

**Fisheries Improvement Project for the Vietnamese Tuna longline and handline
Fisheries Sector**

Action Plan, Budget and Terms of Reference

FINAL REPