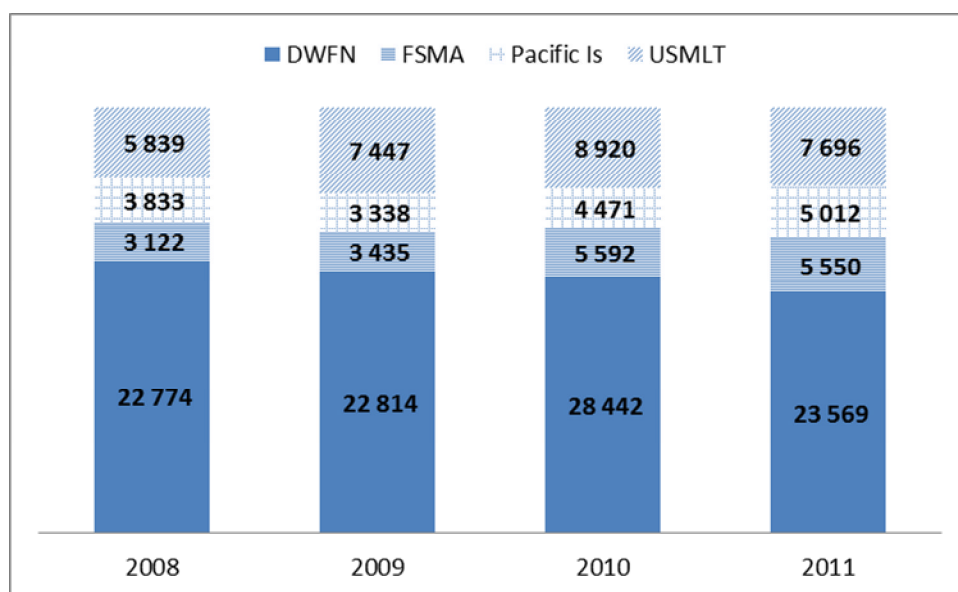


Figure 9: DWFN / FSMA and Domestic Purse seine effort by PNA licensed purse seine fleet

Source: PNAO.

Table 8 below provides the outline of the allocation between the parties under the VDS.

Table 8: PNA VDS allocations, uptake by management year (2008-2011) and transfers

Party allocation	Party allocation	Per cent	Uptake in MY 1-MY3			MY 4 (2011)			2012
			2008 ²¹	2009	2010	Adjusted PAEs	%	Uptake	2012 PAEs
FSM	6,253	22%	5,047	4,591	5,648	5,522	19%	5,040	5,522
Kiribati	6,194	22%	3,998	5,687	4,795	5,450	19%	4,379	5,474
Marsh. Is	2,727	10%	712	456	637	2,234	8%	2,234	2,234
Nauru	1,452	5%	1,511	1,507	2,139	1,653	6%	1,699	1,653
Palau	595	2%	163	80	118	514	2%	543	514
PNG	7,907	28%	12,286	10,606	15,030	10,073	35%	11,144	12,170
Sol. Is	2,361	8%	2,302	2,202	2,548	2,146	8%	1,899	2,310
Tuvalu	979	3%	588	1,022	973	877	3%	940	1,055
Total	28,468	100%	26,607	26,151	31,888	28,469	100%	27,878	30,932
Annual adjustments	MY1 (2008): Adjusted to take account of 13 month operational period, and transfers from MY2 to MY 1 (PNG); MY2 (2009): Transfer of unused fishing days (2008), underutilised days and extra credit to PNG (5,000 days) and Solomon Is (547 days); MY3: Overshoot in annual TAE 4,978 days, but VDS days in surplus from preceding years.								

Source: PNAO.

The PNA countries established a MoU (PNA, 2011) setting a minimum benchmark fee on 20th July²², 2011 agreeing the following:

- A minimum bench mark fee of US\$ 5,000 (€3,448) per fishing day under the Vessel Days Scheme shall be applied to foreign fishing vessels from 2012 as a non-negotiable bench mark;
- The minimum bench mark fee shall be applied to all foreign fishing vessels from the beginning of the 5th Management Year (MY5) (2012);
- Parties shall inform each other of their negotiations with foreign fishing vessels and collaborate with each other so that foreign fishing fleets do not play them off against each other; and
- The Parties shall duly inform foreign fishing vessels of the implementation of the minimum bench mark fee when they renew their bilateral access agreements for 2012.

²¹ The full operation of the VDS commenced with the first Management Year (MY1) of 12 months from 1 December 2007 to 30 November 2008 which was extended by an additional month to include December 2008 in order to align the subsequent Management Years of the VDS to a calendar year from the second Management Year (MY2 – 1 January to 31 December 2008) onwards

²² Kiribati was not present at the meeting but subsequently signed the MoU in August 2011.

Table 9 below summarises the present status of implementation of national VDS effort limits by the Parties.

Table 9: Implementation of PAE Allocations by PNA members at February 2011

FSM	All agreements except for the one with the EU incorporated the VDS and fleets allocated days per calendar year As from 2010. The VDS rate of US\$ 5,000/vessel day is incorporated into each Agreement upon renewal.
Kiribati	Kiribati implemented VDS to all Bilateral agreements renewed in 2011 including Japan, Taiwan, China and New Zealand. The agreements with Korea and EU lapse in April and September respectively. Stakeholder consultations suggest that Korea may be willing to pay US\$ 8,000 per day.
Marshall Islands	Marshall Islands has implemented VDS limits for all Bilateral Agreements, and has actively exchanged Vessel days with PNG, Nauru and Solomon Islands
Nauru	Nauru operated an Olympic system, closing the fishery as and when the PAE was reached. Nauru closed its EEZ to purse seine fishing in October of 2011. As of 2012 Nauru sold its Vessel Days by tender. The amounts have not been disclosed.
Palau	Palau operated an Olympic system up until 2011. VDS as from 2012.
PNG	Allocated vessel days to fleets in agreements. PNG traded days from Palau, FSM and Marshall Islands at US \$ 5,000/day
Solomon Islands	Vessel Days allocated to Korea, Japan and Taiwan in agreements. Trading took place between the Solomon Is and RMI, with a rate / vessel day set at US \$8,000 The Solomon Islands closed the fishery from 17 th June 2011, but this was reopened to the EU on 29 th January on the basis of the existing FPA.
Tuvalu	Tuvalu operated an Olympic system up until 2011. VDS as from 2012.
USMLT	Negotiations are taking place between the US and the Pacific island Parties. Negotiations (based on an exchange of letters) currently stand at a rate of \$10,000/Vessel Day (US\$ 60 million) per annum, with an additional development component separated.

Source: PNA Administrator.

The VDS is a very large management programme being applied by a group of developing countries of varying capacities. Taken together with the various other measures of the 3IA and CMM 2008-01, the VDS provides a central element in the management of the target stocks and is also an important element in the regional strategy to conserve bigeye.

It is not the principal job of this report to evaluate the VDS; however Table 10 presents some strengths and weaknesses of the VDS.

Table 10: Strengths and weaknesses of the VDS

Strengths	Weaknesses
<ul style="list-style-type: none"> • A binding Agreement on allocations of fishing effort • Has mechanisms to account for effort creep • Has high-level political support in the PNA Leadership • Is based on an extensive consultative process with stakeholders directly involved • Is accepted by the WCPFC as evidenced by its incorporation into 	<ul style="list-style-type: none"> • The lack of a clear link between the PAE and scientific advice on stock status • PAE allocation has been unsettled, and difficulties have been addressed in part through increasing the TAE and individual PAEs through <i>ad hoc</i> adjustments • Trading has been slow to develop • The <i>ad hoc</i> adjustments, lack of trading and high provisions for transfers between years resulted in high adjusted PAEs for 2010 and increased effort in 2010, including allowing the transfer, instead of removal, of effort from the closed HSPs

Strengths	Weaknesses
<p>CMM 2008-01</p> <ul style="list-style-type: none"> • Uses a centralized monitoring of effort by VMS • Has support from the FFA VMS and the Regional Observer Programme • Has monitoring (logsheets) and scientific support from SPC • Trading gathered momentum in 2011 	<ul style="list-style-type: none"> • Some Parties have overrun their PAEs, and it is not clear that the sanctions in the Scheme for over-runs are being applied • Limits have only been partially applied at national level • There are inconsistencies in the treatment of non-fishing days, with apparently high provisions for non-fishing days for one Party, while no provisions are made for other Parties; • The Scheme does not apply to archipelagic waters and effort has increased substantially in archipelagic waters of the Parties since 2004; • The FSMA effort is capped at 3,907 days but was exceeded in both 2010 and 2011; and • US effort is being brought into the VDS, but is likely to require an additional 2,460 days • Not accepted by all CCMs to the WCPFC

Source: Consultants' analysis;

In response to the early experience with the VDS, including the shortfalls in performance, PNA is reviewing amending the VDS Management Scheme to improve the Scheme including:

- Implementing target and limit reference points for skipjack tuna, which take account of the catch throughout the range of the stock;
- Requiring FSMA vessels to cease fishing once the cap for days outside home Party waters is exceeded in a Management Year;
- Revising the VDS weighting limits to take account of the catch, with the possibility of introducing a further limit on super seiners;
- Revising the PAEs to take account of changes to the USMLT; and
- Improving the trading mechanism between Parties to ensure all allocations are used within each Management Year (MY).

3.6.4 Niue Treaty

The Niue Treaty on Cooperation in Fisheries Surveillance and Law Enforcement was adopted in 1993 and all FFA Members, except Tokelau, are parties. The Agreement is legally a stand-alone Agreement although it was adopted directly in response to Article 5 of the FFA Convention (calling for the promotion of intra-regional coordination and cooperation in fisheries surveillance and law enforcement) and the FFA has certain administrative responsibilities under the Treaty and so, in practice, taking account also of the largely concurrent membership, the Treaty can be seen as a *de facto* subsidiary Agreement of FFA.

The Treaty is an Agreement on cooperation between FFA members on monitoring, control and surveillance of fishing, and includes provisions on exchange of information and procedures for cooperation in monitoring, prosecuting and penalising illegal fishing vessels. It is designed to complement the other management frameworks in the region, and specifically defines its relationship to harmonized minimum terms and conditions of access. Despite initial broad political support for the Treaty, there has to date been minimal implementation of it. In recent years, however, there has been renewed interest resulting in the organisation and implementation of joint deployment plans.

3.6.5 Regional Organizations (FFA and SPC)

FFA and SPC play significant roles in the management framework for the fisheries under assessment because of the support and services they provide both to PNA and the WCPFC.

3.6.5.1 Forum Fisheries Agency (FFA)

Based in Honiara, Solomon Islands, 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. FFA was established to help countries sustainably manage their fishery resources that fall within their 200 nautical mile Exclusive Economic Zones (EEZs). 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).

The joint aim of members of the FFA is captured in its Vision Statement, which states:

“We, the Member Countries of the Forum Fisheries Agency, will enjoy the highest level of economic and social benefits that is compatible with sustainable use of our tuna resources.”

Approximately 50 staff at the regional FFA headquarters in Honiara support their national contact points in each member jurisdiction. FFA focuses its work on:

- a) Fisheries management – providing policy and legal frameworks for the sustainable management of tuna;
- b) Fisheries development – developing the capacity of members to sustainably harvest, process and market tuna to create livelihoods; and
- c) Fisheries operations – supporting monitoring, control and surveillance of fisheries as well as treaty administration, information technology and vessel registration and monitoring.

Within the overall FFA programme, the Fisheries Management Programme is designed to assist FFA Members including PNA Parties, to refine and maintain effective policy and legal frameworks for the sustainable management of their tuna fisheries resources. This programme provides advice on:

- i. appropriate legal frameworks for national tuna management, including members' obligations under various treaties and arrangements;
- ii. appropriate fisheries management frameworks including the incorporation of the principles of ecosystem based fisheries management;
- iii. effective fisheries administration, including access arrangements, licensing of foreign and domestic fishing vessels, economic implications of different management systems, and the use of new systems and technologies;
- iv. development and implementation of monitoring, control and surveillance systems and effective compliance regimes;
- v. assisting members to keep abreast of best practice fisheries management models, and develop stronger and deeper regional co-operation in fisheries management;
- vi. providing effective oversight, and where appropriate management of a regional vessel register, vessel monitoring system, and observer program;
- vii. servicing regional fisheries treaties and arrangements; and
- viii. improving capacity in fisheries management.

Two key instruments in the implementation of these programmes are:

- 1 the Regional Tuna Management and Development Strategy; and
- 2 the Regional Monitoring Control and Surveillance Strategy.

In addition to providing services to FFA Members, FFA supports the WCPFC VMS through shared facilities with the FFA VMS, providing establishment, maintenance, diagnostic and support infrastructure and services, mobile transmission unit (MTU) or automatic location communicator (ALC) management services and communication gateways for the Commission VMS, along with training for Commission staff.

3.6.5.2 Secretariat of the Pacific Community (SPC)

With its headquarters in Noumea, New Caledonia, the Secretariat of the Pacific Community (SPC) is an intergovernmental organisation that provides technical and policy advice and assistance to its Pacific island members. SPC was established as an international organisation in 1947 and has 26 member countries and territories, including American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji Islands, France, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, United States of America, Vanuatu and Wallis and Futuna.

SPC services are provided primarily in the form of technical assistance, training and research.

The governing body of SPC is the Conference of the Pacific Community, which is held every two years, with each member entitled to one vote on decisions. However, debates are usually resolved in the Pacific way by consensus. The Committee of Representatives of Governments and Administrations (CRGA) meets annually, and in the years that the conference does not meet, is empowered to make decisions on the governance of SPC.

The focus of SPC's work changes over time in response to evolving regional needs and regional collaborative arrangements with other organisations. In 2010, the organisation has six divisions.

One of those Divisions is the Fisheries, Aquaculture and Marine Ecosystems (FAME) Division which includes the coastal fisheries and oceanic fisheries programmes, together with the project co-ordination unit of the Coral Reef Initiative for the Pacific (CRISP). Within the FAME Division, the Oceanic Fisheries Programme (OFP) aims "*to provide member countries with the scientific information and advice necessary to rationally manage fisheries exploiting the region's resources of tuna, billfish and related species*". The OFP is the WCPFC scientific services provider and a large portion of its scientific work is funded under the EDF SCICOFISH programme functions²³. It has three sections:

- i) **Statistics and Monitoring:** including compilation of catch and effort data, data processing and technical support for port sampling programmes and observer programmes in member countries and territories, training in fisheries statistics and database management, statistical analyses and the provision of statistical support to the WCPFC;
- ii) **Tuna Ecology and Biology:** including analysis of the biological parameters and environmental processes that influence the productivity of tuna and billfish populations, focusing on age and growth, movement and behaviour as observed from classical or electronic data archiving tags, and diet in a more general study devoted to the food web of the pelagic ecosystem; and development of mathematical models to understand environmental effects of tuna fishery production, including impacts of climate fluctuation; and
- iii) **Stock Assessment and Modelling:** including regional stock assessments, development of tuna movement and simulation models, bio-economic modelling, National Fisheries Assessments and scientific input to national tuna management plans and support for national Ecosystem Approach to Fisheries Management (EAFM) analyses, tag-recapture database management.

²³ See <http://www.wcpfc.int/doc/wcpfc-2010-dp33/eu-report-article-30-convention-and-resolution-2008-01>

The FAME Division Strategic Plan (2010-2013) (SPC, 2009) addresses three priority areas in ways that are designed to be closely coordinated with, and contribute to WCPFC-level research outcomes as follows:

- i) To provide high-quality scientific information and advice for regional and national fisheries management authorities on the status of, and fishery impacts on, stocks targeted or otherwise impacted by regional oceanic fisheries;
- ii) To collect and analyse accurate and comprehensive scientific data for regional and national fisheries management authorities on fisheries targeting the region's resources of tuna, billfish and other oceanic species; and
- iii) To improve understanding of pelagic ecosystems in the western and central Pacific Ocean.

The building of national capacity to monitor fisheries, manage data, provide technical support to fisheries management and participate meaningfully in regional management discussions is a cross-cutting priority.

The annual budget for the core scientific services for WCPFC was US\$700,000 / €573,770 for 2010, with additional funding for specific high priority activities.

3.7 The Eastern Pacific Fishery: Status and Management issues

3.7.1 Status and management issues

Since the EU tuna fleet share fishing effort between the WCP area and the Eastern Pacific Ocean (EPO) under the management of another RFMO (the IATTC), management and conservation rules adopted in the EPO bear consequences on the fishing strategy of the EU fleet. This section is intended to briefly review the main issues at stake in the EPO area and the likely consequences on the fishing possibilities available to the EU tuna fleet.

The most recent evaluation (IATTC, 2011a) of stock status for tuna fisheries indicates that:

- For yellowfin, MSY has been stable during the assessment period (1975-2010). However when a stock-recruitment relationship is assumed, current effort is estimated to be above the level corresponding to the MSY. There is uncertainty about recent and future levels of recruitment and biomass, and there are retrospective patterns of overestimating recent recruitment;
- For skipjack tuna, the main concern with the skipjack stock is the constantly increasing exploitation rate. However, the data- and model-based indicators have yet to detect any adverse consequence of this increase. The average weight was below its lower reference level in 2009, which can be a consequence of overexploitation, but it can also be caused by recent recruitments being greater than past recruitments. The continued decline in average length is a concern and, combined with levelling off of catch and CPUE, may indicate that the exploitation rate is approaching or above the level associated with MSY. The trend in many of the indicators changed in 2010, but it is uncertain what this implies;
- For bigeye tuna, the results indicate a recent recovery trend for bigeye tuna in the EPO (2005-2010), subsequent to IATTC tuna conservation resolutions initiated in 2004. However, under the current levels of fishing mortality, recent spikes in recruitment are predicted not to sustain this increasing trend. There is however uncertainty about recent and future recruitment and biomass levels, and the recent fishing mortality rates are estimated to be slightly above the level corresponding to MSY.

The main management tool in force in the EPO for purse seine fisheries is a seasonal closure. In 2007, the closure lasted approximately 1.5 month during the second half of the year. Given the need to further reduce the catches, the scientific committee recommended in 2008 an extension of the seasonal closure to 12 weeks (approx. 2.5 months) for the entire EPO with an additional closure of an offshore area located East of Galapagos for a period of approx. 3.5 months. During the 79th meeting of IATTC in 2008, the parties could not reach consensus and as a consequence, no management measures were adopted for 2008. At the 80th meeting of the Commission held in June 2009, IATTC staff tabled the same recommendation and the parties could finally agree on a 59 day closure in 2009, increased to 62 days in 2010 and 73 days in 2011. As concerns the closure of the offshore area off Galapagos, the parties could only agree on a 1 month moratorium, as opposed to the 109 days proposed by IATTC. At the most recent meeting, the 82nd meeting held 4-8 July 2011, the IATTC agreed a multiannual programme for the conservation of tuna in the EPO for 2011-2013 (IATTC, 2011b). The measures agreed include: a 62-day closure period each year for purse seine vessels; a closure of the fishery for yellowfin, bigeye, and skipjack tuna by purse-seine vessels within the area of 96° and 110°W and between 4°N and 3°S from 0000 hours on 29 September to 2400 hours on 29 October; all purse-seine vessels must retain on board and then land all bigeye, skipjack, and yellowfin tuna caught, except fish considered unfit for human consumption for reasons other than size (except for the last set of a trip).

Additionally, IATTC regulates purse seining on tuna associated with dolphins to set annual limits of incidental dolphin mortalities in the tuna purse-seine fishery in the Agreement area to levels approaching zero. Association of tuna schools with dolphins is fairly frequent in the EPO unlike in the other oceanic regions. Furthermore, IATTC imposes 100 % observer coverage of the larger purse seiners (includes all the EU purse seiners) predominantly to monitor incidental catch of dolphins but also to collect scientific data and to monitor compliance with IATTC management and conservation measures.

3.7.2 Issues of special concern to vessels fishing under the Kiribati FPA

Earlier comment has been made about the performance of Kiribati observers in the WCP. Additional comment is necessary on the issue observers in the context of WCPFC and IATTC interplay. A MoU between the two organisations was signed in 2011 to provide a cross endorsement of observers i.e. observers should be able to cover both areas. However the MoU has not yet been implemented as the two secretariats do not agree on the level of preparation and competency of observers, and further training is thus required. This means that vessels have to have IATTC observers when fishing in the EPO and a WPCFC endorsed observer²⁴ when crossing the 150 degree line. In practice this means they always have to have both observers onboard for any trip where there is a chance of fishing in both areas. This requires vessel owners to have to pay for travel for both observers.

A second issue affecting vessels operating under the Kiribati FPA, although not strictly a focus of this evaluation, is the WCPFC and IATTC overlap, which requires vessels to implement both area management provisions. This poses difficulties for vessel owners when such provisions are not harmonized i.e. closed periods in the EPO do not coincide with the three month FAD ban in the WCP.

²⁴ These observers are drawn from national observer programmes as there is currently no PNA/regional observer programme.

3.8 Fleets fishing in the Kiribati EEZ

3.8.1 EU purse seine fleet

At present, the EU has three ongoing Fisheries Partnership Agreements in the WCP area, with the Republic of Kiribati, the Federated States of Micronesia, and the Solomon Islands. These three partner countries are all parties to the Palau Arrangement. The Spanish purse seine shipowner association (OPAGAC) has concluded private agreements with Tuvalu (since 2009) and Tokelau (since 2011) and expects to conclude one with the Cook Islands. An additional private agreement with Nauru has been allowed to lapse.

As outlined in the previous sections, the EU purse seine fleet is a minor operator in the WCPO with only four vessels active and catches averaging below 29,000 tonnes per year (2007-2010). The EU purse seiners represent around 2 % of the total purse seine fishery, which is dominated by fleets from Asia and from Pacific island countries. The main fishing grounds of the European purse seine fleet remain the Indian Ocean and the Atlantic Ocean, with catches in the WCPO accounting for 7.25 % of total EU purse seine catches.

Table 11 presents EU zonal purse seine catches in the WCPO illustrating a Kiribati EEZ catch dependency of 43 % over the length of the FPA, and a HS dependency of 48 %. A small amount of catches occurred in Tuvalu waters (between 3,000-4,400 tonnes in 2008 and 2010 respectively), and Solomon Islands (around 400-1,300 tonnes in the same years). High Seas dependency is linked to dependency on Kiribati for EU vessels due to the fact that the Kiribati EEZ is split by High Seas areas.

Table 11: EU zonal purse seine catches in the WCPO (EEZ and HS) 2007-2010

	Kiribati	Solomon Is	Tuvalu	High Seas	Total	Kiribati dependency within WCPO	High Seas dependency
2007	4,133	0	0	18,825	22,958	18%	82%
2008	17,308	427	0	18,470	36,205	48%	51%
2009	12,806	0	3,240	10,517	26,563	48%	40%
2010	15,717	1,316	4,411	8,023	29,468	53%	27%
Average	12,491	436	1,913	13,959	28,799		
%	43%	2%	7%	48%	100%		

Source: SPC.

The fleet is very much a 'central pacific fleet' compared to many other fleets which operate more strongly in either the EPO, or in the WCP. Catches in Kiribati are not constant during the year, and fleet movements are mainly determined by fish migrations, but also by management measures, as can be seen in Figure 10. During the FAD closure in Kiribati vessels tend to move to the east.

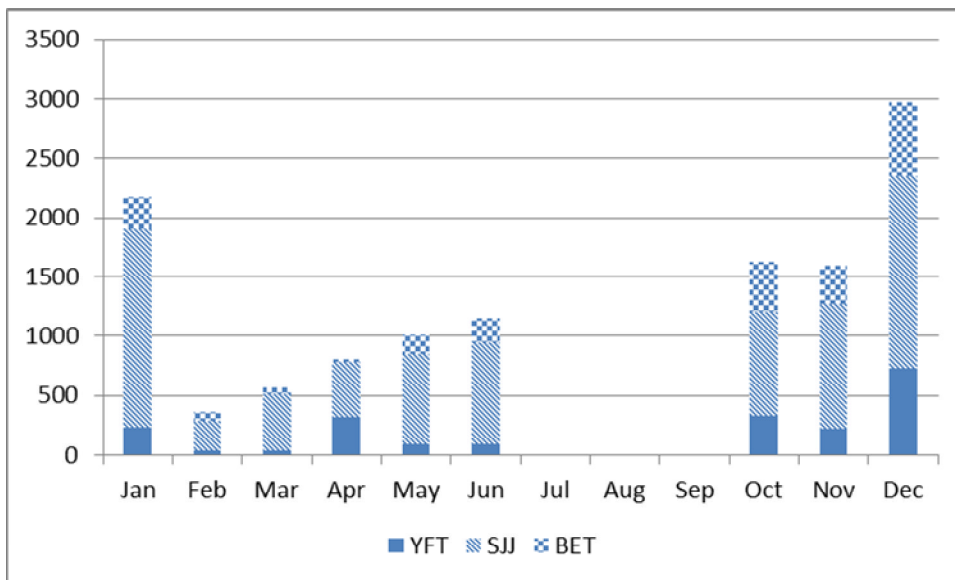


Figure 10: Monthly catches by EU purse seine vessels for 2010 by species (tonnes)

Source: European Commission. (YFT: yellowfin tuna; SJJ: skipjack tuna; BET: bigeye tuna).

Species dependency shows a 73 % dependency on skipjack tuna, 13 % on bigeye tuna and 14 % on yellowfin tuna (Table 12).

Table 12: EU purse seine species catch in the WCPO (EEZ and HS) 2006-2011.

	Skipjack	Yellowfin	Bigeye	Total
2007	15,354	4,322	3,282	22,958
2008	25,553	4,789	5,863	36,205
2009	19,677	3,070	3,816	26,563
2010	20,517	4,040	4,911	29,468
Average (2006-2010)	17,890	3,382	3,211	24,483
Percent of total	73%	14%	13%	

Source: SPC.

Table 13 illustrates a 47 % dependency and 46 % dependency on the Kiribati EEZ and HS. HS effort averaged 217 days over the period 2007 to 2010, exceeding the CMM 2008-01 (Table 2, Attachment B) effort limit of 103 days.

Table 13: EU purse seine fishing days by zone (2007-2010)

	Kiribati	Solomon Is	Tuvalu	HS	Total
2007	90	7	0	172	270
2008	269	34	10	274	585
2009	460	0	78	209	748
2010	350	15	32	168	564
Average	234	11	24	228	496
Percent of total	47%	2%	5%	46%	100%

Source: SPC. Note that contrary to SPC data, EU vessels are known to have fished in Solomon Islands in 2009.

The above data is sourced from SPCs, statistics unit.

Data from the Instituto Español Oceanográfico (IEO) (Spain) are the official catch data for the purpose of the FPA as agreed by both the EU and Kiribati. These data (agreed by the EU and Kiribati for 2007 to 2009), are different to the data held by SPC (see Table 14). The reasons for these discrepancies are not well understood, especially given that the EU provides data to the WCPFC, but EU fleet owners suggest²⁵ may in part be explained by the fact that SPC relies on logbook and port sampling which does not always cover the landings places of the fleets, and relies on some information from processors that may not be reliable (e.g. Bangkok processors record bigeye as yellowfin if under 5kg), while the IEO in Spain get information from logbooks and IATTC records that sample fish unloaded in Ecuador and processing information in Ecuador and El Salvador. As a counter balance to this, SPC data is cross checked against observer reports and VMS data²⁶.

Table 14: Catch statistics for EU fleet in Kiribati provided by different management organisations (2007-2010)

	EU /IEO	SPC
2007	8,671	4,133
2008	12,269	17,308
2009	10,625	12,806
2010	12,268	15,717
2011	13,247	12,491
Average	11,412	12,491

Source: IEO/ European Commission and SPC.

Estimates of catch dependency on the four Kiribati fishing zones are shown below. The table shows a marginally higher dependency on the Line Islands (43 %), followed by roughly similar dependencies in the Phoenix Islands (31 %) and the Gilbert Islands (26 %).

²⁵ OPAGAC, Pers. Comm., February 2012

²⁶ SPC-OFP Pers. Comm., February, 2012

Table 15: EU catch by Kiribati zone (2007-2010)

	Gilbert Islands	Line Islands	Phoenix Islands	TOTAL
2007	0	1,689	2,444	4,133
2008	8,490	2,995	5,824	17,308
2009	2,683	7,370	2,753	12,806
2010	1,734	9,409	4,574	15,717
Average	3,227	5,366	3,899	12,491
Average dependency	26%	43%	31%	100%

Source: SPC.

3.8.2 EU longline fleet

The activities of the European longliners operating in the Pacific Ocean take place primarily south of 20°S, outside the tropical area, targeting the swordfish stock. The fishing grounds overlap the area of competency of both IATTC and WCPFC. Catches in the WCPO originate essentially from the high seas east of New Zealand or from outside the EEZ of French Polynesia, but mainly as a continuation of fishing activities in the Eastern Pacific area.

The EU longline fleet commenced its activities in 2003, consisting of 10-15 surface longliners, and attempted to expand their fishing grounds towards zones in the Central South Pacific, with the area around 120° W becoming a new fishing zone, as an alternative to supplement the traditional grounds located closer to the South-America mainland in the SE Pacific. In 2004 and 2005 experimental fishery activities were undertaken in areas located in both the North and South Pacific, within the WCPFC convention area, which may explain why fishing authorisations were drawn under the FPA with Kiribati although no fishing has taken place inside the Kiribati EEZ. These experimental fishery activities involved the development of fishing patterns that were different from those used in routine commercial operations. Over the course of this activity, substantial differences were found in terms of the prevalence among the species caught, in both the target species as well as the bycatch species. The EU longliners returned to their traditional fishing grounds after estimating that the continuation of their usual fishing strategy targeted on swordfish and oceanic sharks was more lucrative than trying to enter and compete on the equatorial longline fishery for sashimi or albacore dominated by Asian interests. The number of vessels operating in this fishery fell to 6 in 2010 (WCPFC, 2010).

3.8.3 Non-EU distant water fishing activity in the Kiribati EEZ

Distant water nations and FSMA vessels both have a strong dependency on the Kiribati EEZ. Fleet dependencies may of course vary from year to year, but the US, Korea and Taiwan, together with the EU, make up two thirds of the average annual catch (Table 16), and FSMA vessels a further 20 %, including the four vessels registered in Vanuatu. These FSMA vessels, whilst registered in Kiribati, operate throughout PNA waters, and have no specific links to onshore activities.

Table 16: Catches of tuna (tonnes) by DWFN and FSMA purse seine and longline vessels in the Kiribati EEZ

	2007	2008	2009	2010
Purse seine				
<i>DWFN</i>				
US	23,053	45,466	87,500	64,721
Korea	57,657	66,202	92,692	53,381
Taiwan	11,915	20,265	38,059	26,661
EU	4,133	17,308	12,806	15,717
Vanuatu	11,090	9,563	15,257	5,120
Ecuador	7,143	20,226	3,344	6,033
New Zealand	8,611	3,885	6,531	5,144
El Salvador	2,203	7,818	6,064	4,268
China	365	3,521	1,907	1,252
Japan	2,086	5,089	3,007	55
Total Distant Water	128,256	199,343	267,166	182,352
<i>FSMA</i>				
Marshall Is	28,379	7,307	19,251	19,582
Papua New Guinea	12,882	19,265	26,078	19,835
Kiribati	1,136	0	3,432	12,160
Tuvalu	0	0	2,525	2,000
FS Micronesia	107	1,818	1,646	1,967
Total FSMA	42,504	28,390	52,932	55,544
Total Purse seine	170,760	227,733	320,098	237,897
Longline				
Korea	6,886	4,958	3,766	3,766
Taiwan	678	900	573	340
China	46	15	1,376	2
Vanuatu	652	268	500	
Japan			114	
US	46	-	-	26
Kiribati		51		
Total	8,309	6,192	6,329	4,134
Pole and line				
Japan	250	621	450	22
Kiribati			160	
Total	250	621	610	22

Source: SPC.

Table 17: Summary of foreign vessels licensed to fish in Kiribati waters, 2011

Country	Purse seine	Longline	Pole & line
	Vessel numbers		
Korea	28	112	0
Taiwan	26	48	0
PNG	11	0	0
EU	4	0	0
Ecuador	7	0	0
Vanuatu	17	8	0
New Zealand	3	0	0
El Salvador	2	0	0
China	1	75	0
Japan	35	9	3
USA	37	0	0
Kiribati	2	0	0
FS Micronesia	6	0	0
Marshall Is	10	0	0
Tuvalu	1	0	0

Source: MFMRD.

Additional data on catches by species and country for both purse seine and longline vessels are provided in Appendix H.

Kiribati historically has operated bilateral arrangements with 9 fishing nations, as well as being a participant in the USMLT. Specific agreement details are not available due to the confidential nature of the settlements, even though the consultants have made attempts to obtain such information. However, based on a number of indicators provided, it is possible to extract an estimate of the values by fleet segment (Table 18).

Table 18: Estimates of annual average licence revenues accrued to Kiribati in the period 2009-2011

Number of purse seine vessels covered by agreements (excluding USMLT and EU: (Korea, Japan, Taiwan, China, New Zealand, Ecuador, El Salvador, USA)	139
Number of longline vessels covered by agreements (Korea)	112
Number of pole and line vessels covered by agreements (Japan)	4
Average licence access fee per longline vessel (AUS\$ / €)	40,000 / 26490
Average licence access fee per pole and line vessel (AUS\$ / €)	40,000 / 26,490
Average fee per non EU purse seine vessel (AUS\$ / €)	201,000 / 133,133
Estimated fees from longline '000s (AUS\$ / €)	4,500 / 2,980
Estimated fees from pole and line '000s (AUS\$ / €)	160 / 106
Estimated fees from non EU purse seine '000s (AUS\$ / €)	25,293 / 16,750
EU fees from purse seiners '000s (AUS\$ / €)	1,919 / 1,271
Average annual income (2009-2011) all vessels '000s (AUS\$ / €)	31,872 / 21,107
Average fee/tonne (11,447t) caught for EU purse seine vessels (AUS\$ / €)	160 / 106
Average fee/tonne (194,279t) caught for other purse seines (AUS\$ / €)	130 / 86
Average fee/day (396 non-adjusted days) (adjusted for PNA weighting (1.5)) for EU purse seine vessels (AUS\$ / €)	3,299 / 2,185
Average fee/day (4,657 days) (adjusted for PNA weighting for other purse seine (AUS\$)	5,431 / 3,597

Source: Consultants' calculations. Notes: EU fees/figures average of 2009 to 2011 using provisional catch data for 2011, and based on SPC catch data and European Commission records of payments. Average X-R conversion of €1 = AUS 1.51 for 2009-2011.

Table 18 shows that EU purse seiners have been paying roughly the same as other fleets on a per tonne basis. The table also shows that the EU fleet paid AUS\$ 2,788 (€2,050) per weighted vessel day, as compared with AUS\$ 5,431 (€3,993) paid by other fleets.

A number of access agreements have been secured for 2012 which are all now based on Vessel Days. These are with Korea (1,235 vessel days), Taiwan (240 vessel days), and New Zealand (185 vessel days). These agreements are up to and including December 2012. All the access fees have been based on the PNA MoU of US\$ 5,000/Vessel Day (PNA, 2011). Additional agreements are expected to be concluded with China and Japan in 2012, ending December 2012. As of March 2012, 2,790 days remained unallocated with the EU, Vanuatu, Taiwan, El Salvador and Ecuador still to negotiate access rights. It is noteworthy that Kiribati has a PAE of 5,450 Vessel Days (Table 9) which are likely to be undersubscribed. This potentially represents additional access opportunities for EU purse seine (and other), or provides Kiribati with the opportunity to trade unused days with other Parties within the PNA. However, it is unclear as to how additional USMLT days may be accommodated, but it is believed that the current USMLT is requesting a contribution from Kiribati of 1,000 days. The negotiations presently stand at 7,000 Vessel Days from PNA. Kiribati's Minister has stated that all agreements will follow the PNA MoU on renewal²⁷.

The use of PAE days by foreign fleets in Kiribati is shown in the table below.

Table 19: Use of Kiribati PAE days, 2007 to 2010

Fleet	2007	2008	2009	2010	Average	VDS weighting	Average PAE days allocated, 2007-2010	Current uptake
USA	680	1,596	2,567	2,544	1,847	1.1	1,679	1000
Korea	1,448	1,570	2,063	1,406	1,622	1.0	1,622	1235
Taiwan	447	866	1,210	1,067	898	1.0	898	240
EU	90	269	460	350	292	1.5	195	
Vanuatu	347	257	264	168	259	1.2	225	
Ecuador	207	350	104	167	207	1.3	162	
New Zealand	239	135	204	127	176	1.0	176	185
El Salvador	114	173	131	122	135	1.3	108	
China	8	159	119	89	94	1.0	94	
Japan	63	189	100	2	89	1.0	89	
Grand Total	4,716	6,518	8,698	7,756	5,618		5,246	2,660
Kiribati PAE							5450	5450
Unallocated days							204	2,790

Source: SPC. Note that given that there was no allocation of VDS for the EU, the average figure of 195 in the table above for the EU is only an indicative figure for the purposes of this calculation.

3.8.4 Domestic sector

As noted earlier in this report, a very large percentage of the Kiribati population is engaged in small-scale fishing of some form or another, either commercially or on a subsistence basis. Whilst there are a number of vessels registered in Kiribati, there is no domestically based industrial tuna fleet. Small-scale fishing activities are concentrated around, but not exclusively based in, Tarawa where market conditions are better than in other parts of the country, and where the majority of the country's population is based. Catches are comprised of a mix of both tuna and reef fish, and are mainly made by small-scale vessels of under 7m in length.

²⁷ Minister of Fisheries Kiribati, Pers. Comm., February 2012.

Some tunas, and non-target species, such as rainbow runners, trigger fish and mahi-mahi, are also provided by purse seiners when offloading. These are sold through the agents, CPP through its domestic retail shops in Tarawa.

Domestic (small-scale and industrial) activity, along with the activities of visiting industrial vessels generates a certain amount of a) upstream activity in terms of vessels repairs, fuel, engines, b) unloading/transshipment services e.g. stevedores, and c) some downstream marketing/trading activity of domestically caught fish, and of sales of bycatch by foreign-flagged vessels.

Sales of bycatch from EU purse seine vessels can have some impacts on domestic market prices given the quantities involved, and the authorities are reported to be investigating methods of storing such catch so as to better release it onto the market more slowly and during periods of low domestic catches.

Chinese owners are also in the process of building a loining plant to cater for longline caught tunas. It is unlikely whether this will absorb landings from purse seiners, as the distribution chains are distinctly different. This activity will still however provide employment for up to 70 workers, and may provide an additional source for some food fish for the domestic economy.

Generally however, there is no tuna processing activity in Kiribati of any commercial scale. The costs of processing tuna (especially into cans) would mean that resulting sales would probably not be able to compete with processing locations elsewhere in the world (e.g. Bangkok) given both low labour productivity and the costs of production (e.g. cans, oil, power, cartons, water, etc.), which would be high given the need to import most inputs and the remote location of Kiribati.

3.9 Fisheries governance in Kiribati

3.9.1 Policy and institutional framework

The Kiribati Development Plan (KDP) defines the policy focus as a:

- Need to maximize sustainable economic benefits from the tuna resource;
- Need to conserve coastal resources in the face of rising demand for food and cash incomes; and
- Managing the transition from government research to commercial production and export.

Other policy areas emphasize the need for:

- Private commercial investment in marine and mineral resources and tourism;
- Strengthening the agricultural and fisheries extension service;
- Identifying most promising income-earning opportunities in outer islands and demonstrate commercial feasibility;
- Identifying participatory development strategies to manage increasing risk and design; and
- Cost effective adaptation.

Overriding governance priorities are identified as:

- Maintaining close collaboration with the PNA and FFA and to obtain maximum sustainable EEZ access fees promote public-private partnerships with reputable foreign investors in catching and onshore domestic processing of tuna;
- Conducting participatory education programmes with fishers and communities engaged with vulnerable species/stocks; and
- Ensuring legal sanctions are observed to enforce conservation regime and prosecute when necessary.

The Ministry of Fisheries and Marine Resources Development (MFMRD) is responsible for the definition of fisheries policy in Kiribati. It has five core Divisions and a staff of about 115:

- Fisheries Division;
- The Mineral Division (Management of Mineral resources);
- Resource Economics and Policy Division;
- Accounts, Administration and Human Resources Division; and
- Information Technology.

Staff from the Ministry's Fisheries Division represent the country at WCPFC, PNA and Forum Fisheries Committee (FFC) meetings, but higher level meetings (e.g. FFC and PNA) and meetings where there are Ministerial forums and binding decisions, may also be attended by the Minister and the MFMRD Permanent Secretary.

The Ministry is solely responsible for negotiating access agreements, but does so in consultation with the Minister of Fisheries. This task falls to the responsibility of the Resource Economics and Policy Division. This Division provides the management services that ensure planned results of the ministry are achieved. Its services include policy and planning, statistics, progress monitoring, asset maintenance, financial and human resource management. In addition to negotiating fisheries agreements, this Division deals with collection and formulation of project requirements from the other fisheries units and other projects identified priority for further submission for public funding and donor support. The unit is also responsible for monitoring projects such as the development components as specified in the annual recurrent budget, the Aus Aid Incentive Fund programme (see Box 2), and the implementation of sectoral policy/promotion of sustainability as specified in the EU/Kiribati FPA. The management of the EU funds is dealt with under budget issues.

Each of the five Divisions reports to the Permanent Secretary, and ultimately to the Fisheries Minister.

The Fisheries Division (FD), under the auspices of the MFMRD, is specifically responsible for the exploration, exploitation, development, utilisation, proper management and conservation of fisheries and marine resources encompassed within the EEZ. The long-term goal of the division is to maximize returns from these resources and ensures that resources are being utilized on a sustainable basis to ensure the attainment and continued satisfaction of human needs for the present and future generations of Kiribati. The FD consists of three principal sections (Figure 11), Oceanic Fisheries, Coastal Fisheries and Mariculture and Aquaculture.

Oceanic Fisheries is divided into two units - the Licensing unit, and the Monitoring, Control and Surveillance unit. The main objectives of the latter are to generate revenue from Kiribati marine resources through fishing access, to generate employment for workers on fishing vessels, manage the marine resources on a sustainable basis, and to carry out enforcement duties to protect the country's marine resources. To achieve these objectives the unit is tasked to carry out and to accomplish the following:

- Securing of fisheries access agreements with foreign partners;
- To carry out observer placements on foreign vessels to carry out scientific data collection on catch and gear technology;
- To implement the VMS Register and monitor the system;
- Registration and Licensing of Foreign fishing Vessels;
- Promoting of employment opportunities on foreign fishing vessels;
- Cooperating in monitoring, control and surveillance at regional and national level;
- Maintenance of the Unit's fisheries database management information system, simply known as (Fisheries Monitoring Information System (FMIS)); and
- To carry out port sampling work to verify catches made by fishing vessels, and disseminating of information.

Fisheries statistics form a component of this Unit, concentrating in the collection and analysis of relevant fisheries data. All purse seine and longline catch data is entered from the vessel logbooks onto the SPC Tuna Fisheries Database Management System (TUFMAN) data base.

Legal Counsel is seconded permanently from the Attorney General's office for drafting and implementing prosecutions.

Coastal Fisheries: This section inputs into the work of the Fisheries Division by monitoring of the fish resources through the collection of relevant fisheries data and surveys, monitoring of the export activities through the collection of fisheries data and issuance of commercial inshore licenses (<12 nautical miles), promoting the utilisation of marine products in a sustainable manner, providing assistance to local fishermen in the development of the fisheries on the island, monitoring fisheries ponds and compliance with closed areas.

Data are collected from commercial and subsistence fishermen where they fish mainly in the lagoon, reef and the ocean areas within 12 nautical miles. Other data of equal importance are compiled from the private fishing enterprises, fish and marine exporters that export their product overseas, marine products send from the outer islands to Tarawa and marine products send overseas as personal consignments.

This section also undertakes training for the fisheries staff both internally and at overseas institutions including training fishermen in the rural areas in the form of workshops. In addition, the section is also tasked with dissemination of fisheries related information to the general public in the form of posters, pamphlets, radio announcement and videos.

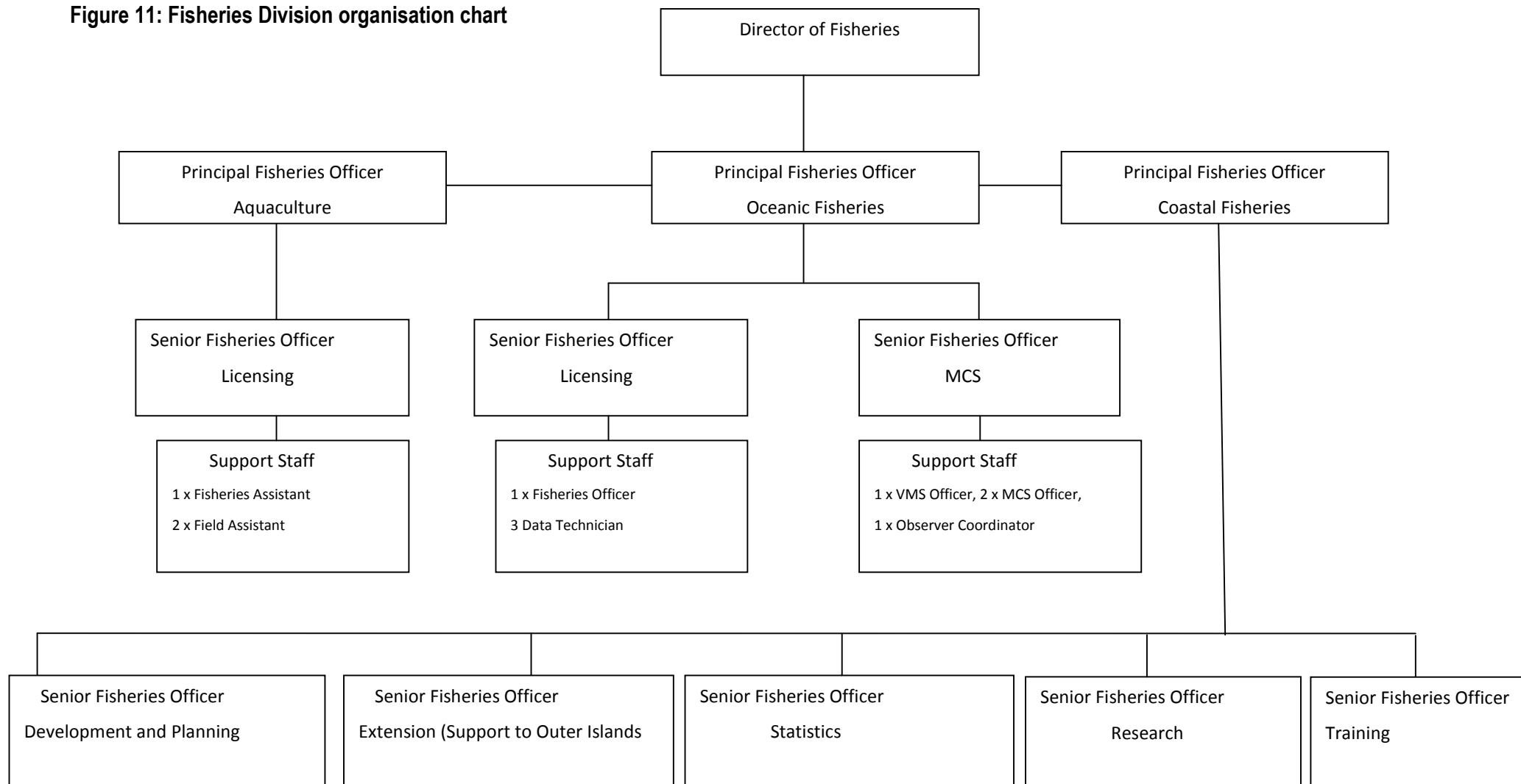
A unit also operates the Kiritimati Fisheries Development Branch which supports coastal fishers. The Gilbert Islands are also supported by Fisheries Assistants.

Mariculture and Aquaculture: The objectives of this section are to conduct research on marine resources that have potential for development and to coordinate collaborative research activities with regional research organisations. Past and current research activities include:

- Clam growth for the aquarium trade;
- Creation of a bêche de mer hatchery, site selection and management;
- The Seaweed Growth Monitoring Programme, which investigates *Eucheuma* seaweed growth rates at various locations and under various conditions with the aim of determining optimum sites and seasonality for farming;
- Giant clam stock assessment, including plans to investigate the potential for farming.

The section's Aquaculture Unit is also involved in research aimed at eradicating tilapia from the Tarawa milkfish ponds.

Figure 11: Fisheries Division organisation chart



3.9.2 Ministry of Fisheries and Marine Resources Development (MFMRD) Budget

The national budget is sourced from two elements: the budget to cover recurrent costs appropriated from Parliament; and the development budget covered to a large part by donor contributions. These are divided into two accounts (No 1 and No 4). Account No 1 deals with recurrent fund expenditure for each Ministry, whilst account No 4 deals with Development expenditure. As EU contributions are divided into payment for access and support for development, the access fees (including payments by the fishery sector) are fed into account No 1, and the development contributions for sectoral policy fed into account No 4. The MFMRD budget is also divided into recurrent and development budgets. MFMRD recurrent and development budgets were AUS\$1.85 mn / €1.37 mn in 2011, then reduced to AUS\$1.3 mn / €1 mn in 2012. The development budget was around AUS\$ 4 mn / €2.9 mn in 2011 with an anticipated increase to AUS\$4.1 mn / €3 mn in 2012.

Table 20: MFMRD Expenditure Framework, 2011 and 2012 (AUS\$ and €)

Description	2011		2012		Notes
	AUS\$	€	AUS\$	€	
<i>Recurrent fund expenditure</i>					
Salaries and staff amenities	1,270,543	882,322	972,013	720,010	
Travel	134,205	93,198	34,148	25,295	
Direct purchases	42,500	29,514	22,500	16,667	
Services and hire of plant	135,000	93,750	224,662	166,416	
Utilities	178,124	123,697	52,588	38,954	
Other	90,993	63,190		-	
Total Recurrent Budget	1,851,365	1,285,670	1,305,911	967,341	Around 65% of total costs are attributed to MFMRD activities
<i>Development fund expenditure</i>					
Fisheries Observer scheme	560,000	388,889	560,000	414,815	Government of Kiribati
Nonouti fish centre	177,014	122,926	177,014	131,121	Government of Kiribati
Donor development projects	2,911,686	2,022,004	3,000,000	2,222,222	Other external funds
EU sectoral policy	375,970	261,090	375,970	278,496	
Total Development Budget	4,024,670	2,794,910	4,112,984	3,046,655	
Total FPA EU payments as % of Total Development Budget		31%		29%	

Source: MFMRD.

Of all the fisheries access agreements, only two specify development support components: the USMLT allows for a development component of 15 %; and the FPA. The development budget was also the recipient of the Australian Incentive Fund in 2010 and 2011. The Development budget may also be supported by some contributions from national recurrent expenditure for specific activities such as the Nonouti Fisheries Centre.

3.9.3 *National Fisheries Laws*

Fisheries management in Kiribati is governed by the Act for Conservation, Management and Development of Kiribati Fisheries and Control of Foreign Fishing and for Connected Purposes (the Act), 2010.

The Act's objectives are to:

- Promote the sustainable management of fisheries of Kiribati and the development of the use of fisheries resources for the benefit of Kiribati, including the recovery of fees that reflect the value of the resource; and
- Protect marine stocks and the environment of Kiribati.

The Act lays down provision for the development of fisheries management plans which comply with the following requirements:

- Specifying the management and development strategies to be adopted;
- Providing for a scheme of licensing and if necessary other appropriate license measures;
- Specifying the license regime to be applied including limitations to be applied to local fishing operations and the amount of fishing to be allocated to foreign fishing vessels;
- Specifying information and other data needs to be provided by persons licensed to fish for that fishery; and
- Taking into account any relevant traditional fishing methods and practices.

When preparing a management plan, the Fisheries Director must consult with appropriate government ministers and departments, as well as fishermen, local authorities and other persons affected by the plan. Kiribati has a draft management plan for tuna, but this has not been formerly adopted.

The Act lays down the basis for penalties for infringements which may be in the range of AUS\$50,000 / €37,037 to AUS\$1 mn / €740,740. Contraventions of the conditions of a license for foreign fishing vessels are \$250,000 / €185,185 for the ship's master, and \$1 mn / €740,740 for the owner (or charterers).

Foreign fishing vessel licenses provide for fishing in Kiribati waters, loading, unloading and transshipping in Kiribati waters, and loading and unloading fuel supplies in Kiribati waters.

The Act specifies compliance with various international treaties including WCPFC CMMs, the Nauru Agreement and the Niue Treaty. These are implemented into Law following agreement at international (WCPFC) and regional (PNA) levels, and are binding. PNA Implementation Arrangements are underwritten by Ministerial Memorandums of Understanding, and transposed into the licensing regulations through the Minimum Terms and Conditions. However, despite agreeing to the amendments to the Third Implementation Agreement, Kiribati has been very slow to implement the required changes.

Foreign licensing conditions are provided in the license schedule by the Minimum Terms and Conditions, as advised by FFA (Box 4). These are required to specify compliance with the CMMs, the Nauru arrangement (and its subsidiary and associated arrangements) and any specific national measures.

The Act is currently being revised to include three additional amendments:

- To extend Kiribati's authorities legal jurisdiction to act on infringements in the HSPs – an evaluation of the legal basis for this within international law is not within the scope of this evaluation, but changes to the Act are motivated by the wish by the Kiribati authorities to ensure that it's Act enables it to act on behalf of WCPFC, primarily through providing for powers for inspection on the High Seas, and participation of observers;
- Strengthening the provision to include the implementation of the PNA 3 IAs; and
- Allowing for use of evidence and actions by non-Kiribati actions in enforcing fisheries regulations.

The Act is likely to be submitted for approval by Parliament in April, 2012.

3.9.4 Specific national marine protected area measures

Kiribati has established the Phoenix Islands Protected Area (PIPA) which is the largest marine protected areas (MPA) in the Pacific islands at 408,250 km². In addition, there are 11 MPAs in Kiribati, totalling 590 km² in area (Table 21).

Table 21: Marine Protected Areas in Kiribati

Designation	Name	IUN Category	Latitude	Longitude	Size (ha)
Closed Area	Cook Islet Closed Area (Kiritimati WS)	Ia	2°00'N	157°20'W	3
	Motu Tabu Islet Closed Area (Kiritimati WS)	Ia	2°00'N	157°20'W	1
	Motu Upua Closed Area	Ia	2°00'N	157°20'W	4
	Ngaontetaake Islet Closed Area (Kiritimati WS)	Ia	2°00'N	157°20'W	2
	North-west Point Closed Area (Kiritimati WS)	DE	2°00'N	157°20'W	13
Wildlife sanctuary	Birnie Island	IV	3°35'S	171°33'W	20
	Kiritimati	UA	2°00'N	157°20'W	32,100
	Malden Island (Closed Area)	Ia	4°03'S	155°01'W	3,930
	McKean Island	IV	3°35'S	174°02'W	57
	Phoenix Island (Rawaki)	IV	3°42'S	170°43'W	6,500
	Starbuck Island (Closed Area)	IV	5°37'S	155°56'W	16,200
	Vostock Island	IV	10°06'S	152°23'W	24

Relevant IUCN MPA categories are as follows: Ia: Strict Nature Reserve: protected area managed mainly for science; IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention; UA Unassigned.

Source: IUCN database (http://www.unep-wcmc.org/protected_areas/data/pacific.htm).

PIPA is nearly uninhabited and encompasses eight atolls, each with a 60 nautical mile protected perimeter, and two submerged reef systems. More than 120 species of coral and 520 species of reef fish have been identified in the area, as well as dolphins, sea turtles, and healthy seabird populations. It contains a near pristine coral archipelago with abundant marine and bird life, and is the first MPA in the region with deep sea habitat, including underwater mountains. The Republic of Kiribati and the New England Aquarium (NEA) developed the Phoenix Islands project over several years of joint scientific research and discussions, with funding and technical assistance from the Global Conservation Fund at Conservation International (CI) and, more recently, CI's Pacific islands Program.

Under a MoU signed by Kiribati, the NEA and CI²⁸, management and enforcement of PIPA will be financed through an endowment system that will cover the core recurring management costs and compensate the Kiribati government for the foregone commercial fishing license revenues. The size of the endowment will depend on the value of the fisheries to be closed, as well as projected PIPA administration costs; the final figure is being researched. The endowment is projected to last in perpetuity, assuming management of the protected area is administered in good faith by the Kiribati government.

Although a management plan for the site is not expected to be set for another year or so, it is anticipated that commercial inshore reef fishing, including by foreign vessels, may be banned in the PIPA. Subsistence reef fishing by the fewer than 50 residents of the Phoenix Islands archipelago will be allowed to continue. The PIPA also includes deep water, and it is unclear yet whether commercial fishing for offshore resources, like tuna, will

²⁸ Exact data unknown

be allowed. A review of the VMS tracts around Phoenix Island illustrates very high levels of dependency by EU vessel on this area. This is also highlighted in Table 15.

The consultants sought additional information from MFMRD about the status of plans for the PIPA without success, despite continued requests for clarification. However, MFMRD have stated that the President is supportive of PIPA, and a working group has been established. Currently 7 of the 8 atolls are fully protected as no take zones inclusive of terrestrial environments, lagoons, coral reefs and coastal habitat out to 12 nautical miles (22 km; 14 mi). One atoll, Kanton, has permissible harvest of resources for subsistence purposes only, for the government caretaker population. In Phase 2, it is reported that no take zones (NTZs) are to be increased by an additional 25 %. Priorities for an increase in no-take zones include full protection of the two submerged reefs and increasing protection of seamounts and around each atoll/reef island. No coordinates for PIPA were provided despite requests by the consultants.

3.9.5 *Monitoring, control and surveillance*

The core components of the Kiribati MCS system are:

- A complement of 100 observers, 90 based in Tarawa and up to 10 at Kiritimati;
- A MCS system, designed and supported by FFA;
- Enforcement officers, to monitor transshipments and landings; and
- A Fishery Patrol Vessel²⁹, managed by the Maritime Police.

Additional support is provided by the US Coastguard (Ship Rider), once or twice per year, and the New Zealand Royal Air Force, for occasional over-flights.

Kiribati also participates, along with other Pacific countries (Tuvalu, RMI, FSM and Solomon Is) in specific joint exercises. The last such exercise was *Operation Kuru Kuru*.

Usual non-compliance issues are reported to relate to fishing without a license (a common occurrence with longliners); and transshipping on the High Seas (again by longliners).

A specific problem as reported by the Kiribati authorities found with purse seiners has been the non-compliance with the no discards rule. Observers are noting very high levels of discards from FAD related fisheries, particularly from EU vessels. This is in contravention of the CMM 2008-01. Observers are reporting these during debriefing sessions, and the authorities are in the process of reviewing prospective actions for any further breaches^{30,31}. It should be noted however that the European Commission and the shipowners have not received copies of observer reports (an issue raised by the EU in WCFPC meetings with the EU having co-sponsored proposals with other long-distance fishing nations to reinforce the obligation to submit reports), and the European Commission has not been notified of any breaches in the regulations by EU vessels on which it could be expected to act. Earlier text (Section 3.6.1 page 27/28) has also already noted that the 2011 WCPFC 3rd Annual report for the regional observer programme highlighted that 57 % of observer trip reports due had not been submitted by Kiribati.

²⁹ One Australian-built Forum Class small patrol boat called *Teanoai*. The *Teanoai* was commissioned in 1994 and displaces 162 tons. The vessel has a top speed of 20 knots and is berthed at Bairiki Island in the Tarawa Atoll, part of the Gilbert Islands

³⁰ Director MFMRD, Pers. Comm., February, 2012

³¹ The consultants interviewed both observers and Observer de-briefers on general compliance and reporting issues. Non-compliance of the no discards rule was raised by both, and by other officials.

There have also been prosecutions of purse seiners discarding during transshipment, including one EU vessel; and non-reporting of catch in the logbook. No specific examples of the nationality of vessels were cited for the latter.

The Kiribati authorities are also aware of non-compliance on high seas fishing day restriction by EU vessels. However, this is not technically the subject of this evaluation, and is a matter for the EU and the relevant national competent authority.

Strengths of the MCS system in Kiribati are³²:

- High compliment of observers operating in the EEZ and the high seas on behalf of the WCPFC;
- Strong commitment and understanding of observers; and
- A functioning VMS system covering the EEZ.

Weaknesses in the MCS system are:

- Due to its extent, much of the Kiribati EEZ, as with most Pacific EEZs, goes unpatrolled;
- Insufficient financial resources to undertake the required duties, e.g. fuel for the fisheries patrol vessel;
- A need to strengthen the compliment of Fishery Officers;
- A need to strengthen the observer debriefing process so as to more readily detect non-compliance, e.g. with the no discards rule;
- A need to establish a core nucleus of Senior Observers, from the existing pool, to assist this process; and
- Network issues associated with the VMS³³.

Issues such as weaknesses in the observer reporting system have been noted. However, MFRDB appear to have responded to criticism and are scanning and dispatching observer reports on a regular basis. The main weakness with the observer operations, as mentioned above, is the need to increase the capacity of observer debriefers.

The functionality and strength of the MCS system has been complimented by a change to the Act, including an increase in penalties of up to \$1 mn / €740,740 or imprisonment for up to 10 years, for the serious offences such as fishing without a licence or transshipping without authorisation.

There are several key aspects of monitoring, control and surveillance and enforcement authorities and actions that are addressed in the Act. These include the authorities of Authorized (Fisheries) Officers to stop, board, inspect, or search the vessel; examine and take notes of all documents, gear and fish, processing or other activities; monitor fishing and processing operations; take samples; request licenses or other documents; direct the vessel to port or other area; arrest, detain, or seize articles as evidence (the vessel, gear, fish or other evidence such as poisons, explosives, etc.) with the provision of a receipt; or other lawful enforcement activities. The officer has authority to detain and arrest a vessel, master and crew *within fisheries limits, where he/she has reasonable and probable grounds that an offence has been committed*, but not outside those waters in a "hot pursuit" situation. The Authorised Officer is protected from obstruction, and is non-liaible for actions completed in the pursuit of their lawful duties. The standard activities leading up to, during, and following proceedings are addressed in the Act, e.g., jurisdiction of the courts, seizure of evidence and goods, detention, release on bond, disposal of seized goods such as forfeiture, and release of goods on a finding of "not guilty".

³² The consultants have been unable to report specifically on issues relating to traceability

³³ A report by MRAG (2009) identified network issues as an MCS problem. The consultants interviewed the VMS monitoring officer who stated that the network issues, whilst not perfect had improved considerably, with close to 24/7 coverage

Kiribati has no intention to implement an electronic reporting system and has not made provision for this in their revised Fisheries Act.

3.9.6 Catch certification

The implementation of the EU Illegal, Unreported and Unregulated (IUU) Catch Certificate Scheme (CCS) is laid down in Council Regulation EC 1005/2008 and subsequent legislation for third countries exporting marine fisheries products to the EU. While there are no fisheries exports from Kiribati straight to the EC, there are nonetheless obligations and best practices for Kiribati in terms of flag State duties, port State duties, and coastal State duties pertaining to implementation of the CCS. The European Union has not yet published the flag State notification of Kiribati. Hence, Kiribati cannot validate EU catch certificates for fishery products which are exported directly or indirectly to the EU. The fish stemming from Kiribati vessels exported for processing to a third State (e.g. Ecuador) cannot be re-exported to the EU after processing as the processed fishery product would still need to be accompanied by a catch certificate validated by the Kiribati authorities.

For product transshipped from the four EU purse seine vessels on land at Tarawa, the Kiribati competent authority should sign section 7 of the catch certificate through which they will confirm that the transshipment operation has taken place and such operation was authorised in accordance with its internal legislation and/or relevant conservation and management measures approved by a regional fisheries management organisation to which the third country is a contracting party or a cooperating party³⁴. For product transshipped at sea in Christmas island, the two masters of the fishing and carrier vessel should sign section 6 of the catch certificate, if such an operation is allowed under the Kiribati waters or under the relevant international rules. Assisting the Kiribati authorities to comply with the IUU regulation will shortly be the subject of a technical assistance project provided under the EU IUU Regulation Project (Accompany Developing Countries in complying with the implementation of Regulation 1005/2008 on IUU fishing – CRIS Number 2010/248-130 – and its one year extension).

³⁴ More details on how to fill-in the EU catch certificate can be found in Section 5.16 of the handbook: http://ec.europa.eu/fisheries/cfp/illegal_fishing/info/handbook_original_en.pdf

4 EX-POST EVALUATION SPECIFIC TO THE PROTOCOL OF THE FISHERIES PARTNERSHIP AGREEMENT

4.1 Introduction to the Fisheries Partnership Agreement

The EU has three Fisheries Partnership Agreements (FPAs) with 'third countries' in the Pacific. As with all FPAs, the Pacific FPAs have multiple objectives including: supporting responsible fisheries; better use of EU fleet capacity; creation of employment and value-addition both in the EU and in third countries; provision of product to the EU processing industry; and contribution to EU market supplies. The first Pacific FPA entered into force in 2003 with Kiribati, and was renegotiated in 2006, entered into force on the 30 April 2008, and runs from 16 September 2006 to 15 September 2012 (EC 893/2007³⁵). The current FPA with Kiribati is thus the second such FPA between the EU and Kiribati. In addition, in 2004 the EU negotiated FPAs with the Solomon Islands (renegotiated in 2009) and the Federated States of Micronesia (Protocol negotiated in 2010 but not yet in force). These FPAs provide for Spanish, Portuguese and French vessels to operate within the waters of the third countries.

All the current FPAs are complementary and reinforce and strengthen the EU's strategy to create a network of tuna fishing opportunities for EU fishing vessels in the Pacific Ocean. The FPAs are focussed on promoting partnership arrangements, which secure access for EU vessels to the highly migratory species (and in particular to yellowfin tuna, bigeye tuna and skipjack tuna), while at the same time providing financial contribution for access and support to fisheries sectoral policy.

These FPAs and related Protocols are in line with the Council Conclusions on the Fisheries Partnership Agreements (EC, Com 2002/637/final³⁶) and separate financial contribution for access rights, and support for sectoral fisheries policy of the third country. The current annual EU financial contribution to Kiribati under the existing Protocol is set €478,000. This is comprised of 6,400 reference tonnes at €65/tonne, plus sectoral support of €62,400 i.e. 15 % of the total payments. Out of the total financial contribution of €478,000, however, 30 % is devoted to supporting sectoral fisheries policy, with a view to promoting responsible and sustainable fisheries in Kiribati waters in the first year. During the second year of the Protocol, this percentage increases to 40 %, and to 60 % the following years. The Protocol covers a reference tonnage of 6,400 tonnes of tuna per year and fishing opportunities for 4 purse seiners (3 from Spain and 1 from France) and 12 long-liners (6 from Spain and 6 from Portugal). From the second year, at the request of the EU, the number of purse seine vessels might be increased if scientific assessment warrants such an increase. The contribution by vessel owners is set at €35 per tonne. In the event that the overall quantity of catches by EU vessels in Kiribati waters exceeds 6,400 tonnes per year as provided in the Article 2.1 of the Protocol, the amount of the financial contribution increases by €65 per tonne for the EU. However, the total annual amount paid by the EU is capped at a maximum of €956,800. For shipowners yearly fishing authorisations are charged at €35 per tonne for 600 tonnes per purse seine vessel fishing authorisation, and for 120 tonnes for longline vessels, with an additional €35 per tonne paid if catches in any year exceed these amounts.

³⁵ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:205:0003:0034:EN:PDF>

³⁶ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2002:0637:FIN:EN:PDF>

The technical conditions of the Protocol governing tuna fishing have been revised to take account of the practices specific to highly-migratory species fisheries. These include the placing of observers on board EU vessels and the obligation to employ fishermen from the ACP states (or a payment to the Kiribati authorities if the EU vessels do not so). Pending the creation of a regional observers' scheme within the framework of the WCPFC, Kiribati appoints the observers. Implementation of the Regional Observer Programme is based on the use of existing regional, sub-regional and national observer programmes already in place when the 'Conservation and Management Measure for the Regional Observer Programme CMM 2007-01 entered into force on 15 February 2008. CMM 2007-01 provides for gradual development of the programme through to 2012. Up to 700 observers are deployed in the region, representing 100 % coverage for all purse seine vessels³⁷. The Protocol also includes a VMS protocol.

4.2 Utilisation

4.2.1 Fishing authorisations and uptake of the possibilities negotiated

The Protocol provides for:

- 4 purse seine fishing authorisations, with 1 for France, and 3 for Spain; and
- 12 longline fishing authorisations, evenly split between Portugal and Spain.

As can be seen in Table 22, apart from two longline fishing authorisations taken by Spain during the first year of the Protocol (with no associated catches made), there has been 0 % utilisation of the longline fishing authorisation possibilities. The longline fisheries of the EU fleets are more directly linked to the temperate water fishery for swordfish rather than the tropical fisheries associated with tunas, which could account for the lack of uptake of the longline fishing authorisations.

However, utilisation of the four purse seine fishing authorisations has been 100 % for each of year of the Protocol. As can be seen from the table, Spain uses all four of the fishing authorisation possibilities under the Protocol. The French fishing authorisation possibility is provided by France to Spain each year, without any direct compensation being paid by Spain to France, as there is no French purse seine activity in the Pacific at the present time.

Table 22: Utilisation of fishing authorisations provided for in the Protocol

Fishing category	Fishing possibilities		2006/07		2007/8		2008/9		2009/10		2010/11	
	Country	Authorisations	Used	%	Used	%	Used	%	Used	%	Used	%
Purse Seiners	ES	3	4	133%	4	133%	4	133%	4	133%	4	133%
	FR	1	0	0%	0	0%	0	0%	0	0%	0	0%
	Total	4	4	100%	4	100%	4	100%	4	100%	4	100%
Longliners	ES	6	2	33%	0	0%	0	0%	0	0%	0	0%
	PT	6	0	0%	0	0%	0	0%	0	0%	0	0%
	Total	12	2	17%	0	0%	0	0%	0	0%	0	0%
TOTAL		16	6	38%	4	25%	4	25%	4	25%	4	25%

Source: European Commission. ES = Spain. FR = France. PT = Portugal.

³⁷ <http://www.wcpfc.int/regional-observer-programme>

4.2.2 Catches and utilisation of the possibilities negotiated

For all years since 2007 there has been more than 100 % utilisation of the reference tonnage of 6,400 tonnes per year, and an average of 178 % utilisation of the reference tonnage possibilities for the years between 2007 and 2011 (Table 23). It is important to note that the reference tonnage is not a quota per se, but rather a catch quantity used to estimate the minimum financial contribution paid by the EU to Kiribati under the Protocol on the basis of €65 per tonne, and the basis on which vessel fishing authorisation fees are calculated (at €35 per tonne). In the event of catches over and above the reference tonnage, the protocol to the Protocol provides for additional payments to be made to Kiribati by the EU of €65 per tonne up to a maximum of €956,800 i.e. double the reference tonnage, and by vessels of €35 per tonne. In 2011 provisional data show that catches recorded by IEO exceeded twice the reference tonnage.

Table 23: Utilisation of catch possibilities provided for in the Protocol

Fishing Category	Country year	2006	2007	2008	2009	2010	2011	Average	Average 2007 to 2011
Purse seiners	ES	2,799	8,671	12,269	10,625	12,268	13,247	9,980	11,416
	FR	0	0	0	0	0	0	0	0
	Sub-total	2,799	8,671	12,269	10,625	12,268	13,247	9,980	11,416
Longliners	ES	0	0	0	0	0	0	0	0
	PT	0	0	0	0	0	0	0	0
	Sub-total	0	0	0	0	0	0	0	0
TOTAL	0	2,799	8,671	12,269	10,625	12,268	13,247	9,980	11,416
Reference tonnage	0	6,400	6,400	6,400	6,400	6,400	6,400	6,400	6,400
% utilisation	0	44%	135%	192%	166%	192%	207%	156%	178%

Source: European Commission. Note data for 2011 provisional. ES = Spain. FR = France. PT = Portugal.

4.3 Costs of the Protocol

The total finances received by Kiribati under the Protocol for items specifically referred to in the Protocol text, are shown in Table 24. They are based on a number of elements:

- Financial contribution for access paid by the EU based on the reference tonnage;
- Financial support for sectoral policy paid by the EU;
- Financial contribution for access paid by the EU for catches over the reference tonnage;
- Payments made by vessel owners based on the reference tonnage in the form of fishing authorisation payments;
- Payments made by vessel owners for catches over the reference tonnage; and
- Payments made by vessel owners for vessel registration.

Table 24 shows that one payment which should have been paid (for sectoral policy) has not yet been paid (pending the JC meeting). Further comment is provided on this issue in Section 4.4 below and in Appendix C. Payments amounted to an average of more than €1.2 mn.

Further analysis of the payments made compared to the tonnages caught and the days spent fishing in Kiribati waters, again for the period 2007-2011, is provided in Table 25. The data serve to highlight some important points:

- Payments equate on average to €106/tonne, and to €5,016/day spent by EU vessels in Kiribati waters i.e. considerably more than the current PNA benchmark price of US\$5,000/day. However when these payments are converted into weighted days (with EU vessel days representing 1.5 vessel days – see earlier discussion on PNA weighting to reflect greater catching capacity of larger vessels), the payment per day on average over 2007 to 2011 was €3,350³⁸ / US\$4,675 i.e. close to the current PNA benchmark price of US\$5,000/day. These data are however strongly affected by low catches in 2007 which increase the payments made per day, and analysis for the last three years (2009 to 2011) presented earlier in Table 18 show considerably lower payments per EU-vessel day;
- Payments made by the EU against the reference tonnage of 6,400 for the financial contribution for access each year and the financial support for sectoral policy, total €478,400, which equates to €74.5 /tonne (€65 /tonne for access plus €62,400 per year for the sectoral support);
- The payments for sectoral policy and access are based on the annual year of the Protocol i.e. starting September, not the calendar year starting January. However, as the catches are reported in line with the regional reporting by calendar year, the money for additional catches are paid based on calendar years;
- Payments per tonne of fish caught have remained constant during the period of the Protocol, while as noted below, prices have risen by around 50 % over the same period. Payment per tonne as previously highlighted is broadly consistent with payments made by other countries and their respective catches;
- Payment by the EU in 2012 could for the first time be limited by the Protocol which states that EU payment for excess catches can only be twice the reference tonnage payments, if catches continue to rise; and
- The EU pays for 67 % of the total payments made to Kiribati, with fleet owners paying 33 %.

³⁸ Calculated as the EU plus fleet owner payments for each year summed and averaged, and divided by the averaged sum of the weighted days reported by SPC

Table 24: Payments made to Kiribati by the EU and fleet owners

EU PAYMENTS	Amount due €/yr	Amount paid (€)	Balance
A. Financial compensation for access			
2007	334,880	334,880	0
2008	287,040	287,040	0
2009	191,360	191,360	0
2010	191,360	191,360	0
2011	191,360	191,360	0
2012	191,360	0	191,360
Sub-total	1,387,360	1,196,000	191,360
B. Financial support for sectoral policy			
2007	143,520	143,520	0
2008	191,360	191,360	0
2009	287,040	287,040	0
2010	287,040	0	287,040
2011	287,040	0	287,040
2012	287,040	0	287,040
Sub-total	1,483,040	621,920	861,120
TOTAL A+B	2,870,400	1,817,920	1,052,480
C. Financial compensation for excess catches			
2007	147,615	147,615	0
2008	381,485	381,485	0
2009	274,625	274,625	0
2010	381,420	381,420	0
2011 (provisional)	445,055	n/a	n/a
2012	not yet known	n/a	n/a
Sub-total	1,185,145	1,185,145	0
TOTAL EU PAYMENTS A-C	4,055,545	3,003,065	1,052,480
FLEET OWNER PAYMENTS			
	Amount due €/yr	Amount paid (€)	Balance
D. Reference tonnage licences			
2007	92,400	92,400	0
2008	84,000	84,000	0
2009	84,000	84,000	0
2010	84,000	84,000	0
2011	84,000	84,000	0
2012	84,000	84,000	0
Sub-total	512,400	512,400	0
E. Registration			
2007	3,600	3,600	0
2008	2,400	2,400	0
2009	2,400	2,400	0
2010	2,400	2,400	0
2011	2,400	2,400	0
2012	2,400	2,400	0
Sub-total	15,600	15,600	0
F. Excess catch			
2007	219,485	219,485	0
2008	345,415	345,415	0
2009	287,875	287,875	0
2010	345,380	345,380	0
2011 (provisional)	379,645	n/a	n/a
2012	not yet known	n/a	n/a
Sub-total	1,577,800	1,577,800	0
TOTAL FLEET OWNER PAYMENTS D-F	2,105,800	2,105,800	0
TOTAL ALL PAYMENTS A-F	6,161,345	5,108,865	1,052,480

Source: European Commission for EU payments, fleet owner payments based on tonnages and registration fees. Notes: 1/ Potential payments for excess catches in 2011 estimated based on provision catch data, but 2012 not included. 2/ In 2009 only 262,175 was actually paid by the EU for excess catches, with 12,450 offset by DG Budget following a recovery by AIDCO of a Kiribati debt.

Table 25: Payments made to Kiribati per tonne of fish and per day, 2007-2010

	2007	2008	2009	2010	2011	Average
EU Payments (€)	626,015	859,885	753,025	859,820	923,455	804,440
Fleet payments (€)	315,485	431,815	374,275	431,780	466,045	403,880
Total payments(€)	943,507	1,293,708	1,129,309	1,293,610	1,391,511	1,210,329
Tonnes caught	8,671	12,269	10,625	12,268	13,247	11,416
EU payment/t (€)	72	70	71	70	70	71
Fleet payment/t (€)	36	35	35	35	35	35
Total payment/tonne (€)	109	105	106	105	105	106
Days in Kiribati	90	269	460	350	378	309
Tonnes per day	96	46	23	35	35	47
EU payment/day (€)	6,956	3,197	1,637	2,457	2,443	3,338
Fleet payment/day (€)	3,505	1,605	814	1,234	1,233	1,678
Total payment/day (€)	10,461	4,802	2,451	3,690	3,677	5,016
Total payment/day (\$)	0	0	0	0	0	0
Adjusted days (1.5)	135	404	690	525	567	464
Total payment/ adjusted day (€)	6,989	3,206	1,637	2,464	2,455	3,350
Total payment/ adjusted day (\$)	9,435	5,066	2,308	3,006	3,559	4,675

Source: Consultants' calculations with European Commission the source for EU payments and tonnages caught. SPC source for days spent in Kiribati. Note: Data for 2011 estimated based on provisional 2011 catch data provided by IEO, and assumes days in Kiribati based on catch rates per day as per.

4.4 Compliance with the covenants and obligations specified in the FPA

A detailed examination of the covenants and obligations required by the FPA, and the status of compliance with them, is provided in Appendix C.

The Appendix highlights that in many areas the covenants and obligations are being complied with by all parties. All vessels are duly registered and licenced, have VMS onboard, report catches, and take onboard observers. The Kiribati authorities have two designated accounts for the financial contribution for access and the financial support for sectoral policy as required. And the EU for their part have increased the percentage of the reference tonnage financial payments for sectoral support to 60 % as required. However areas of concern include:

- The failure of the Joint Committee (JC) meetings to take place until 2011 and the associated lack therefore of any monitoring of the implementation of sectoral policy against the specified indicators (although the sectoral development funds are reportedly being applied, and during the technical meetings the EU did request the relevant documents to enable such monitoring to take place);
- The slow payments in recent years for the financial support for the sectoral policy, in part also due to the failure of the JC meetings to take place, as the JC meetings are required to assess existing performance before authorizing additional payments;
- The failure to supply inspection certificates and observer reports to shipowners; and
- The lack of any real impetus towards joint enterprises or local landings for processing. EU vessel owners try to engage actively with the local sector, for example through permanent employment of shore-based labour, but there have been no real attempts for joint investments by EU and Kiribati private sector interests and no moves to support onshore processing. These requirements as laid out in the FPA are standard language that appear in all of the FPAs, and their failure to take place is explained by the fact that they make little economic sense in Kiribati where the private sector is weak in terms of both financial and human capacity, and where the economics of processing into cans are make little sense (see earlier discussion in Section 3.8).

4.5 Economic analysis of Protocol

4.5.1 Findings and discussion of the economic and financial impacts of the Protocol

4.5.1.1 Sales values

Price data are available for product shipped to Ecuador for processing as provided by OPAGAC. The cost of carriage to Ecuador is estimated at €150/tonne from Christmas Island, and €200 /tonne from Tarawa (due to the greater distance). The following table shows Carriage Insurance and Freight (CIF) prices in Ecuador, and the estimated average FOB ex-vessel prices for the three main species caught under the Protocol over the evaluation period. The table also shows percentage changes in prices over time for the three species. The table highlights how prices have risen considerably over the period of the existing protocol, and typically by around 50 % in absolute terms.

Table 26: Carriage Insurance and Freight (CIF) prices paid for fish caught by EU purse seiners fishing under the Protocol

CIF to Ecuador Species	€/metric ton			% increase on previous year		
	Skipjack	Yellowfin	Bigeye	Skipjack	Yellowfin	Bigeye
2006	645	1,197	806			
2007	762	1,392	950	18%	16%	18%
2008	966	1,400	1,105	27%	1%	16%
2009	706	1,039	904	-27%	-26%	-18%
2010	777	1,332	1,065	10%	28%	18%
2011	964	1,575	1,226	24%	18%	15%
Average 2007-2011 CIF	835	1,348	1,050			
Average carriage costs	175	175	175			
Average 2007-2011 FOB	660	1,173	875			
Price change 2006- 2011				49%	32%	52%

Source: OPAGAC for CIF prices (in absolute terms).

Prices paid to vessels fishing under the Protocol, can be compared to import prices for tuna in Bangkok, as shown in Figure 12. Even accounting for different carriage/transportation costs, the generally lower prices paid for fish caught under the Protocol and sent to Ecuador for processing are thought to reflect the smaller fish caught by EU vessels due to their high dependency on FAD-caught fish, and the smaller fish that tend to congregate around FADs. Price differentials for different sizes of fish exist because larger fish offer better quality meat and better processing yields. Bangkok reference prices for tuna 1.8-3.4kg may be increased by around 5 % for fish over 3.4kg, and reduced by 15 % for 1.4-18kg fish, and by as much as 35 % for fish less than 1.4kg.

However, it should also be noted that drawing firm conclusions about price differentials is difficult, as price data for catches made under the Protocol may also be affected by the vertically integrated nature of the fish catching and processing sector operation, and the potential for transfer pricing to be taking place between different links in the supply chain i.e. prices paid to vessels may be set higher or lower than would normally be the case, so as to reduce or increase respectively processing sub-sector profits. It has not been possible to explore in detail within this evaluation the extent to which this might be taking place, if at all.

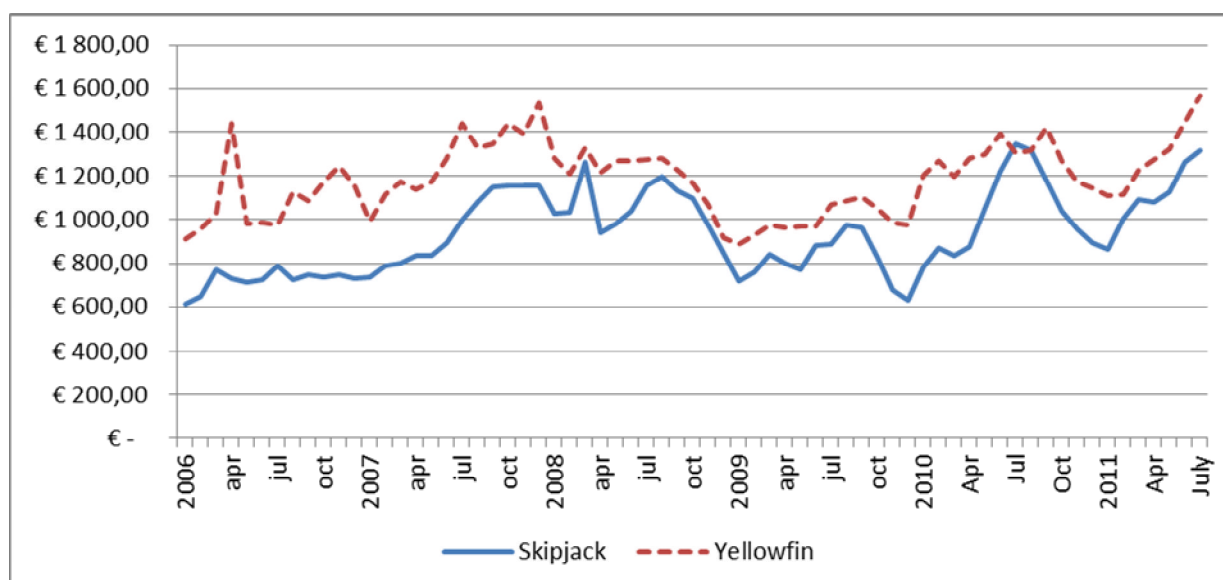


Figure 12: Average monthly import prices paid by Bangkok canneries for purse seine caught fish (Euro/tonne, 2006 to July 2011)

Source: <http://www.customs.go.th/Customs-Eng/Statistic/StatisticIndex2550.jsp>

Note: Prices are import prices to Thailand, and include carriage costs. Monthly \$ prices converted to Euros using mid-year exchange rate for each year 2006 to 2011. Bigeye tuna is not included in the price series/data due to the small volumes compared to the other two species.

Table 27: Average yearly import prices paid by Bangkok canneries for purse seine caught fish (Euro/tonne)

Year / species	Skipjack	Yellowfin
2006	723	1,089
2007	966	1,279
2008	1,059	1,208
2009	811	997
2010	1,031	1,272
2011	1,106	1,294
Av. 2007-2011	994	1,210

Source: as above.

Species sales values used in the economic analysis are shown in Table 28 (FOB prices i.e. excluding carriage costs to Ecuador).

Table 28: Average yearly ex-vessel prices (€/tonne)

Species	Skipjack	Yellowfin	Bigeye
2006	470	1,022	631
2007	587	1,217	775
2008	791	1,225	930
2009	531	864	729
2010	602	1,157	890
2011	789	1,400	1,051
Average	628	1,148	834

Source: OPAGAC.

Given the catch data available from IEO, as shown in Appendix D, catches made by the 84m vessels averaged €801/tonne over the period of the Protocol, whereas catches made by the 100+m vessels averaged €851/tonne. The difference is explained by the different species mix of the catch made by the two vessel classes each year, and the different yearly fish prices, which as shown in the table above differ each year in relation to one another i.e. the price differential between yellowfin tuna and skipjack tuna, and bigeye tuna and yellowfin tuna, is not the same each year. Over the period 2007 to 2011, 70 % of the catch of the 84m vessels was comprised of skipjack, 17 % of yellowfin, and 13 % of bigeye. The respective figures for the 100+m vessels were 68 % skipjack, 13 % yellowfin, and 19 % bigeye. The 100+m vessels displayed higher average skipjack prices over the period 2007 to 2011 (€781/tonne) than for the 84m vessels (€669/tonne), and so given the dominance of skipjack in terms of total production, even though average prices for yellowfin and bigeye over 2007 to 2011 were both slightly lower than for the 84m vessels, the weighted basket price of fish is higher for the 100+m vessels.

Total yearly value of catch made under the Protocol is shown in Figure 13, and demonstrates how the Protocol is becoming increasingly important for EU purse seine vessels in the Pacific.

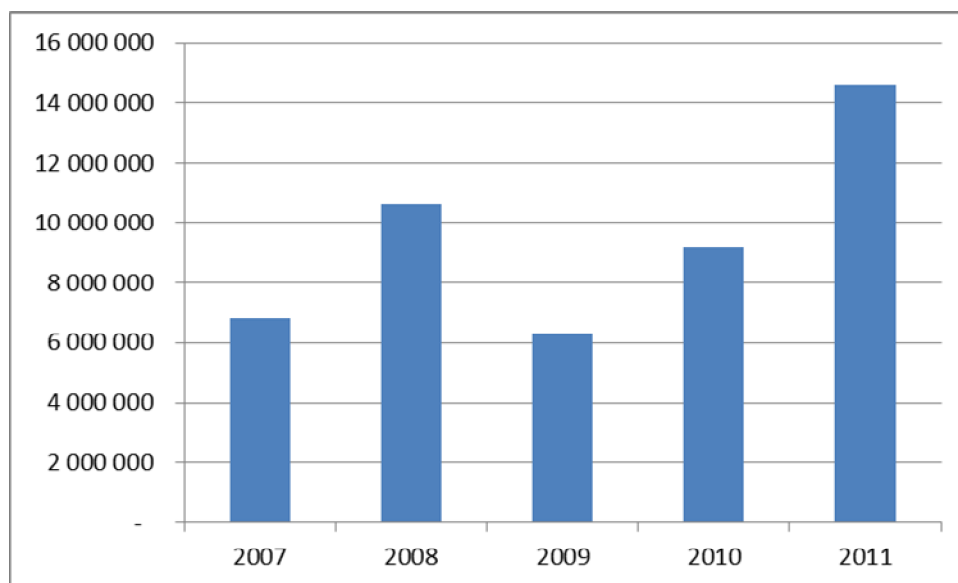


Figure 13: Annual value of catches made in Kiribati EEZ by EU vessels under the Protocol (Euros)

Source: IEO catch data (2011 provisional) provided by the European Commission, and prices provided by OPAGAC.

4.5.1.2 Value-added

The following table (Table 29) provides an estimation of the average annual value-added accruing from the Protocol, based on the methodology described above. The table shows that a total of €6.4 mn of value-added is accrued each year when considering the benefits to both the European Union and Kiribati.

Table 29: Average annual value added accruing to the EU and to Kiribati from the Protocol

Upstream sub-sector i.e. inputs	% in EU	% in Kiri	rate of VA	EU VA	Kiri VA	TOTAL
Port calls Kiribati		100%	75%		267,159	267,159
Insurance	100%		40%	114,168		114,168
Depreciation	100%		25%	890,269		890,269
Overhead/mgt charge	100%		100%	285,096		285,096
Fishing access rights		100%			1,210,329	1,210,329
Total upstream sub-sector				1,289,533	1,477,488	2,767,021
Catching sub-sector						-
Crew	60%	4%	100%	639,412	42,627	682,039
Observers			100%		52,113	
Vessel profit	100%			1,821,584		1,821,584
Total catching sub-sector				2,460,996	94,740	2,555,736
Downstream sub-sector						-
Fish processed in EU	45%		25%	1,060,847		1,060,847
Total processing sub-sector				1,060,847	-	1,060,847
TOTAL all sub-sectors				4,811,375	1,572,229	6,383,604

Notes: 1/ Upstream inputs only included if the value-added estimated is thought to accrue to either the EU or Kiribati

2/ Fuel not included in value-added estimations as taken at sea by tanker from international sources

3/ Repairs and maintenance assumed to take place in South America

4/ Port calls comprise the cost of labour for transshipment, supplies, management charges and taxes

5/ No repairs and maintenance take place in Kiribati, and vessels are assumed to split costs between Ecuador and the EU

6/ Vessels assumed to be insured and constructed in the EU

7/ Access fees considered and input and thus included in upstream sub-sector not in catching sub-sector

8/ Observer value-added based on standard \$50/day fee paid by vessels for days in Kiribati zone x 1.25 to allow for travel time and additional days vessels may have to pay observers to be onboard even when not fishing in Kiribati due to trip logistics

Source: Consultants' calculations.

Upstream sub-sector

In the upstream sector, average annual value-added accrues to Kiribati to the tune of €1.48 mn through port calls, and through payments made by both the EU and vessel owners providing for EU vessels to fish in Kiribati waters. The rate of value-added from port calls is high because of the large amounts of labour used during transshipment (with a 100 % rate of value-added) comprised of around 80 people working to tranship vessels over a 5-6 day period, and the transshipment taxes and other local taxes that are paid (also having a value-added rate of 100 %).

Upstream value-added in the EU is comprised of value-added made on insurance, value-added on vessel construction, and overhead/management charges. As Table 30 shows, value-added in the upstream sub-sector is estimated at around €1.3 mn.

Catching sub-sector

Catching sub-sector value-added (€94,740) accruing to Kiribati is limited to the 2-3 Kiribati crew onboard EU vessels, and the one observer on each vessel (given the 100 % observer coverage required). Fishing crew are onboard year-round, but the model and above table assume that only their earnings while fishing in Kiribati under the Protocol are eligible for inclusion in the estimation of value-added derived from the Protocol. Observers are onboard when vessels are fishing in Kiribati, but typically spend additional time on EU vessels as they have to be taken onboard at the beginning of any trip in which a vessel may move into the Kiribati EEZ, even when vessels may spend a part of that trip outside of the Kiribati EEZ.

For the European Union, the catching sub-sector generates considerable levels of value-added, primarily through vessel profits (more than €1.8 mn per year, and with vessel EBIT of 11 % for 84m vessels and 23 % for 100+m vessels), but also through EU labour employed on the vessels fishing in Kiribati under the Protocol.

Downstream processing sub-sector

There is no downstream processing sector value-added derived in Kiribati from the Protocol, as there is no processing of tuna caught under the Protocol. The model, and this evaluation, does not include any estimation of the very small amounts of value-added that might be made from sales in Kiribati of bycatch landed by EU vessels into Kiribati.

For the EU value-added is estimated at just over €1 mn per year. Of the total average yearly catch made under the Protocol (11,416 tonnes), it is estimated by OPAGAC³⁹ that 10 % is destined for processing in Bangkok, and the remaining 90 % for Ecuador. Of the 10,274 tonnes estimated to be processed in Ecuador each year, 50 % is processed into cans, and the other 50 % into loins which are then sent to the EU/Spain/Galicia for processing into cans. Thus 5,137 tonnes whole weight and 2,677 tonnes of loined weight (based on conversion factor of 0.485⁴⁰) are estimated to be processed in the EU, with associated levels of value-added in terms of labour and profits. It should be noted that labour value-added associated with the processing in the EU is relatively small because the major labour inputs in processing take place at the loining stage. Thus the Protocol is contributing to value-added in South America as well as in the EU. The fact that canning continues to be viable in Spain compared to elsewhere, may in part be explained by the lower weight of tuna cans in Spain compared to elsewhere in the world (a typical tuna can in Spain weighs 80g net and has a 52g drained weight). This means that relative to the tuna weight the price of steel and packaging and the vegetable oil are more important. When also considering marketing and distribution factors, and fact that Spain has a highly technically advanced and automated process to transfer loins into cans, this explains why in recent years it has still been economically viable to can in Spain.

Balance of value-added between sub-sectors and between the EU and Kiribati

Table 29 above allows for the calculation of the balance of value-added between sub-sectors, and between the EU and Kiribati. As shown in Table 30, EU value-added is concentrated strongly in the catching sector (51 % of total EU value-added), while for Kiribati almost all the value-added (94 %) is derived from the upstream/input sub-sector in the form of payments made by the EU and fleet owners.

When considering the total value-added to the EU and to Kiribati, the analysis shows that 75 % of all value-added accrued to the EU, and 25 % to Kiribati.

³⁹ Pers. Comm., February 2012

⁴⁰ See <http://www.iattc.org/PDFFiles2/TT-23-04-Tracking-and-certification.pdf>

Table 30: Balance of value-added between sub-sectors, and between the EU and Kiribati

Value-added	EU	% of EU	% of EU & KI	Kiribati	% of Kiribati	% of EU & KI
Upstream/input sub-sector	1,289,533	26.8%	46.6%	1,477,488	94.0%	53.4%
Catching sub-sector	2,460,996	51.1%	96.3%	94,740	6.0%	3.7%
Processing sub-sector	1,060,847	22.0%	100.0%	-	0.0%	0.0%
T total	4,811,375	100.0%	75.4%	1,572,229	100.0%	24.6%

Source: Consultants' calculations.

4.5.1.3 Costs and benefits

Table 31 below shows the costs and benefits of the Protocol to the European Union, to the fleet owners, and to Kiribati.

For the EU as a whole, the Protocol generated an average annual benefit/cost (B/C) ratio of 4.0, demonstrating that the Protocol provides good value for money with every €1 invested by the EU and fleet owners generating €4.0 of benefit in terms of value-added.

For the fleet owners, benefits from the Protocol are significant given that a large proportion of the total EU value-added benefits accrue in the catching sub-sector, while the vessel owners pay 33 % of the total payments made to Kiribati with the remaining payments made by the EU. The cost of access for vessel owners (€35/tonne) represents 4.1-4.4 % of the average weighted sales prices received for catches made under the Protocol. Annual average catch values made under the Protocol are close to €9.5 mn, and given operating and fixed costs, profits as a proportion of sales revenues range between 11 % and 23 % for the two vessel classes.

Kiribati received more than €1.2 mn per year on average from the European Union, plus smaller benefits in the form of value-added made from port calls made by EU vessels and from local crew and observers onboard EU vessels. When considering the payments made over the course of the Protocol per PNA-weighted vessel day, the analysis shows that there was not a significant difference in the payments received from the EU as opposed to from other countries, although as noted earlier these differences are more marked when only considering catches and payments over the last three years.

Table 31: Average annual costs and benefits (€) of the Protocol (2007 to 2011)

To European Community	Costs	Benefits	B/C ratio
Total value -added benefits		4,811,375	4.0
Total payments to Kiribati	1,210,329		
Payments to Kiribati per tonne of fish	106		
Payments to Kiribati per PNA weighted day	3,350		
To Fleet owners			
Payments to Kiribati	403,880		
Payments to Kiribati per tonne of fish	35		
Profit before interest and tax		1,821,584	
Catch value		9,503,211	
Operating costs per day	11,963 - 16,783		
Profit as % of catch value		11-23%	
To Kiribati			
Payments received per PNA-weighted day under FPA		3,340	0.9
Payments received per PNA weighted day from others	3,597		
Value-added from port calls		267,159	
Value-added from vessel crew		42,627	
Payments made for access and sectoral support		1,210,329	
Notes: Kiribati Benefit/Cost (B/C) ratio estimated based on difference between average yearly payments made under FPA over 2007-2011, and average yearly payments made by other countries for access 2009-2011			

Source: Consultants' calculations.

Given the flow of product from Kiribati through Ecuador for processing and on to the EU, and the fact that EU vessels operating in Kiribati are based out of Ecuador, the Protocol also generates considerable benefits to the Ecuadorian economy in the form of vessel supplies, and value-added (profits and employment) in the processing sector (both for canning and for loining). While to some extent these benefits may ultimately also accrue to the European Union through EU beneficial ownership of Ecuadorian operations, due to time limitations and budgetary constraints, this evaluation does not attempt to quantify the extent to which such benefits occurring from the Protocol in Ecuador could be considered as benefits to the European Union.

4.5.1.4 Supplies to the market

As noted above, an estimated yearly average of 10 % of catch made under the Protocol is destined for processing in Bangkok, and the remaining 90 % for processing in Ecuador. Of the catch processed in Ecuador each year, an estimated 50 % is processed into cans, and the other 50 % into loins which are then sent to the EU (Spain/Galicia) for processing into cans.

Canned tuna imports to the EU reached a high of 426,592 tonnes in 2007, but declined to 371,013 in 2010. The table below (Table 32) shows that catches made under the Protocol and canned in Ecuador contribute a small proportion of the total EU market for canned tuna (an average of 1.2 % per year). Kiribati FPA catches in 2010 represented 9 % of total canned exports from Ecuador to the EU (which itself represented 16 % of total EU imports of canned tuna), and a relatively high percentage (19 %) of total Spanish imports of canned tuna (28,362 tonnes) assuming that all cans from Ecuador using Kiribati FPA caught fish are destined for Spain.

With respect to the import of loins to the EU, the FPA catch in Kiribati accounts for around 3 % of loined imports to the EU market once a conversion ratio of 0.485⁴¹ is applied to the whole weight, 4 % of the imports of loins to Spain (which itself accounts for 64 % of total EU imports of loins), and 6.9 % of Ecuadorian exports of loins to the EU.

Spanish canned tuna production was reported as 226,418 tonnes in 2010, with loins from catch made in Kiribati under the Protocol contributing an estimated 1.2 % of Spanish tuna canning raw material imports.

Table 32: EU imports of canned and loined tuna and estimated contributions of catch made under the Protocol to EU imports

	Import of canned tuna to EU	Imports from Kiribati Protocol	% of imports
2007	426,592	3,902	0.9%
2008	424,865	5,521	1.3%
2009	378,432	4,781	1.3%
2010	371,013	5,521	1.5%
Average	400,226	4,931	1.2%
	Import of frozen pre-cooked loins	Imports from Kiribati Protocol	% of imports
2007	81,527	1,892.45	2%
2008	85,052	2,677.71	3%
2009	112,121	2,318.91	2%
2010	104,686	2,677.49	3%
Average	95,847	2,391.64	2%

Notes: Assumes constant 90 % of catch from Protocol destined for the EU, and 50 % as cans and 50 % as loins

EU canned imports include tuna in pouches as same tariff code

Loin to whole conversion ratio estimated at .485

Source: EU trade statistics and IEO catch data provided by the European Commission.

⁴¹ See <http://www.iattc.org/PDFFiles2/TT-23-04-Tracking-and-certification.pdf>

4.6 Employment analysis of the Protocol

The employment estimated to be generated by the Protocol is shown in Table 33, and is estimated at 98 Full-Time Equivalent (FTE) jobs. This employment generation represents 116 tonnes of fish caught under the Protocol for every one job, or 0.009 jobs per tonne of fish caught under the Protocol. While total EU FTE jobs are estimated at 51,158 EU jobs are in some way dependent on the Protocol (i.e. total jobs not accounting for dependency on Kiribati catch). Total FTE in Kiribati is estimated at 47, and Kiribati thus accounts for 48 % of the FTE resulting from catches made under the Protocol.

Catching sector FTE is estimated from the data on crewing nationalities⁴², the number of vessels operating under the Protocol (four), and the dependency of vessels on catches in Kiribati. It is noteworthy that 2-3 Kiribati crew are permanently onboard EU vessels, and the total number employed by the fleet is more than the six included as an objective in the Annex to the FPA. In addition the EU vessels take onboard Kiribati observers. It is also noteworthy that of the total crew around 50 % are from the EU, with the balance of around 40 % being sourced from South America.

Upstream jobs in the EU are based on a figure provided in the *Oceanic Developpement et al. 2008* methodological guidelines for jobs per vessel, and dependency of vessels on catches in Kiribati, and may well be over-estimated given the supplies and services to EU vessels operating in Kiribati waters coming from South America; the Protocol certainly generates upstream jobs in South America as well as in the EU. On the other hand it is likely that some of the jobs created in South America may be for EU nationals, but it is not possible within the scope of this evaluation to provide more quantitative estimates of the extent to which this might be the case.

Upstream jobs in Kiribati are based on three managers of logistical support employed in Kiritimati (Christmas Island) and two in Tarawa, and around 100 people employed when vessels land/tranship in Kiribati (converted in FTEs) for transshipment and other requirements, with each vessel landing taking an estimated 5 days (40 of these 100 are now under permanent contract to OPAGAC but also work unloading other vessels). Temporary manual labourers are reported to earn around €2/hour.

There is no downstream employment of any note in Kiribati resulting from the Protocol, but the loins processed in Ecuador and destined for the El Grove cannery in Galicia/Spain generate an estimated 9-10 jobs in the EU. The extent to EU-based processing sector employment is limited by the loining process taking place in Ecuador. A large proportion of the labour in canning is associated with cutting and cleaning tuna into loins, and this helps to explain why much of the catch is loined in Ecuador where labour costs are cheaper than in the EU.

⁴² OPAGAC, Pers. Comm., February 2012

Table 33: Employment generated by the Protocol

Catching sub-sector	73m	100m	Total for fleet	%
Fleet	2	2		
Vessel crew				
EU crew	15	15	60	51%
Kiribati crew	2	3	10	8%
Kiribati observers	1	1	4	3%
Other crew	10	12	44	37%
Total	28	31	118	100%
Dependency on Kiribati	25%	31%		
FPA related employment/vessel				
EU FPA related crew	3.7	4.6	16.7	51%
Kiribati FPA related crew	0.5	0.9	2.8	9%
Kiribati FPA related observers	0.2	0.2	1.0	3%
Other FPA related crew	2.5	3.7	12.4	37%
Total FPA related jobs	6.9	9.6	33.1	100%
Upstream sub-sector				
EU Jobs per fleet segment	44	44	88	
FPA related EU jobs	10.9	13.6	24.5	
Kiribati jobs			43.5	
Other country FPA related jobs	not estimated			
Downstream sub-sector				
Employment at El Grove/Galicia			300	
Yearly production capacity (t)			75,000	
Input of loins from FPA (t)			2,392	
FPA EU related jobs			9.6	
Total EU FPA-related jobs			50.8	52%
Total Kiribati FPA-related jobs			47.3	48%
TOTAL FPA-related jobs			98.1	100%
Jobs per tonne of fish			0.009	
Payments to Kiribati per EU job			23,810	
Tonnes of fish per job			116	
Notes: 1/ Upstream jobs based on estimate of 22 jobs per vessel for EC purse seiners in the Indian Ocean, quoted in Oceanic Development et al 2008 report on methodological guidelines				
2/ All jobs estimated on Full-Time Equivalent basis				

Source: Consultants' calculations.

Also emphasized in Appendix C, and earlier in Section 4.4, the social clause elements of the Protocol in terms of wage levels, seamen having contracts, etc., are all being fully complied with.

4.7 Effectiveness – The extent to which the specific FPA objectives were achieved

To what extent has the Protocol contributed to the development of responsible fishing?

The EU fleet plays only a small role in terms of overall fleet activity in both Kiribati and WCP. Its ability to impact on responsible fishing is therefore limited given the large number of purse seine vessels operating in the region from other flag States.

However, EU vessels have exceeded their reference vessel days allocated under the WCPFC Convention for time allowed in High Seas; while not directly relevant to this evaluation as outside the Kiribati EEZ, there is an indirect link in that a) the Protocol provides the basis by which vessels can operate sustainably in the region more generally, and therefore in high seas areas, and b) stocks exploited in the high seas areas are the same as those exploited in Kiribati waters. In addition, and more directly related to the evaluation of the Protocol, the strong reliance on FADs by the EU fleets (see Table 5) is a potential issue of concern given the higher catches of juveniles (and some resulting discarding so as to high-grade as reported by observers during consultations in Kiribati⁴³ contrary to Kiribati and CMM requirements) and the higher proportions of bigeye and yellowfin tuna in catches made on FADs (see Table 4 and Table 12). Earlier text in this report (see Section 3.4) highlighted concerns over bigeye stock status in particular. The strong reliance on FADs also results in high interactions with pelagic sharks, some of which are estimated to be in danger of overexploitation.

It is for that reason that the EU is supportive of FAD management plans to be adopted by WCPFC (as stated in a submission by the EU to the WCPFC in February 2012 on a CMM for the conservation and management of tropical tunas (bigeye, yellowfin and skipjack) in the WCPFC Convention Area). The EU also actively participates more generally in the WCPFC and its deliberations with regards to responsible fishing. Other ways in which the Protocol is contributing to the development of responsible fishing include: provision in the Protocol for a modification of the fishing opportunities should conservation and protection measures so require; support for sectoral policy; and the Protocol being a means by which EU vessels fishing in the Kiribati EEZ can be subjected to the management measures recommended by the WCPFC, the regional fisheries organisation covering the region to which the European Union is a full Commission Cooperating Member.

Sectoral policy support provided under the Protocol should also be contributing to responsible fishing, both by the Kiribati fisheries sector, and more generally by other nations fishing in Kiribati waters, through actions aimed at reducing IUU, strengthening MCS and improving management capacities to strengthen compliance. The extent to which this is in fact the case is difficult for the consultants to judge – as noted in Appendix C, part of the reason for the lack of sectoral support payments in recent years has been the failure by the Kiribati authorities to provide the EU with the documentation necessary to show that the sectoral policy matrix is being implemented, and so such documentation is not available for review by the consultants. During the consultants' consultations in Kiribati, the government stated⁴⁴ that sectoral development funds are being applied with the monies being committed to the various activities listed according to the matrix provided. However the consultants were not provided with a breakdown of expenditure commitments to verify that this was actually the case. It is also noteworthy that priority within MFMRD, focusses very much on deploying development funds, specific to the EU and the USMLT agreement, the fisheries administration budget has been cut. This is a worrying development against the background of the need to improve fisheries management systems per se.

⁴³ Pers. Comm., February 2012

⁴⁴ Director of Fisheries, Pers. Com, February 2012

Other areas of concern over the contribution and impact of the Protocol on responsible fishing include: some weaknesses in MCS capacities in Kiribati (as noted in Section 3.9); and a failure of the parties to adequately monitor the implementation of sectoral policy elements (noting that this does not necessarily imply that the sector policy elements are not being implemented).

To what extent has the Protocol contributed to the processing industry and the market in both the EU and the partner country?

The Protocol has not contributed to any forms of processing in Kiribati, as the only landings of catch in Kiribati are very small quantities of bycatch which are destined for the local market. The Protocol has not resulted in any joint processing enterprises being established in Kiribati. The reasons for this are explained by the potential economics of establishing processing/canning for export, as highlighted in Section 3.8.

As highlighted in the analysis in Section 4.5, the Protocol contributes to the EU processing sector, with around 45 % of catch made under the Protocol loined in Ecuador before being exported for canning in the EU. These loins represent around 2 % of the EU demand for imported loins. Canning of product in the EU generates both employment and value-added within the EU. The Protocol also benefits Ecuadorian processing operations which loin the tuna, and which also can around 45 % of catch made under the Protocol. The export of this canned product to the EU represented an average of 1.2 % of the total EU imports of canned tuna over 2007 to 2011.

A very high percentage (around 90 %) of all fish caught under the Protocol is destined for the EU market.

To what extent has the EU fleet exploited the surplus available in Kiribati?

In part this evaluation question relates to the extent to which the Protocol has contributed to responsible fishing, and comments made above therefore pertain. Earlier text in Section 3.4 demonstrated that while EU fleets have been exploiting 'surplus' skipjack stocks, for yellowfin tuna the stock is at least fully exploited and there is a 50 % chance that overfishing is occurring. However it is with respect to bigeye tuna that there is the greatest possibility that EU fleets are making catches from a stock for which no surpluses are available. Recent assessments show that overfishing of bigeye tuna is currently occurring, with catches around 7 % higher than the MSY, and with current levels of catch unlikely to be sustainable.

It is however also of interest that Kiribati has a number of PAE days allocated to it which up to now, it is not able to utilise. Some of this may be in response to climatic variations, which in the case of 2011 resulted in much of the fishing taking place in the west of the WCPO. Some historic under-utilisation also suggests that there may be some further opportunities for EU fleet activity. However, within the framework of the VDS, it is important to ensure that the TAE is set against specific Limit and Target reference points in order to ensure sustainable exploitation.

What has been the contribution of the Protocol to the activities of the EU catching sector?

The Protocol has been very significant for the four purse seine vessels utilising the Protocol. Catch rates and revenues show an increasing trend over the period of the Protocol, and vessels show a high dependency on catches made in the Kiribati EEZ. As a fleet based in the central Pacific and operating in both the WCP and the EPO, access to the waters of Kiribati is critical for overall vessel viability. The important contribution the Protocol plays to purse seine operations is evidenced from the high rates of utilisation as shown earlier in this report, and in 2011 provisional data suggest that catches exceed 200 % of the reference tonnage for the first time.

The Protocol has made no contribution to the activities of the EU longline sector. Two fishing authorisations were taken in 2007 but no catches were made, and in subsequent years no fishing authorisations have been taken and no catches made in the Kiribati EEZ.

To what extent has the Protocol been successful in creating employment both for EU nationals, and those in the partner country?

The Protocol is estimated to create roughly equal number of jobs in both the EU and Kiribati, and a total of 98 FTE jobs (see Section 4.6).

While 51 FTE jobs result from the Protocol in the EU based on catch dependencies, it is estimated that around 157 jobs are in some way dependent on the Protocol. The creation of EU jobs is lower in the processing sub-sector than in both the upstream and catching sub-sectors, and particularly for the estimate 60 EU nationals working onboard the EU fleet, the Protocol is important in creating and maintaining their employment.

In Kiribati employment creation is very strongly focussed in the upstream vessel support sector (e.g. transshipment services, vessel support, etc.), and the failure of the Protocol to generate any joint enterprises in either the catching or processing sub-sector has meant that few jobs are created in either of these sub-sectors. The reasons for this failure have been explained earlier in this report and relate to a weak local private sector, and the economics of local processing for export which would probably not create the conditions for viable export processing of canned product.

The Protocol also creates employment in South America, and in Ecuador in particular, in the upstream, catching and processing sub-sectors.

4.8 Efficiency – The extent to which the desired effects were achieved at a reasonable cost

To what extent is the cost of the fishing possibilities negotiated under the Protocol advantageous for the EU fishing industry?

Indications that the Protocol has been efficient for the fishing industry include the fact that access payments per tonne of fish have remained constant over the period of the Protocol, while ex-vessel fish prices rose by 49 %, 32 % and 52 % for skipjack, yellowfin and bigeye tuna respectively over 2006-2011 (see Table 28). At the same time as these price rises, vessel operational costs may not have risen significantly over the evaluation period – the single most important operational cost item for purse seine vessels is fuel, which accounts for an estimated 46-50 % of operational costs. Analysis of gasoil prices over 2007 to 2011 shows that the average yearly price did not rise over this period, in large part due to significant reductions in prices in 2009 and 2010 before prices rose again in 2011 to above 2007 levels. The access fees paid by vessels represent 4.1-4.4 % of the value of catches (see Appendix D). All of these factors help to explain the profits for vessels using the Protocol (earnings before interest and tax of 11-23 % of sales revenues – see Appendix D), and suggest that the cost of fishing possibilities negotiated under the Protocol are advantageous for the EU fishing industry.

However, the strong concentration of total EU value-added made in the catching sub-sector (see Table 29, and the relatively small value-added in the upstream and downstream sub-sectors in the EU (in part due to the reliance on South American vessel bases and processing) suggests that the Protocol is providing better value-for money for fleet owners than for EU tax payers.

The Protocol has resulted in the creation of jobs for the EU, and a measure of efficiency can be inferred from the fact that total combined payment from the EU (EU and fleet owners) per EU-job created over the evaluation period was €23,810 (see Table 33).

To what extent is the cost of the fishing possibilities negotiated under the Protocol advantageous for Kiribati?

Payments made to Kiribati over 2007 to 2011 were more than €6 mn, at an annual average of €1.2 mn (see Section 4.3). For the years 2009 to 2011, payments made by the EU under the Protocol represented 7 %, 4 % and 7 % of national fishing licence revenue. As described in Section 2, revenues from fishing licences traditionally provide between 23-30 % of Kiribati's government revenue, suggesting that Protocol payments account for around 1-2 % of total annual government revenues.

In addition to the revenue to Government from the Protocol, value-added of around €300,000 per year is created through onshore services provided to vessels during port calls, and through fishing crew and observers employed on EU vessels (see Table 29). The Protocol has however not been advantageous or efficient in generating any downstream activity in Kiribati, and there has been a failure through the Protocol to develop any on-shore processing capacity, for the reasons already elaborated in terms of the economic viability of doing so. The Protocol has however been successful in generating interest by EU vessels in supporting local employment creation, and this is reflected through MoUs between OPAGAC and the government, updated yearly, covering observers, stevedores, cooperation in field of a donated cargo vessel for inter-island transport, and a salt project in Kiritimati (Christmas Island).

The presence of the EU fleet provides an alternative to traditional fleets operating in the WCP, thereby strengthening the hand of Kiribati negotiators of access rights, through having a larger number of nations interested in negotiating access.

What is the cost-benefit ratio of the Protocol?

The Protocol has cost the EU an average of €804,440 per year over the period 2007 to 2011, and fleet owners €403,880 per year, with total payments from the EU thus averaging €1.2 mn per year. These costs have directly resulted in average yearly value-addition for the EU of €4.8 mn, with a benefit/cost ratio for the EU therefore of 4.0 i.e. for every Euro spent, €4.0 of value-added has been created. The Protocol has thus been efficient for the EU as described in Section 4.5.

Over the evaluation period of 2007 to 2011, the payments paid by the EU per PNA-adjusted fishing day, and per tonne of fish caught, were only slightly less than payments made by other countries for access to Kiribati waters (a benefit cost ratio of 0.9), although during the last three years payments received from the EU per PNA-adjusted fishing day have been less than the average payments received from other countries (see Table 18).

4.9 Sustainability – The extent to which positive / negative effects are likely to last after the FPA has terminated

How far has the Protocol ensured the viability of the EU fishing sector?

The Protocol has generated considerable levels of value-added (€2.5 mn) and profits for the EU catching sub-sector (€1.8 mn, equal to 11-23 % profit on sales before interest and tax) which has supported the investment capacity of the sector, thereby contributing to its sustainability (see Table 30.)

Financial and economic sustainability of the catching sub-sector in turn means that the Protocol has contributed to sustainable employment for the estimated 60 EU-crew working in the catching sub-sector. The strong dependency on Kiribati in terms of total catches (25 % and 31 % of total catches for the 84m and 100+m vessels respectively – see Appendix D), and the fact that the EU fleet is a central Pacific fleet, means that the Protocol has been very important in ensuring the sustainability of the four vessels fishing under the Protocol.

In contrast to the contribution to the viability of the purse-seine fleet, no longline vessels have been supported under this Protocol so there has been no contribution to longline fleet viability. Longline vessels from the EU

operate in the swordfish fishery that lies outside the EEZs of Pacific island nations and is, in any case, distinct from the tropical tuna longline fisheries.

In terms of the upstream sector in the EU, the Protocol has had no contribution to the sustainability of suppliers of operational inputs to the catching sub-sector in the EU, but may have made small contributions to the sustainability of vessel construction operations given the comments made above about the Protocol having supported investment capacity in the catching sub-sector.

Downstream of the catching sub-sector there has also been a small contribution to the sustainability of processing operations in the EU which process loins of tuna in cans, but this contribution is reduced by the levels of processing that take place in South America.

How far has the Protocol ensured the viability of the partner country fishing sector?

The fisheries catching sub-sector in Kiribati is predominantly small-scale with a large percentage of the population engaged in fishing activities in some form or other and the operations of the domestic fleet are such that there is no direct competition for resources or interaction between the fleets. The EU purse seine fleet is only a minor operator in the WCP, representing only 2 % of the total purse seine fishery. The limited catches by EU vessels as a % of total WCPO catches, and the current under-utilisation of Kiribati PAE vessel days, mean that the fishing under the Protocol does not appear to threaten the sustainability of the Kiribati fishing sector. The Protocol has also contributed to the capacity development of local fishing crew employed onboard EU vessels.

The activities and visits of foreign vessels, including those from the EU, contribute to the sustainability of the domestic upstream sector by providing revenues and employment opportunities i.e. for transshipment services, agents, etc.

The Protocol has not however been successful in resulting in any sustainable joint catching sub-sector operations, or in making any contributions to sustainable Kiribati processing sector operations (while there has been an initiative to develop a tuna loining plant, this has been an initiative related to the Chinese longline fleet and it is unlikely to cater for purse seine caught tuna).

The Protocol has also made important contributions to government revenues that are used to support the local fisheries sector. It is notable that the Protocol, along with US, is the only access Agreement where funds are allocated to fisheries sector development rather than directly to Treasury. Through these payments, the Protocol has contributed to the development of Kiribati fisheries sector by facilitating such activities as contributing to coastal fishery development projects, capacity-building in the sector, participation of Kiribati delegates in international meetings, and membership of international organisations. It could be argued that these activities would probably have taken place even in the absence of the Protocol but, at the same time, their financing would have reduced funding available for other initiatives. The administration and implementation of the Protocol also makes some contribution to government staff capacities and the revenue generated under the Protocol can support additional capacity development. Other comments have been made earlier about the difficulties for the consultants in determining the extent to which the sectoral policy payments are directly contributing to a sustainable and viable local sector.

Sales of bycatch from EU purse seine vessels may have had some negative impacts on the sustainability of local traders of fish, through the effect of sales of bycatch from purse seine vessels on reducing domestic market prices, although this issue has not been well researched during this evaluation. To the extent to which this may have happened, there may also have been corresponding benefits to local consumers in terms of reduced prices of fish. Both the government and the purse seine vessel owners are engaged in exploring options for storing fish and releasing this to the market at times of low domestic supply so as to minimize any negative impacts of the sale of purse seine bycatch in Kiribati.

4.10 Consistency – The extent to which positive / negative spill-over onto other economic, social or environmental policy areas are being maximised / minimised

How consistent is the Protocol with the CFP in general?

International fisheries instruments, including both the CFP and WCPFC management measures contain a number of requirements to manage capacity and fishing effort, to control catches, and to minimise bycatch. The CFP recognises the important role that RFMOs must play in managing regional stocks, and the need for the EU to participate in them⁴⁵, and so for the Protocol to be coherent with the CFP, it must also be coherent/consistent with WCPFC management measures.

The EU is a CCM to the WCPFC, and the Protocol is coherent with both the CFP and WCPFC policies and management measures. For example the Protocol is coherent with Commission Regulation (EC) No 500/2001 of 2001 laying down the rules for the application of Council Regulation (EEC) No 2847/93 on the monitoring of catches taken by EU fishing vessels in third country waters and on the high seas. The Protocol also contains a VMS protocol which is being followed, and all vessels must be duly licenced and registered as per the requirements of the CFP and WCPFC. In other aspects, there is coherence by the Protocol and vessel activities with other CMM measures including 100 % on-board observer coverage and the 3 month FAD closure, and because of the strong emphasis in the CFP on responsible fisheries and working within RFMOs, the Protocol is thus also coherent with the CFP in this regard.

Comment has been made under the section on effectiveness (Section 4.7) about the extent to which the Protocol is contributing to responsible fishing – a key principle of the CFP. The EU regulations and the Protocol are coherent in terms of prohibiting fishing on marine mammals and on shark finning. There are however some potentially worrying issues, most specifically the high discard rates of pelagic sharks, which as yet have not been fully addressed within the Protocol or WCPFC, with a corresponding lack of coherence with the CFP's efforts to support sustainable fishing operations. In this regard, there is evidence that pelagic shark species are heavily depleted, and the actions in force through CMM 2008-03, are inadequate.

The FPA also refers to, and is consistent with both the FAO's Code of Conduct for Responsible Fisheries, and with the International Labour Organisation's Declaration on Fundamental Principles and Rights at Work.

In what ways is the Protocol consistent with the other EU policies (i.e. development and cooperation policy, trade policy, environmental policy, etc.)?

Whilst the Kiribati Protocol specifies a sectoral support component, this is provided separately from other development assistance provided by the EU. The current 10th EDF (2008-2013) contains provisions for support for water sanitation and renewable energy and non-focal technical cooperation. Fisheries have remained outside of both the 9th or 10th EDF national programmes for Kiribati, and Kiribati is ineligible for direct support through the ACP FISH2 programme as support is intended to be provided through the Protocol (see discussion in Section 2.3). Given that the Protocol is so important to EU vessels, and that there are pressing needs for capacity development and other support, for example in the field of strengthening MFMRD capacity, this demonstrates a lack of coherence between direct development policy and the Protocol.

At the regional level there is better coherence in that regional 10th EDF focus includes fisheries issues such as training and capacity development for access negotiations, training of observers, etc. Support for SPC under regional programmes is entirely coherent with the Protocol and ensuring responsible fisheries.

⁴⁵ Communication from the Commission to the Council and the European Parliament Community - participation in Regional Fisheries Organisations (RFOs): [COM/99/0613](#)

To date, EU trade and FPA negotiations have been addressed separately, which might raise the prospect of potential inconsistencies. However, there is currently no domestic processing of fish for export to the EU, and the Protocol has no real bearing on Kiribati fish trade to the EU. There are therefore no inconsistencies in the Protocol text or its implementation, and EU trade policy.

The current FPA and Protocol are coherent with EU environmental policy given the strong emphasis on sustainable fishing (in the objectives of the Agreement and in Article 7 of the Protocol). The Annex also contains many provisions to ensure responsible behaviour by fishing vessels in terms of environmental policy e.g. respecting closed areas, the requirement for observers, and monitoring of vessel activity.

In what ways is the Protocol consistent with the fisheries and developing policy of the partner country?

At the national level there is consistency between the Protocol and Government development objectives as described in Sections 2 and 3. Access compensation under the Protocol can be used by the Treasury to support national development objectives as it sees fit. In addition, vessel activities and operations at Kiritimati (Christmas Island) make direct contributions to the government objective of development of the island and employment creation so as to reduce population pressure on Tarawa. Furthermore the JC meeting in April 2011 incorporated the development of the jetty at Kiritimati (Christmas Island) into the sectoral policy matrix.

With regards to coherence between the Protocol and national fisheries policy, financial support for sectoral policy development and implementation is based on the national development plan and the MFMRD plan and objectives, and this ensures a strong level of consistency between the sectoral policy matrix and national fisheries policy. However, in the implementation of the Protocol payments for sectoral policy implementation have been delayed with the result that the programme has been operational only from the second half of 2011 and the next JC meeting will consider the implementation of the sectoral policy matrix. At this stage it is therefore too early to assess how effectively the programme is being implemented or its impacts. The Protocol is consistent with and also stresses compliance with the national fisheries Act.

Perhaps the key issue of concern in relation to consistency however, is the fact that the Protocol is a tonnage-based Protocol, with payments for access made per tonne. National policy, in line with evolving regional initiatives, is now strongly in favour of negotiating and providing access based on vessel days (although this fact has not been directly communicated to the EU).

4.11 Relevance – The extent to which the FPA’s objectives were pertinent to the needs, problems and issues faced by stakeholders

Does the Protocol satisfy various needs of the different interest groups in the EU?

The Protocol most strongly meets the interests and needs of the Spanish purse seine fleet, and is highly relevant to this fleet. The Protocol has both a direct and strategic benefit for this fleet. The Protocol adequately provides for the needs of the Spanish fleet in terms of catch possibilities, as evidenced by the fact that there is no maximum quantity of catch specified in the Protocol. However, stakeholder consultations suggest that the Protocol would be even more strongly aligned with the needs of the Spanish fleet if it included four fishing authorisations for Spanish vessels, not the current three – at the present time Spanish vessels rely on the goodwill of France to let them use the French fishing authorisation possibility not used by France. The relevance of the Protocol to Spanish vessels is further evidenced from stakeholder comments about the extreme negative impacts that would result from not having a Protocol. With regards to longline fishing authorisations, Spain has indicated to the European Commission that it would like to retain three longline fishing authorisation possibilities under a future Protocol, suggesting that the current Protocol more than meets the needs of the Spanish private sector given that it currently contains six longline fishing authorisation possibilities.

While the FPA has provision for a French purse seine vessel, France does not maintain any purse seine activity in the Pacific at present, and the one purse seine fishing authorisation available for French vessels is, on its own, deemed by French stakeholders as an insufficient basis on which to commence activities given the benefits of vessels working in pairs/groups when searching for free schools (the focus of French activities). During the period of the existing Protocol French vessels have not attempted to fish in the Pacific, and consultations with stakeholders suggest that even had France had more than one fishing authorisation, it would have been unlikely that they would have been used. So in this sense the Protocol fully meets the *current* needs of French vessels, as well as fulfilling a requirement of French vessels to retain some possibility of fishing under the Protocol in the future should they chose to expand the area of their operations into the Pacific.

As evidenced by stakeholder consultations, the wishes of the Portuguese purse seine sector to have one fishing authorisation under a future Protocol, and their wish to have fished in the Pacific in recent years, both suggest that their needs have not been met by the existing Protocol. With regards to longline fishing authorisations, Portugal has indicated to the European Commission that it would like to retain three longline fishing authorisation possibilities under a future Protocol, suggesting that the current Protocol more than meets the needs of the Portuguese private sector given that it currently contains six longline fishing authorisation possibilities.

However, based on the actual utilisation of the Protocol, its provision for longline fishing has not been relevant for either Spain or Portugal in terms of actual longline activity, with stakeholder consultation confirming that there are no EU longline vessels operating in tropical waters. This is because EU longline vessels in the Pacific target swordfish in temperate waters far to the south of Kiribati waters. It is also noteworthy that the activities of this longline fleet in the WCPO have declined significantly since the formulation of the earlier Protocol.

The Protocol is relevant to the needs of EU consumers as evidenced by the fact that it provides for tuna supplies to the EU market, however, the quantities are small compared to the overall EU market as shown in Table 32, so the relevance is also small.

The Protocol is also relevant to the needs of EU processors, and stakeholder consultations confirmed that some catch made under the Protocol is destined for processing in the EU. However, the quantity of loins from catch made under the Protocol which is imported to the EU for processing into cans is small compared to total EU imports as evidenced by Table 32, and so the relevance of the Protocol to EU processors is not significant.

Does the Protocol satisfy the various needs of the different interest groups in the third country?

The Protocol is relevant to Kiribati, and satisfies its needs in terms of the income generated through selling access to its resource. As noted above, for the years 2009 to 2011, payments made by the EU under the Protocol represented 7 %, 4 % and 7 % of national fishing licence revenue, and 1-2 % of total annual government revenues. And as commented earlier, payments in return for access have been broadly consistent with payments made by other countries, on both a tonnage and days basis, over the evaluation period, although in recent years EU payments have been less than those made by other countries.

The Protocol does not however satisfy the needs/desires of Kiribati to have a Protocol which is structured around paying for access based on vessel days.

And while the FPA has an objective for the creation of joint enterprises and support for local processing activity, an objective which satisfies the needs of Kiribati, implementation of the Protocol has not managed to bring about any such activity i.e. these needs have not been realised, largely for the economic reasons already specified (see Section 3.8.4 Fleets fishing in the Kiribati EEZ)

5 ANALYSIS OF IMPACTS AND EX-ANTE EVALUATION OF A FUTURE PROTOCOL OF THE FISHERIES PARTNERSHIP AGREEMENT

5.1 Stakeholders to a future protocol and their views

The views of the stakeholders reported in this section, are the views reported to the consultants during the consultations completed during the completion of the evaluation (see Appendix B).

Kiribati authorities

Kiribati's Fisheries Minister, and the MFMRD are committed to following the VDS management system. They are seeking to establish parity in their access arrangements with all countries and to sell access based on days at sea, and not tonnage. They are also looking to establish an annual tender system which may be introduced from 2013 onwards. A number of countries (e.g. China and Japan) whose traditional allocations have been low, are now seeking to increase their access to the Kiribati EEZ, and the authorities in Kiribati feel that this places them in a strong negotiating position with all countries when negotiating access. The vessel day scheme also allows for unused days to be sold to other Pacific countries.

Kiribati would welcome a Protocol with the European Union on the basis of VDS. The benchmark figure for access is US\$ 5,000/vessel day, but the authorities are aware that higher access fees have been secured by other Pacific island countries, up to as much as US\$ 8,000/vessel day. This means that they are likely to be reluctant to engage in a 6 year Protocol, unless the financial contribution for access was deemed to be sufficient.

MFMRD is positive about the sectoral development component of the Protocol. There are internal struggles for budget between the MFMRD and the Ministry of Finance, and this element of the Protocol, guarantees funding to support fisheries specific development opportunities.

Kiribati is committed to implementing all PNA and WCPFC conservation measures. The requirement to implement these is explicit in their Fisheries Act. Stakeholder consultations suggest that Kiribati will seek to introduce the amendments to the 3 IAs including the increase in mesh size, closure of the high seas, and the whale shark measure, and that these will be introduced as part of an amendment to licensing conditions for foreign vessels fishing in Kiribati. The Kiribati Fisheries Act already contains a binding commitment to implementing arrangements advanced through a number of international agreements including WCPFC and PNA.

Private industry in Kiribati

Kiribati coastal fishers have no specific concerns about the activities of EU (or vessels from other countries), and recognise that the Protocol generates support funding for the sector. There are also no perceived threats to the sustainability of their activities posed by the activities of EU vessels.

The owners of the domestically-based purse seine fishing vessels, some of which are Spanish or South American owned, had no specific comments on the Protocol. A representative of the private sector, Peter Tiong, brother of the president., was not able to meet with the consultants, despite a number of attempts to raise a meeting.

European Commission

The European Commission is in favour of a tonnage based Protocol, as the EU is not a party to the PNA, and other FPAs in the region (Solomon Islands and Federated States of Micronesia) are tonnage based FPAs.

The European Commission recognises the importance of the Protocol to the EU private sector, and in particular to the EU catching sector.

The European Commission has concerns over the transparency of the VDS, and has not yet been formally notified by the Kiribati authorities that they intend to peruse a future Protocol based on the VDS.

Other concerns of a future Protocol relate in particular to the implications of potential WCPFC management measures which could be put into force during the lifespan of a future Protocol, and which could significantly impact on the value-added which would be generated for the EU.

The European Commission also hopes that under a future Protocol, the Kiribati authorities will be able to ensure more timely provision of the documentation and information needed before sectoral policy payments can be made.

The European Commission recognises the high level of juvenile bigeye (BET) tuna catches taken by EU vessels in the FAD fishery, and is willing to consider some direct measures to be included in the Protocol (Annex) to mitigate this problem.

Member States in the EU and their private sector industry interests

Stakeholder consultations with Member State officials and with private sector representation suggests that the views of Member States and their private sector are aligned. They are thus discussed here together. Member States and the private sector in the EU, especially the Spanish purse seine vessel owners, are keen to see a future Protocol agreed between the EU and Kiribati. Spanish vessels are very dependent on catches made in the Kiribati EEZ, and Spain would like to have a fourth fishing authorisation possibility for Spain included in a future Protocol to reflect the four Spanish vessels currently operating in the Pacific. Purse seine catches also generate benefits both upstream, and downstream, in Spain. While it is unlikely that Spanish longline vessels would use a future Protocol, Spain would like to see at least three longline fishing authorisation possibilities retained within as future Protocol.

The French purse seine sector wishes to see a future Protocol agreed, and for its purse seine fishing authorisation possibility to be retained even though it has no intention of using it in the short-term.

Portugal has also expressed an interest to the consultants of obtaining one purse seine authorisation to fish in Kiribati⁴⁶, but does not appear to have any plans to utilise the longline fishing opportunities in the future. Portugal has also expressed a desire to the European Commission to have three longline fishing authorisation possibilities retained in a future Protocol.

The EU private sector as a whole is concerned about the implications of potential WCPFC management measures which could be put into force during the lifespan of a future Protocol, and which could significantly impact on the value-added they would generate.

5.2 Sectoral policy development

In thinking ahead to a future Protocol, and noting the lack of information provided to the consultants during the mission to Kiribati completed as part of this evaluation, the consultants make a number of observations below with respect to the existing sectoral policy matrix in terms of its structure, content and implementation. These observations may serve to guide sectoral policy development supported by the EU within a future Protocol.

The general impression of the consultants is that the Objectives have been accurately identified, but that clearer distinction is required between fisheries management functions, MCS and economic development.

⁴⁶ This would be for a vessel which is currently Mexican flagged but beneficially Portuguese owned and already fishing in the Pacific. The intention would be to re-flag the vessel with a Portuguese flag if a fishing authorisation could be obtained for it. The vessel (called the Chac mool) is 62m in length and has a GT of 1,279.

In some cases, objectively verifiable indicators should be clearer, with means of verification better defined, so as to ensure that the deliverables directly relate to the EU programme, as opposed to other donor support programmes.

The Logframe

Objective 1: To promote conservation and management in the Kiribati fishing zone

1.1 To carry out MCS activities

Fish stock assessment, fisheries social and economic surveys, and stock enhancement programmes are activities that do not sit well within an MCS objective. All would be better placed under the Objective 'develop sustainably fisheries in order to optimise economic benefits'.

MCS activities have been implemented and infringements detected. However, the achievement of three trips per year, is itself not a sufficient deterrent to IUU fishing. Unlicensed fishing by longliners would appear to be a specific risk for the Kiribati EEZ. Efforts should be made to increase the frequency of marine inspection under the programme.

The logframe makes no specific reference to interaction with other MCS-coordinated activities, e.g. Operation *Kuru Kuru*. It is important to identify if surveillance at sea has been coordinated with International support exercises such as this, or others supported by New Zealand and Australia.

No reference is made to the strengthening of the observer programme. Particular attention should be paid to activities which relate to the FPA, most specifically, efforts should be made to monitor FAD catch and ensure that there are no discards, in compliance with CMM 2008-01. Infringements are reported anecdotally, but no actions have been taken, following observer debriefing.

Special attention should be paid to strengthening senior observer training and observer debriefing, and be listed as an activity in the Logframe.

Apparent weaknesses in real-time VMS reporting have been indicated. Whilst this may have been dealt with, the matrix should contain an indicator on the number of hours covered.

1.2 To improve management of fisheries

Development of management plans is a key priority, and is a laudable activity. However, the consultants could not find any management plans for tuna purse seine or longline fisheries. These should be developed as a matter of priority in conformity with PNA Implementation Arrangements and WCPFC resolutions. Specific attention needs to be paid to vessels (domestic and FSMA) registered in Kiribati, and the status of these vessels in terms of the application and control for management.

It is noteworthy that Fisheries Management Plans are central to the application of the Fisheries Act, so their omission should be rectified as a matter of urgency. The Fisheries Management Plans should in themselves contain details of specific Goals such as *Governance system strengthened, tuna resources exploited at sustainable levels* and fishery impacts on bycatch, by-product species, ETPs and benthic vulnerabilities. Results should be clearly defined with activities determined.

EEZ boundaries do not appear to have been finalised in the amendments to the new fisheries Act, and should be clarified.

1.3 To Develop an Information Technology (IT) tools for fisheries management

There is evidence that IT systems have been strengthened. MFMRD now has a dedicated IT unit, and the functionality of the VMS system and the use of the SPC TUFMAN database appears to have improved.

1.4 To increase knowledge of fisheries officials

It is apparent that in-house training has taken place. However, it is not clear whether this is directly in response to the EU support programme, or wider regional support such as DEVFISH II. A clearer distinction should be identified in the form of *Objectively Verifiable Indicators* and *Means of Verification*, allowing for a distinction between the various support programmes.

Objective 2: To develop sustainably fisheries in order to optimise economic benefits**2.1 To improve fishing techniques**

It is not clear what this activity is for. It would seem that activities mentioned under Objective 1 should be transferred to this section.

It was reported that MFMRD was encouraging use of FADs for domestic fisheries, so as to encourage some diversification away from coastal activities. This is not mentioned in the Logframe, and would appear to be an appropriate activity, recognising the importance of the domestic industry.

2.2 To develop a fishing infrastructure

Number of jetties built, appears to have been a deliverable outcome, and would demonstrate good visibility.

2.3 To carry-out small-scale initiatives

No comment is provided on this objective due to a lack of information available to the consultants.

2.4 To increase the revenue from foreign/local fishing authorisations

This development would appear to be in progress. However, there may be a need to address fee structures for the growing interest by foreign longliners, seeking to target albacore, yellowfin and bigeye tuna.

Objective 3: To improve safety and quality of fishery products for export**3.1 To develop an infrastructure for fisheries export**

Development of ice plants to support the domestic sector might be better placed under optimising economic benefits. The activity appears to be taking place.

Development of transshipment support services and an improved jetty at Christmas Island could be considered under a future Protocol with potential support under the EU 11th EDF programme, investment banks (such as the European Investment Bank), and private sector parties (e.g. fleet owners from the EU and other nations which might seek to use an improved facility).

3.2 To establish the Competent Authority (CA)

This activity appears to be in process with training of officers and staff in Fiji. However, the indicators have not been reported in the log frame. It is also not clear from the matrix if this objective relates to a CA with respect to fish health and hygiene requirements and HACCP, or to the EU IUU regulation and the implementation of a catch certification scheme and the issuance of catch certificates. Nevertheless this objective appears to be an important one for a future Protocol.

5.3 Ex-ante evaluation criteria

This final section presents in short tabular form some key points based on the ex-ante evaluation criteria specified in Article 21(1) of the 2009 EU Impact Assessment Guidelines.

Table 34: Ex-ante evaluation of the renewal of the EU/Kiribati Protocol

Ex-ante evaluation criteria	Main points for consideration
Needs to be met (short- and long-term)	<p><i>Short term</i></p> <p>EU needs:</p> <ul style="list-style-type: none"> • Maintenance of existing fishing opportunities for the EU fleet, within the context of fishing operations within the WCP, so as to generate value-added and employment for EU companies and citizens, and viable and sustainable fisheries-related activities; • Contribution of fish to the EU market; and • Compliance with the covenants and obligations of the FPA. <p>Kiribati needs:</p> <ul style="list-style-type: none"> • Funds to support the general government budget, from the sale of access to Kiribati resources; • Funds to support sectoral policy development and implementation; • Sale of access based on rates comparable with those charged of other nations in Kiribati and in the region; and • Compliance with the covenants and obligations of the FPA. <p><i>Long term</i></p> <p>EU needs:</p> <ul style="list-style-type: none"> • As per short-term above. <p>Kiribati needs:</p> <ul style="list-style-type: none"> • Development of viable and sustainable fishing-related activities to include not just upstream vessel support and transshipment services, but also catching and processing sub-sector activity; and • Plus as per short-term above.
Added-value of EU involvement	<ul style="list-style-type: none"> • Requirements of the FPA for separation of funds into access payments and support for sectoral policy development means that the sector can benefit (in terms of management, development and improved human capacity) from having funds ear-marked for it, rather than having monies being passed to the national treasury; • Potential ability to have coherence between EU development policy and related financial support, and FPA-related sectoral policy matrix implementation; • Ability of EU vessel activity in Kiritimati (Christmas island) operating under the FPA to support island development in line with Government policy, and potentially to leverage funds for jetty improvements; and • Potential human capacity developments of Kiribati crew (by EU vessels), and Kiribati observers (under sectoral policy support activities or other EU development projects).

Objectives to be achieved	<ul style="list-style-type: none"> • Promotion of responsible fisheries in Kiribati waters based on international obligations and principles/best practice; • Monitoring of the results of sectoral policy implementation; • Sustainable economic and social benefits to both the EU and Kiribati arise from the FPA; • Good economic and social governance, respective to the state of fish stocks; and • Employment of all FPA-related employment based on international obligations and principles/best practice.
The policy options available, including the risks associated with them	<ul style="list-style-type: none"> • Increasing fishing authorisation possibilities, for example to address the desire of Portugal to have a purse seine fishing authorisation and for Spain to have four not three – associated environmental risks, and potential low fishing authorisation utilisation; • Increasing reference tonnage – this would just reflect recent catch rates, but risks are that a) if catch rates fell it could result in low utilisation and higher payments by EU per tonne of fish if reference tonnage was not used, and b) if catches rates increased further and above a new higher reference tonnage, this could mean that the Protocol provides for fishing opportunities that would not be coherent with responsible fisheries; • Payments based on tonnage or Vessel Days Scheme – either party may not agree / potential/ongoing weaknesses in VDS; • Differing payment rates for access – potentially negative impacts on vessel viability, generation of unequal benefits arising to the EU and Kiribati; • Kiribati policy option to let the market decide on payment rates per day, which could increase rates even above the current \$5,000/day • Enlargement of the protocol by including more elements concerning fisheries governance – no real risks as long as coherence ensured with WCPFC management and governance measures, and indeed may not be necessary given that WCPFC addresses governance issues at the regional level, while at the national level may also not be necessary given that sectoral policy support covers governance issues • No Protocol – reduced ability of EU to influence responsible fisheries and no funds earmarked for sectoral policy developments; and • WCPFC and PNA policy options with respect to FAD measures, mesh size increases and closed high seas area around Kiribati – significant risks to EU vessels because the cost of new net for each vessel is around €650,000, and because EU vessels are dependent on the PIPA for around 30 % of their catches. In addition it should be noted that FAD measures have been suggested in recent reviews (see Section 3.6) as being an effective management tool from a stock perspective, but closed areas much less so. The potential increase in mesh size has not yet been the subject of a full evaluation to consider the potential economic, social and environmental costs and benefits.
Results and impacts expected, in particular economic, social and environmental impacts	<ul style="list-style-type: none"> • Considerable generation of value-added and employment in both the EU and Kiribati; • Improved fisheries policy framework and its implementation; • Improved capacity development in Kiribati; • Contributions to responsible fisheries and improved fishing practices; and • Some negative environmental impacts in terms of bigeye tuna.

Lessons learned from the past	<ul style="list-style-type: none"> • Longline possibilities have not been used. • France has not used its one fishing authorisation possibility and has no purse seine vessels operating in the Pacific. All four fishing authorisations are currently used by Spain and this pattern continues likely under a future Protocol, although France prefers to retain its fishing authorisation even if not used in case of future fleet developments in the Pacific; • Value-added benefits from the Protocol appear to be balanced in favour of the EU, but Kiribati also generates considerable benefits from the Protocol and is expected to do so in the future; • Compliance with the covenants and obligations contained in the legal text of the FPA have generally been complied with, but there have been some elements of poor performance by all parties which should be addressed under implementation of future FPA; • Kiribati human capacity for sectoral management and MCS requires strengthening; • The EU is in favour of a tonnage-based Protocol whereas Kiribati would prefer one based on vessel days, raising potential difficulties over agreeing a future Protocol; • Development of joint EU/Kiribati enterprises has not taken place, and may well be rather unrealistic in the short- to medium-term, although vessel owners have made efforts to engage with local capacity developments and local development; • Increasingly coordinated efforts by parties in the region to bring foreign fishing fleets within their EEZs, based on the economic benefits of doing so; and • FAD measures have been suggested in recent reviews (see Section 3.6) as being an effective management tool from a stock perspective, while closed areas much less so.
The most appropriate method of implementation	<ul style="list-style-type: none"> • A Protocol that benefits all parties; and • Improved involvement of the Joint Committee.
The internal coherence of the proposed programme or activity and its relations with other relevant instruments	<ul style="list-style-type: none"> • Future Protocol likely to be coherent with CFP (and its potential reform), with WCPFC arrangements, and with national Kiribati sectoral policy.
Monitoring system and the indicators and evaluation arrangements needed to measure them	<ul style="list-style-type: none"> • Use of quantitative and qualitative indicators, which are objectively verifiable, and contained within the sectoral policy implementation matrix. Indicators to be determined on conclusion of any future Protocol; and • Evaluation arrangements based on ex-post and ex-ante analysis.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

Catches made by the EU purse seine fleet represented just 2 % of purse seine catches in the WCPO in 2010, while EU longline catches accounted for less than 1 % of longline catches and 0 % of longline catches within Pacific country EEZs. The EU longline fleet thus makes no use of the longline fishing possibilities provided by the current FPA between the European Union and Kiribati. The EU purse seine fleet utilising the FPA, is based out of Ecuador, and also fishes in the EPO; the fleet is very much a 'central Pacific fleet', unlike many other fleets operating in the region which tend to fish predominantly in either the WCPO or the EPO.

The principal fisheries management organisation in the WCPO is the WCPFC, of which the EU is a Commission Contracting Member. The WCPFC sets management regulations, based on scientific advice, in efforts to ensure that fish stocks are sustainably exploited.

The PNA is a treaty-level fisheries management Agreement by an alliance of Pacific island states (to which the EU is not therefore a party), including Kiribati, whose EEZs collectively account for a significant bulk of the region's tuna catch and 54 % of the purse seine catch. The VDS is a scheme under the PNA, which establishes a system of tradable fishing days allocated to the Parties. The VDS, and other management measures (such as closure of high seas pockets) have increasingly sought distant water fishing nations to fish within Pacific country EEZs rather than high seas areas, and to compensate Pacific countries for access to resources, typically to at a cost of US\$5,000/vessel day (€3,731/day at the current 2012 exchange rate). There are both strengths and weaknesses of the VDS. Current access to the EU fleet of purse seine vessels operating in the waters of Kiribati, as specified in the Protocol, is based on payments per tonne of fish.

Except for two longline fishing authorisations which were taken in 2007 (but not used), there has been no interest by the EU longline fleet in fishing in Kiribati under the Protocol and no catches have been made in Kiribati waters during the Protocol. However, as evidenced by 100 % utilisation of the fishing authorisation possibilities and very high rates of utilisation (178 % of the reference tonnage of the Protocol of 6,400 over 2007-2011, and 207 % in 2011 based on provisional catch data), the Protocol is of critical importance for the EU purse seine fleet operating in Kiribati. Catches in Kiribati represent around 50 % of vessels catches in the WCPO. A feature of the EU purse seine fleet operations is their higher reliance on FAD fishing compared to many other countries fishing in Kiribati and in the region more generally.

The Protocol is of less importance for the EU upstream sector, and for the EU-downstream processing sub-sector. However, the Protocol generates some catches which are imported in loined form for canning in the EU (representing around 2 % of the import of loins to the EU). Fish caught under the Protocol and canned in Ecuador for import to the EU represents around 1 % of the EU import of canned tuna. A very high percentage (perhaps as much as 90 %) of all fish caught under the Protocol is destined for the EU market.

The Protocol contributes an average of €1.2 mn to Kiribati in the form of financial contribution for access, and financial support for fisheries policy implementation. This represents around 4-7 % of government fishing licence revenue, and 1-2 % of total government revenues. In addition to these benefits, the Protocol also generates value-added and employment in the upstream/vessel supply sector, primarily through transshipment-related services. The Protocol has not provided any meaningful developments to the local fishing sector in Kiribati, and there have been no joint enterprises (with shared investments) set up between EU and Kiribati companies. However the activities of the EU fleet have contributed to human capacity developments in Kiribati for crew, observers, and onshore labourers.

Current stock status for the three main species of tuna caught by the EU fleet suggests that skipjack tuna is not over-exploited, that yellowfin tuna is fully exploited, and that bigeye tuna is over-exploited. Noting the small role of the EU fleet in the region as whole, this suggests that the vessels using the FPA, and others in the region, may nevertheless not be exploiting just the 'surplus stocks' available, but may be contributing to overfishing of bigeye tuna. It should however be noted that Kiribati has un-used vessel days in 2011 based on the PNA VDS. There are also concerns over catches of pelagic sharks in the region, to which the EU fleet contributes.

Payments for access to Kiribati waters per tonne of fish caught have remained constant over the period of the Protocol, while fish prices have risen by about 50 % over the period 2006 to 2011. This may help to explain why vessels using the FPA generate profits, and the value-added (i.e. profit plus crew earnings) made by the catching sector, which ensure that payments made by the EU represent good value for money. It appears however that ex-vessel prices are lower than international commodity prices paid for tuna in other main processing locations, such as Bangkok.

The current Protocol has generated an average of €6.4 mn per year for the EU and Kiribati combined, with the EU accounting for 75 % of the total value-added generated. The benefit/cost ratio for the EU over the course of the Protocol has been 4.0 i.e. for every Euro spent, 4.0 Euros of value-added have been generated for the EU. The Protocol has also generated an estimated 98 jobs, split roughly evenly between the EU and Kiribati. Given the payments made, this equates to €23,810 per EU-job.

All parties (the EC, fleet owners, and the government of Kiribati), have generally complied with the covenants and obligations laid out in the text of the Protocol. However, a particular concern, especially given the importance and potential benefits of the sectoral support payments under the Protocol which is a unique characteristic of Protocol compared to agreements between Kiribati and other countries (except the USA), has been the failure of the Joint Committee to meet regularly since the commencement of the Protocol – despite two technical meetings having taken place, one in 2008 and one in 2009, only one Joint Committee meeting took place (in 2011). Also of concern given their potential role in contributing to responsible fisheries is the current lack of mutual recognition by WCPFC and IATTC of observers operating in both the WCPO and the EPO, which in turn requires vessels to have observers mandated by both organisations onboard for any trip where vessels may fish in both the WCPO and the EPO), and the frequent failure by Kiribati observers to provide observers reports as required.

Looking forward to a potential future Protocol, potential new management measures being considered in the region to improve the management regime (e.g. a one month extension of the FAD closure, an increase in minimum mesh sizes, closure of the Phoenix Island Protected Area to fishing, high seas closures around the Kiribati EEZ) would have a negative impact on the activities and profitability of EU purse seine vessels. FAD measures have been suggested in recent reviews as being an effective management tool from a stock perspective, while closed areas much less so. Other changes which could have an impact if mandated by the WCPFC include potential changes in crewing requirements to 10 % and then 20 % being from PNA countries – this would require changes to the text of the Protocol to ensure coherence, as the text currently states a minimum of 6 crew on the fleet of purse seiners, which represents around 5 % of current vessel crew numbers (this figure is exceeded by the EU fleet, with around 9 % of total crew already sourced from Kiribati).

It would be in the interest of both the EU and Kiribati to have a new Protocol. For the EU fleet a 'no Protocol' would cause fishing rights as a proportion of sales revenues to rise considerably, while for Kiribati a failure to sign a new Protocol would eliminate the ear-marked funds for special sectoral support provided by the EU under the Protocol. Although unlikely, a 'no Protocol' could also potentially also result in Kiribati not fully using its PAE days, and it is surely the objective of the Government to ensure full utilisation (and the resulting payments that would result).

However, we can conclude that while all parties in principal will be supportive a new Protocol, the forthcoming negotiations are likely to be difficult for both parties; the EU because Kiribati is strongly in favour of a Protocol based on the VDS, and Kiribati because the EU views the VDS as having certain weaknesses. Given its PNA obligations, Kiribati may not be able or willing to compromise on the VDS, so some solution may need to be found that somehow merges the VDS into a tonnage based Protocol. Furthermore, assessing a 'fair' price for access may be disputed by the parties involved in the forthcoming negotiations given a) recent rises in fish prices b) static prices per paid per tonne over the course of the current Protocol, c) the ability and willingness of the EU to have FPAs with different countries based on different payment rates, and d) the increasing 'market' price for vessel days in the region with the \$5,000/day benchmark fee having been exceeded in some recent bilateral agreements.

6.2 Recommendations

The recommendations made in this report are necessarily brief, given that it is not the job of the consultants to present a strategy to the EU, rather to provide the EU negotiators with the economic data to prepare for the negotiations. Thus the principal recommendation made is to base the negotiations on the economic and social data provided in this report so as to ensure that there is indeed signature of a new Protocol.

The ongoing CFP reform means that there is as yet, not clear direction or guidance on changing the balance of access per tonne between the EU and fleet owners, and the current balance should therefore be retained.

From a purely technical perspective, this evaluation recommends that the longline fishing opportunities be removed from the Protocol or at least substantially reduced, given the fact that there have been zero catches made by the longline fleet under the Protocol. However a final decision on this issue would also need to reflect the political wishes and agreement by EU Member States.

Given the high level of juvenile bigeye tuna catches taken in the FAD fishery by the EU fleet, the evaluation also recommends that direct measures should be included in the Protocol (Annex) to mitigate against this problem. Such measures should be agreed jointly by all parties, but could include the use of, and reporting on, FAD management plans.

The levels of payments in a future Protocol, and the basis on which they are paid (e.g. tonnage or vessel days), will be the subject of negotiation, but should be informed by recent catch levels and rates of utilisation.

A firm recommendation however is made for greater emphasis and recognition by all parties of the importance of the Joint Committee meetings. These meetings represent a vital monitoring mechanism for implementation of the FPA – a mechanism which has historically not been especially effective. The Joint Committee meetings must be yearly as required in the text of the FPA, and should be used both to review sectoral policy implementation, and to ensure ongoing compliance with the covenants and obligations laid out in the FPA (and necessary action of such if compliance is found to be lacking). Current areas of weakness in compliance with other covenants and obligations required in the FPA, as highlighted in Appendix C should also be addressed as a matter of urgency.

The evaluation recommends that any future Protocol, and its implementation firmly align sectoral policy support with the Government's development and sectoral policy. Within this context focus should be given to the issue of improved MCS capacity in Kiribati and efforts aimed at reducing IUU fishing and at supporting responsible fishing by both EU and Kiribati fishers. FPA sectoral funds, and other EU development support, could be used to enhance observer capacities and reporting for example and to ensure mutual recognition by WCPFC and IATTC of each other's' observers.

The evaluation also recommends greater recognition by EU development projects of the important nature of the Kiribati FPA, and therefore for the use of funds to support Kiribati. The view of this evaluation is that there should be a special effort to better align sectoral policy support provided by the FPA with other EU development aid in a mutually enforcing manner, while taking care to avoid duplication of efforts. This could be supported by the appointment of a fisheries attaché to the EU Delegation in Fiji, and the EU is believed to be in process of recruiting someone to such a position.

Finally, the evaluation recommends the active participation by the EU within the WCPFC, so as to ensure responsible fisheries. Most specifically, an important support action would be to encourage the setting of Target and Limit Reference points across the three tuna species with explicit management measures tied to these, but most specifically in provision of support to strengthen the VDS.

APPENDICES

Appendix A: References

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Appendix B: Persons consulted

Name	Position, Organisation
In the Pacific	
Dr. Transform Aqorau	CEO, PNA Office
Tinian Reiher	Minister of Fisheries, Kiribati
Mr. Beero Tioti	Director – MFMRD
Mr. Kauto Toganibeia	Resource Policy Advisor MFMRD-
Ms. Aketa Taanga	Senior Fisheries Officer (Offshore Fisheries) – MFMRD
Ms. Mbwenea Teioki	MCS
Mr. Kaon Tiamere	Senior Licensing Officer
Mr. Tekirua Riing	Senior Observer coordinator
Mr. Taremon Korere	VMS officer
Mr. Ruria Iteraera	Legal officer
Mr. Sergei Dodzin	Senior Economist, Asia Pacific Dept, IMF
Mr. Yi Xiong	Economist, IMF
Mr. Tobias Haque	Economist, Pacific, World bank, Fiji
Mr. Xianyong (Eric) Gao	International officer, Public/ private partnerships
Mr. John Hampton	SPC-OFP
Mr. Peter Williams	SP-OFP
Mr. Len Rodwell	FFA
Mr. Anton Jimwererly	PNA Administrator
In the EU	
Dr. Julio Morón	Director Gerente, OPAGAC. Spain
Dr. Juan Pedro Montegudo	Asesor Científico, OPAGAC. Spain
Dr. Michel Goujon	Directeur, Orthongel, France
Susana Salvador	Chefe de Divisão de Recursos Externos. Direcção-Geral das Pescas e Aquicultura. Portugal
Mr. Johathan Lemeunier	Head of the European and International Affairs Unit, Maritime Fisheries and Aquaculture Directorate, Ministry in charge of Fisheries, France
Mr. Constantin Alexandrou	Head of Unit DG MARE.B.3, European Commission
Dr. Marek Beran	Administrator for Greenland and Pacific. DG MARE B.3, European Commission
Ms. Gosia Lachut	Desk Officer Kiribati, Solomon Islands, Tonga, Tuvalu, Vanuatu. Pacific Division, Asia-Pacific Department. European External Action Service
Mr. Emmanuel Berck	Deputy Head of Unit DG MARE.B.3 European Commission
Mr. Alan Gray	DG MARE.B.3 European Commission
Mr. Mario Alcaide	DG MARE.B.3, Control and Inspection issues, European Commission
Mr. Yann Davalo	DG MARE.B.2, European Commission, fishing authorisation and catch data officer

Dr. Pavlina Nikolova	DG MARE.B.1, European Commission, administrator for WCPFC
Mr. Pawel Swiderek	DG MARE B.4. (trade issues)
Ms. Ana-Maria Caraman	DG MARE A4 (IUU issues in the Pacific)
Mr. Attila Schoenbaum	DG MARE.F.2, European Commission, evaluation and impact assessment coordination in DG MARE
Mr. Dominique Phillipe Leveil	DG MARE.C.3, European Commission, Spain desk officer
Mr. Thierry Soyez	DG DEVCO, desk officer for Kiribati

Appendix C: Compliance with key covenants and obligations in the Agreement, Protocol and Annex

Article, Chapter, Section, Para.	Covenant	Compliance status (yes, no, partial, n/a, unknown)	Justification, explanation, evidence, and any additional comments	Basis for evaluation of compliance status e.g. source of information
Art, para	The Agreement			
	Access by Community vessels to fisheries in Kiribati waters			
5.2	The Kiribati authorities shall notify the Commission of any amendments to that legislation and to any other legislation which may have an impact on fishing legislation	Partial	The new Kiribati Act for the Conservation, Management and Development of Kiribati Fisheries and Control of Foreign Fishing and for Connected Purposes (2010) was notified to the EC, but not until the Joint Committee meeting in 2011. The reason being that the Kiribati authorities prefer to use bilateral discussions as the medium of exchange. PNA/WCPFC decisions are discussed through the WCPFC TCC meetings. WCPFC members report through the annual TCC Part 2 report which provides details of changes to legislation and compliance with the measures.	Kiribati legislation / letters from Kiribati authorities to the EU / consultations with owners and EU / meeting minutes
	Licences/fishing authorisations			
6.1	Community vessels may fish in the Kiribati fishing zone only if they have a valid fishing licence issued under this Agreement	Yes	Licence applications received and vessels owners informed by September in time for fishing season which commences	Licence records in Kiribati
	Financial contribution			
7.1	The Community shall grant Kiribati a financial contribution in accordance with the terms and conditions laid down in the Protocol and Annexes	Yes	There are two separate bank accounts as per the requirements. However payments according the timeframes specified have not always taken place - see comments under Protocol Article 2.5 below on timing.	EU records of payments / Kiribati record of monies received
7.2	The financial contribution shall be determined and managed in the light of objectives identified by common accord between the parties in accordance with the Protocol, to be achieved in the context of the sectoral fisheries policy drawn up by the Government of Kiribati and an annual and multiannual programme for its implementation	Partial	The strategy for managing the financial contribution is based on the MFMRD Four-Year Strategic Plan (2010-2013) and presented within the Sectoral Policy matrix. However, irregular and delayed payments for sectoral policy have meant that the programme has only been operational since the second half of 2011.	Strategy plan, and sectoral policy matrix / payment records
7.3	The financial contribution granted by the Community shall be paid each year in accordance with the Protocol	Partial	The financial contribution payments are in principle made yearly. But see comments under Protocol Article 2.5 below on timing. Kiribati has also received payments from industry based on their tonnages.	EU records of payments / Kiribati record of monies received

Article, Chapter, Section, Para.	Covenant	Compliance status (yes, no, partial, n/a, unknown)	Justification, explanation, evidence, and any additional comments	Basis for evaluation of compliance status e.g. source of information
	Promoting cooperation among economic operators and in civil society			
8.2	The parties shall encourage exchanges of information on fishing techniques and gear, preservation methods and the industrial processing of fisheries products	Partial	There has been no formal expression of interest or requests from Kiribati authorities or the Kiribati private sector to the EU for information on such issues. But more general exchange of views takes place through WCPFC, technical meetings, and Joint Committee meetings. In addition, the EU fleet owners have shown the authorities how things are done on board, processes for loading, handling. And there is some exchange of knowledge from Kiribati crew onboard, and Kiribati observers.	Documentation showing evidence of exchanges of information / consultations
8.4	The parties shall undertake to implement an action plan between Kiribati and Community operators, with the aim of developing local landings of Community vessels	No / Partial	Vessels make transshipments in Tarawa and Kiritimati (Christmas Island). There is an MoU between OPAGAC and the government (updated yearly) covering observers, stevedores, cooperation in field of cargo vessel provision for inter-island transport (a donated vessel), and a salt project in Christmas. But there is no formal action plan to develop local landings. This is explained by the fact that there is no commercial incentive for EU fleet owners to land product in Kiribati as there are no processing facilities, and catches are landed/processed in South America. The economics of operating a processing operation, other than perhaps for fresh sashimi product, would be very marginal. Low productivity of domestic workers, allied to competing with Ecuador, would suggest that efforts to develop local landings would never be likely to succeed.	Documented action plan (or lack of) and evidence of its implementation as obtained through consultations

Article, Chapter, Section, Para.	Covenant	Compliance status (yes, no, partial, n/a, unknown)	Justification, explanation, evidence, and any additional comments	Basis for evaluation of compliance status e.g. source of information
8.5	The parties shall encourage, in particular, the setting up of joint enterprises in their mutual interest which shall systematically comply with Kiribati and Community legislation	No	There are no real joint investments in the sense of shared ownership/assets, and the private sector in Kiribati is not sufficiently developed for that. However OPAGAC employ CCPL (a local agent) with 40 people on permanent contract as stevedores. There are four FSMA vessels, which are registered/flagged in Kiribati, and one is Spanish owned (the <i>Pacific Star</i>). However, it does not provide any direct benefits to Kiribati, and the FSM arrangement is not proving to be effective in attracting local investment as was originally intended.	Consultations with DG MARE, Kiribati authorities, and private sector in EU and Kiribati on demand and feasibility for such joint enterprises
	Joint Committee			
9.1	The Joint Committee shall perform the following functions: monitoring performance of agreement, liaison, forum for dispute settlement, assessing level of fishing opportunities	Partial	All these functions are theoretically performed by the Joint Committee. However, the Joint Committee's first meeting was not until April 2011 although there were technical meetings in 2008 and 2009. It took Kiribati some time to leverage funds from the Ministry of Finance, which it has now done successfully	Minutes of Joint Committee meetings
9.2	The Joint Committee shall meet in principle once a year	Partial	In principle the parties try/seek to, but yearly meetings have not always taken place due to diary clashes, distance and logistical issues of travel, and other meetings being given priority by both parties. There was however a technical meeting in December 2008 and December 2009, and a Joint Committee meeting in April 2011.	Minutes of Joint Committee meetings

Article, Chapter, Section, Para.	Covenant	Compliance status (yes, no, partial, n/a, unknown)	Justification, explanation, evidence, and any additional comments	Basis for evaluation of compliance status e.g. source of information
Art, para	Protocol			
	Financial contribution — Methods of payment			
2.5	Payment of the financial contribution referred to in paragraph 1 shall be made no later than 30 June 2007 for the first year and no later than 30 June 2008, 2009, 2010, 2011 and 2012 for the following years	Partial	Payments made but there have been delays. These delays appear due to a failure by the Kiribati authorities to provide information required before payments can be made. For example there were some delays in payments for normal contributions due to bank account details not being provided in time. And one sectoral policy payment has been delayed due the fact that there was no JC meeting and that Kiribati did not provide requested documents. To be able to launch the payment the next JC Meeting needs to agree on the planned and actual implementation of the sectoral policy, and this is expected to be completed during the next JCM. Shipowners are paying on time	EU records of payments / Kiribati record of monies received
	Cooperation on responsible fishing — Annual scientific meeting			
3.2	During the period covered by this Protocol, the Community and the Kiribati authorities shall monitor the state of resources in the Kiribati fishing zone	Yes	This takes place through the WCPFC.	Consultations with EU and Kiribati Authorities to assess their engagement with stock monitoring e.g. participation in annual meeting of the Palau Agreement, WCPFC meetings, etc.
	Review of fishing opportunities by mutual agreement			
4.1	The fishing opportunities referred to in Article 1 may be increased by mutual agreement provided that the conclusions of the annual meeting of the 'Palau Arrangement' members and the annual review of the status of stocks made by the Secretariat of the Pacific Community confirm that such an increase will not endanger the sustainable management of Kiribati resources	n/a	Fishing opportunities remain at 4 purse seine and 12 longline vessels i.e. fishing opportunities have not been increased. However under VDS scheme, there may be opportunity to increase access under the Palau Agreement VDS scheme.	Records on individual vessel landings
	Promotion of responsible fishing in Kiribati waters			
7.1	30 % of the total amount of the financial contribution shall be allocated the first year to the support and implementation of initiatives taken in the context of the sectoral fisheries policy. This percentage is fixed at 40 % the second year and at 60 % the year	Yes	The % of the total contribution allocated for sectoral has increased.	Monies going into the two different bank accounts in Kiribati. Review of fisheries sector budgets.

Article, Chapter, Section, Para.	Covenant	Compliance status (yes, no, partial, n/a, unknown)	Justification, explanation, evidence, and any additional comments	Basis for evaluation of compliance status e.g. source of information
	thereafter			
7.2	As soon as this Protocol enters into force and no later than three months after that date, the Community and Kiribati shall agree, within the Joint Committee provided for in Article 9 of the Agreement, on a multiannual sectoral programme and detailed implementing rules covering annual and multiannual guidelines, objectives, evaluating the results	Partial	This was not done through the Joint Committee, which did not sit until 2011. But it took place and was agreed by exchange of letters and presented in the Sectoral Policy matrix in the technical meeting The Planning Department in Kiribati monitors the outcomes	Review of multiannual sectoral programme and detailed implementing rules
7.4	For each year of application of the Protocol after the first year, Kiribati shall notify the Community of the allocation to fisheries sectoral policy no later than 1 March of the year concerned	Partial	This has not been systematic each year in terms of the allocation to specific chapters/activities, even though the Kiribati authorities have been reminded of its importance by letters.	Documentation from Kiribati to the EU providing notification, in due time.

Article, Chapter, Section, Para.	Covenant	Compliance status (yes, no, partial, n/a, unknown)	Justification, explanation, evidence, and any additional comments	Basis for evaluation of compliance status e.g. source of information
Ch, Sect, para	Annex			
	Registration			
I 1.1-1.3	Fishing by Community vessels within the Kiribati fishing zone shall be subject to the issuance of a registration number by the Kiribati competent authorities. Applications for registration shall be made on the form provided for that purpose by the Kiribati authorities	Yes		Registration records, and application forms provided
	Licences/Fishing authorisations			
I 2.4	The Community authorities shall present to the Ministry responsible for fisheries in Kiribati an application for each vessel wishing to fish under the Agreement at least 15 days before the date of commencement of the period of validity requested	Yes	OPAGAC agent works with Government to ensure that this takes place. And this always takes place in advance. Vessels are all on FFA good standing register.	Date of licence applications vs. commencement date of validity
I 2.5 and 2.6	Applications shall be submitted to the Ministry responsible for fisheries in Kiribati on a form drawn up in accordance with the specimen in Appendix I, and accompanied by proof of payment and other necessary documents or certificates	Yes		Licence application forms and receipts of payment
I 2.9	Licences for all vessels shall be issued to shipowners or their agents via the Delegation of the Commission of the European Communities to Kiribati (the Delegation) within 15 days of receipt of all the documents	Yes/No	Fishing authorisations are issued in time, but usually direct to the shipowners because the Delegation to Kiribati is based in Fiji.	Consultation with EU fleet owners
	Validity and fees			
I 3.4 and 3.5	The final statement of the fees due for year n shall be drawn up by the Commission of the European Communities by 30 June of the year n + 1 at the latest on the basis of the catch declarations made by each shipowner and confirmed by the scientific institutes responsible for verifying catch data in the Member States. The statement shall simultaneously be notified to the Ministry responsible for fisheries in Kiribati and the shipowners for checking and approval	Partial	Normal fee payments are always made within the time limit. Payments for excess catches have been generally been made at the end of the year n+1 There is a data inconsistency between SPC and IEO which has been raised at the two formal technical meetings.	EU records and copy of communications made to Kiribati
I 3.6	Any additional payments shall be made by the shipowners to the competent Kiribati authorities by 30 September of the following year at the latest, into the Kiribati Government account No 1	Partial	See above	Records of Kiribati receipt of monies

Article, Chapter, Section, Para.	Covenant	Compliance status (yes, no, partial, n/a, unknown)	Justification, explanation, evidence, and any additional comments	Basis for evaluation of compliance status e.g. source of information
	Fishing zones			
II 1-3	Vessels not authorised to fish in closed areas, within 12nm of base lines, within 3 n.m of FADs, and within 60nm from baselines of the islands of Tarawa, Kanton, and Kiritimati	Yes		Monitoring and control records
	Catch reporting arrangements and landings declarations			
III 1.	Captains shall provide the Director of Fisheries with information relating to the time, position of, and catch on board of the licensed fishing vessel before entering zone, while in zone, before entry into ports, after transhipping, prior to refuelling	Yes		Fax and email records held by Director of Fisheries (subject to III 7.
III 3.1	Vessels shall declare their catches on the corresponding sheet in the logsheet, in accordance with the specimen in Appendix III A and III B	Yes		Logsheets
III 8.	The shipowners of purse seine vessels shall provide copy of the landing receipt after completion of every fishing trip that took place totally or in part within the Kiribati fishing zone	Yes		Landing receipt records provided by owners to Kiribati authorities
	Embarking seamen			
IV 1.	For the fleet of tuna seiners, at least six ACP seamen shall be signed on during the tuna fishing season in the Kiribati fishing zone. For the fleet of surface longliners, at least four ACP seamen shall be signed on during the fishing season in the Kiribati fishing zone	Yes	Crewing is done through the Agency at Christmas island. 2-3 of crew on each vessel are from Kiribati.	Consultations with EU fleet owners
IV 4.	Where contracts have been signed with Kiribati nationals, in accordance with point 1 of this Article, the shipowner or agent shall inform the competent Kiribati authorities of the names of the local seamen taken on board the vessel concerned	Unknown	Not clear whether information is forthcoming from the Agency	Records provided by shipowners or agents to Department of Fisheries
IV 6.	Kiribati seamen will be given employment contracts, which will guarantee the seamen the social security cover, applicable to them, including life assurance and sickness and accident insurance	Yes		Consultations
IV 7.	The wage conditions granted to local seamen shall not be lower than those applied to Kiribati [other?] crews and shall under no circumstances be below ILO standards	Yes		Consultations

Article, Chapter, Section, Para.	Covenant	Compliance status (yes, no, partial, n/a, unknown)	Justification, explanation, evidence, and any additional comments	Basis for evaluation of compliance status e.g. source of information
IV 9. And 10.	Where no ACP seamen are taken on board Community shipowners shall be obliged to pay, for each day of the fishing trip in the waters of the ACP country concerned, a flat-rate amount of EUR 20 per day. Upon its entry into the Kiribati EEZ, Community shipowners will notify the number of ACP seamen on board. This sum shall be used for training local seamen and shall be paid into the account specified by the authorities of the ACP country concerned	n/a		Records of financial payments. Notifications of seamen provided by vessels on entry as recorded by Department of Fisheries.
	Technical measures			
V	Vessels shall comply with the measures and recommendations adopted by WCPFC in the region regarding fishing gear and the technical specifications thereof and all other technical measures applicable to their fishing activities	Yes	May be some non-compliance with WCPFC HS regulation, but this is outside the control of Kiribati and is a matter from the EU.	Observer reports, MCS records of infringements
	Observers			
VI 2.	Vessels authorised to fish in Kiribati waters under the Agreement shall take on board observers appointed by the WCPFC....the WCPFC shall inform the shipowners concerned, or their agents, of the name of the observer appointed to be taken on board their vessel at the time the licence is issued, or no later than 15 days before the observer's planned embarkation date	Partial	Not always, and notification can be very late preventing sufficient time to organise visas, flights, etc. for observers to arrive in Ecuador on time. Observers decided by Kiribati authorities, and WCPFC not involved. Done through national observer coordinator. Some vessels have left Ecuador without observers and get special agreement to pick them up in Kiribati.	WCPFC communication to owners
VI 6.	Within two weeks and giving 10 days' notice, the shipowners concerned shall make known at which ports in the sub-region and on what dates they intend to take observers on board	Unknown		Consultations
VI 13.	At the end of the observation period and before leaving the vessel, observers shall draw up an activity report to be transmitted to the WCPFC, with a copy to the master of the vessel	No	Need to improve capacity of Kiribati observer capacity. PNA have reportedly told observers not to supply report to master. MFMRD does not allow observers to submit reports to ships masters for fear that it will compromise their safety. This requirement is not specified in the FFA Standard Operating Procedures, which are followed by all Pacific island countries.	Observer reports

Article, Chapter, Section, Para.	Covenant	Compliance status (yes, no, partial, n/a, unknown)	Justification, explanation, evidence, and any additional comments	Basis for evaluation of compliance status e.g. source of information
	Monitoring			
VII 1.	The European Community shall keep an up-to-date list of the vessels to which a fishing licence has been issued under this Protocol. This list shall be notified to the Kiribati authorities	Yes		Communication from EU to Kiribati
VII 2.	Community vessels shall notify, at least three hours in advance, the Kiribati authorities responsible for fisheries inspection of their intention to enter or leave the Kiribati fishing zone	Yes		Email, fax or other communication records in Kiribati
	Control procedures			
VII 3.	Once a boarding inspection has been completed, a certificate shall be issued to the master of the vessel	No	Never inspected at sea, but don't get certificate when inspected on land. This requirement is not specified in the FFA Standard Operating Procedures, which are followed by all Pacific island countries. However the FPA is an international agreement and thus it is an obligation for Kiribati	Consultations
	Satellite monitoring			
VII 5.	All Community vessels fishing under this Agreement shall be subject to satellite monitoring	Yes		VMS records, fleet owner consultations
	Transshipment			
VII 9.	All Community vessels wishing to tranship catches in Kiribati waters shall do so within Kiribati ports. And the owners of such vessels must notify the information in accordance with the Appendix IV to the competent Kiribati authorities at least 48 hours in advance	Yes		Notifications by vessels to authorities and transshipment records

Appendix D: Costs and Earnings models for 84m and 100+m EU purse seine vessels utilising fishing possibilities provided by the Protocol

<i>Figures in Euros and Tonnes</i>	84m vessels	100+m vessels
Operational information		
Number of vessels in fleet	2	2
Average age of vessels	1999	2000
Average length (m)	73	103.5
Average GT	2,490	3,995
Vessel and engine cost	24,000,000	28,000,000
Vessel and engine lifespan	20	20
Gear cost	600,000	600,000
Gear lifespan	5	5
EU crew	15	15
Kiribati crew	2	3
Other crew	10	12
Total crew	27	30
Fishing days per year	300	300
Fishing days in Kiribati	73	73
Fishing days in WCP	135	135
Fishing days in EPO	165	165
Average yearly skipjack catch in Kiribati	1,393	2,519
Average yearly yellowfin catch in Kiribati	338	481
Average yearly bigeye catch in Kiribati	255	715
Total average yearly catch in Kiribati	1,985	3,715
Total average yearly catch all areas	8,000	12,000
Dependency on Kiribati for catch	24.8%	31.0%
Average catch per day	27	40
Financial information		
Sales Revenue		
Sales revenue Kiribati zone		
-Skipjack	931,568	1,967,167
-Yellowfin	422,720	547,632
-Bigeye	234,958	647,562
- Total sales revenue Kiribati zone	1,589,245	3,162,360
- Total sales revenues all areas	6,405,341	10,216,267
Average price per tonne	801	851
Operational costs		
Fuel	1,650,000	2,500,000
Crew	900,000	1,000,000
Port calls	250,000	375,000
Yearly fishing related repairs and maintenance	500,000	750,000
Fishing rights	138,943	260,015
Other	150,000	150,000
Total operational costs	3,588,943	5,035,015
Operational costs/day	11,963	16,783
Fixed costs		
Insurance	128,107	204,325
Bi-annual major repairs/refit	500,000	750,000
Vessel depreciation	1,200,000	1,400,000
Gear depreciation	120,000	120,000
Overhead	192,160	306,488
Total fixed costs	2,140,267	2,780,813
TOTAL COSTS	5,729,210	7,815,828
	-	
Net profit/earnings before interest and tax	676,131	2,400,439
Net profit as % of turnover	11%	23%
Cost of fishing rights as % of average price/t	4.4%	4.1%

Appendix E: Methodology used in this evaluation

The basis for the estimation of the economic and financial impacts of the Protocol presented in this report is as follows:

- Two separate costs and earnings profiles have been developed for the EU purse seine vessels operating in Kiribati, based on two main vessel classes. One profile has been developed for the two 84m vessels (average 2,490 GT), and one for the 102+m vessels (3,500-4,500 GT). These two types of vessels may be expected to have different costs/earnings profiles given differing catch rates and investment costs. No model has been constructed for longline vessels as none have used the Protocol (and there is no perceived possible usage under a future Protocol). The costs and earnings profiles are provided in Appendix D;
- Data for each profile is presented to show an average yearly costs and earnings profile for the Protocol period, with data being an average of 2007-2011 (and using provisional catch data for 2011). Each profile calculates profit margins;
- Each profile first provides some operational information on vessel size, fishing days in Kiribati and elsewhere (based on SPC data), crew nationalities, the total estimated yearly catch, and the catch in Kiribati waters based on IEO catch data and therefore dependency on Kiribati;
- Sales revenue is then estimated based on fish prices by species (see Table 26 with all yearly prices adjusted to reflect Free On Board (FOB) prices), to arrive at an average annual turnover, and average fish price per tonne;
- Variable and fixed costs are presented and broken down as far as is possible into different line items, and are best estimates based on data presented in Miyake *et al.*, (2010) which provides a costs and earnings profile for French purse seine vessels of around 73 m operating in the Indian Ocean in 2007 (and fishing on free schools of tuna), consultations with OPAGAC, and the balance of costs shown in Spanish Annual Economic Report (AER) data for the over 40m purse seine fleet. The two profiles make a number of assumptions with regards to input costs as follows:
 - Fuel price data for French purse seine vessels in the Indian Ocean has been indexed to changes in gasoil prices over the period 2007-2011, based on average yearly gasoil prices (which provides an index of 0.97 on 2007 gasoil prices⁴⁸);
 - The 100+m vessels are 21 % larger in length than the 84m vessels, 60 % larger in terms of GT, and are estimated to catch 50 % more per year/day. Input costs for the 100+m vessels are therefore scaled up where appropriate from those estimated for the 84m vessels;
 - We acknowledge that approaches to depreciation may vary, but have used an approach which bases depreciation cost on the lifespan of the capital item (vessel and gear), and an estimated new build cost at the mid-point of the evaluation period (in this case mid-2009). However, we also take the view that sources of finance may vary considerably and should not be included. The profiles thus estimate a net profit per class of vessel, or earnings, before interest and tax i.e. (EBIT – a commonly-used financial indicator).

⁴⁸ Gasoil prices dropped in 2009 to 65% of 2007 prices before rising again in 2011 to above prices in 2007.

- The two individual vessels models are then used as the basis for estimating total value-added resulting from the Protocol based on the total fleet operating in Kiribati waters, and its dependency on Kiribati relative to fishing in other areas. For each of the variable and fixed cost items, value-added to the upstream/input sub-sector is estimated. Estimates are made of a) the percentage of the total value-added derived/generated in both the EU and in Kiribati, and b) the rate of value-added i.e. labour inputs represent 100 % value-added, while value-added from other physical inputs is sum of the profit and labour made by suppliers of those inputs. The rates of value-added are acknowledged as necessarily best estimates only;
- Value-added in the catching sub-sector is estimated based on the crew earnings and the net profits before interest and tax;
- Value-added in the downstream processing sector is estimated based on the amount of product destined for processing in the EU (i.e. the estimated tonnage destined for canneries in Spain/Galicia after primary processing into loins in Ecuador). The rate of processing sector value-added is estimated at 25 % based primarily on the Oceanic Development *et al.* report of 2005 on the tuna sector (which reported a commercial margin of 16 % on the cost of fish for the EU tuna processing sector for skipjack cans from loins, plus an additional 5 % labour costs), and on Spanish Data Collection Regulation / Data Collection Framework (DCR/DCF) national aggregated data on the processing sector as a whole for Spain which shows a rate of 35 % gross value-added in 2007, 29 % in 2008 and 32 % in 2009 (provisional data). There is no downstream processing in Kiribati; and
- Based on all of the above, the economic model constructed allows for an estimation of the value-added directly attributable to the Protocol to both the EU and to Kiribati, in the upstream sub-sector, in the catching sub-sector, and in the processing sub-sector.

Appendix F: Purse seine catches in the WCPO by nationality, 2006 to 2010 (tonnes)

flag_id	2006			2007			2008			2009			2010		
	Skipjack	Yellowfin	Bigeye	Skipjack	Yellowfin	Bigeye	Skipjack	Yellowfin	Bigeye	Skipjack	Yellowfin	Bigeye	Skipjack	Yellowfin	Bigeye
China	47,776	4,828	140	48,745	5,428	768	43,406	10,960	1,188	67,635	7,073	1,535	42,255	10,513	948
Ecuador	6,152	1,328	2,043	6,222	716	2,249	17,675	2,463	5,277	3,136	505	787	5,846	850	1,755
EU	8,347	690	1,997	15,354	4,322	3,282	25,553	4,789	5,863	19,677	3,070	3,816	20,517	4,040	4,911
FS															
Micronesia	9,215	958	159	11,853	1,448	196	15,933	1,899	294	16,784	1,807	545	19,395	2,673	380
Indonesia	154,233	44,253	6,115	138,341	63,524	4,830	144,118	54,375	8,204	161,223	37,205	8,268	179,826	20,670	6,201
Japan	217,566	28,295	4,672	229,220	26,282	5,396	212,417	35,331	5,630	193,051	33,096	3,447	200,011	38,544	2,679
Kiribati	3,367	1,157	139	4,178	1,169	103	3,937	1,570	249	16,721	3,135	1,021	23,153	4,686	3,593
Korea	205,220	43,346	3,224	214,933	41,469	1,775	187,277	59,047	2,478	257,481	23,647	2,140	216,026	58,314	2,972
Marshall Is	38,881	1,436	2,032	53,916	3,370	2,118	26,500	4,151	1,567	39,674	1,532	2,233	47,387	7,028	1,546
New Zealand	21,662	2,157	860	33,646	2,329	651	26,079	3,200	713	26,667	1,264	204	23,615	765	131
Papua New Guinea	184,087	39,224	5,693	181,475	41,042	4,250	146,954	51,039	4,765	160,782	41,976	6,512	149,780	48,174	4,473
Philippines	123,749	51,178	7,358	149,740	51,100	4,282	176,078	63,738	4,136	161,547	43,204	4,356	123,679	39,789	3,722
Solomon Is	12,333	8,816	1,355	10,164	6,225	918	6,413	9,187	88	9,557	8,133	193	8,207	4,212	546
El Salvador				3,546	1,307	1,172	8,639	599	1,724	6,023	639	2,162	5,461	707	1,203
Tuvalu										3,991	392	45	8,459	1,996	99
Taiwan	189,392	19,793	987	209,002	21,147	2,386	165,007	35,770	3,196	173,725	16,237	2,113	166,211	29,203	3,437
USA	55,633	8,448	4,364	75,210	10,541	2,985	159,741	45,363	4,220	253,783	21,245	6,561	215,587	25,686	4,251
Vanuatu	55,050	5,982	871	62,631	7,886	764	30,512	7,634	572	35,454	2,035	351	21,031	2,452	237
Grand Total	1,333,030	261,926	42,314	1,448,543	289,342	38,430	1,396,606	391,152	50,469	1,607,278	246,232	46,594	1,476,813	300,339	43,389

Source: SPC.

Appendix G: Longline catches in the WCPO by nationality, 2006 to 2010 (tonnes)

flag_id	2006			2007			2008			2009			2,010		
	Yellowfin	Bigeye	Albacore	Yellowfin	Bigeye	Albacore	Yellowfin	Bigeye	Albacore	Yellowfin	Bigeye	Albacore	Yellowfin	Bigeye	Albacore
Australia	1,830	499	2,591	1,390	1,008	1,925	1,650	1,027	1,277	1,387	726	1,523	1,359	458	745
Belize	106	254	271	273	158	164	129	89	7	121	43	26	279	89	10
Cook Islands	262	166	2,223	290	238	2,644	247	292	2,224	197	217	1,551	215	126	1,536
China	3,997	9,790	7,191	1,580	7,821	5,453	4,562	8,761	15,092	6,800	11,565	20,149	2,356	8,895	16,790
Spain	127	62	0	127	62	0	10	77	66	7	46	70	7	46	70
Fih=ji	2,231	771	11,802	1,721	556	7,145	2,763	671	7,650	2,564	689	7,166	1,875	456	4,119
FSMicronesia	270	172	0	548	1,395	0	328	970	0	583	1,395	40	406	899	49
Indonesia	9,482	3,011	0	10,371	1,993	0	9,564	6,704	0	18,221	4,000	0	14,041	1,221	0
Japan	14,658	26,393	24,240	15,107	27,024	25,658	13,194	20,144	20,960	14,885	17,149	24,550	16,255	12,051	24,498
Kiribati							7	44	0						
Korea	9,529	12,489	1,050	8,817	10,054	1,433	7,846	17,001	1,481	9,312	15,239	1,608	7,644	13,914	1,337
Marshall Is				2	3	0	91	375	15	120	381	10	117	257	17
New Caledonia	414	35	1,358	393	53	1,324	424	63	1,506	487	51	1,649	505	44	1,939
Nauru															
Niue	42	22	213	30	18	137	8	1	7	20	10	147	8	4	97
New Zealand	3	177	496	25	213	357	11	133	382	3	253	422	6	131	456
French Polynesia	690	498	2,918	527	478	3,957	447	490	3,068	725	610	3,865	398	433	3,572
Papua New Guinea	2,139	216	1,811	1,539	111	1,598	2,259	201	464	2,714	128	906	2,147	39	883
Philippines	484	59	0	484	59	0	484	59	0	484	59	0	484	59	0
Palau															
Solomon Is													3,197	412	7,966
Tonga	227	117	414	341	129	390	291	81	220	109	38	124	47	24	124
Taiwan	18,654	14,295	11,027	16,668	14,760	10,918	16,418	15,300	7,015	17,895	13,338	11,166	22,234	11,996	14,795
USA	1,450	4,562	4,334	1,473	5,599	5,426	1,169	4,781	3,848	827	3,990	4,063	931	4,067	4,273
Vanuatu	799	1,651	8,804	967	2,122	8,388	539	860	5,582	514	1,300	7,992	788	2,060	12,293
Western Samoa	264	128	2,113	305	101	3,113	317	106	2,342	412	117	2,816	386	108	2,529
Grand Total	67,661	75,370	82,856	62,982	73,957	80,030	62,758	78,230	73,206	78,387	71,344	89,843	75,684	57,789	98,098

Source: SPC.

Appendix H: Purse seine and longline catches in Kiribati EEZ by nationality, 2007 to 2010 (tonnes)

Purse seine	2007			2008			2009			2010		
	flag_id	Bigeye	Yellowfin	Skipjack	Bigeye	Yellowfin	Skipjack	Bigeye	Yellowfin	Skipjack	Bigeye	Yellowfin
China	11	33	321	94	2,241	1,186	18	89	1,800	41	138	1,073
Ecuador	1,844	683	4,616	3,915	1,674	14,637	542	351	2,451	1,620	773	3,640
EU	1,240	987	1,906	2,628	2,260	12,420	1,447	1,837	9,522	2,150	2,286	11,281
FSM	1	23	83	26	494	1,299	53	137	1,455	28	332	1,607
Japan	17	150	1,919	74	3,594	1,421	154	542	2,310	31	4	20
Kiribati	24	492	620				170	357	2,905	1,971	1,986	8,203
Korea	617	11,451	45,589	1,176	26,068	38,958	865	5,902	85,925	755	11,486	41,140
Marshall Is	1,111	1,979	25,289	107	2,055	5,145	793	690	17,769	702	1,842	17,039
New Zealand	271	865	7,474	209	1,281	2,395	48	199	6,284	35	234	4,874
PNG	206	3,296	9,379	389	6,552	12,324	266	2,040	23,772	366	2,728	16,741
El Salvador	236	391	1,576	899	325	6,593	1,360	455	4,249	668	447	3,152
Tuvalu							27	181	2,317	3	32	1,966
Taiwan	195	1,417	10,303	563	8,885	10,816	507	2,220	35,332	597	2,891	23,174
USA	981	3,091	18,980	1,204	17,513	26,749	2,110	5,244	80,146	1,303	5,621	57,797
Vanuatu	224	1,395	9,471	331	4,303	4,929	122	493	14,643	53	232	4,835
Grand Total	6,979	26,253	137,528	11,616	77,246	138,871	8,482	20,737	290,879	10,325	31,030	196,542
Longline	2007			2008			2009			2010		
	flag_id	Albacore	Bigeye	Yellowfin	Albacore	Bigeye	Yellowfin	Albacore	Bigeye	Yellowfin	Albacore	Bigeye
China	0	26	21	1	12	2	78	1,063	313	0	1	1
Japan							10	62	52			
Kiribati				0	44	7						
Korea	186	3,935	2,951	124	3,304	1,654	128	2,400	1,366	128	2,400	1,366
Taiwan	362	508	170	47	727	173	41	429	143	0	1	0
Vanuatu	239	535	117	67	220	47	342	422	78	404	262	78
Grand Total	787	5,045	3,264	239	4,307	1,884	599	4,375	1,952	633	2,707	1,458

Source: SPC.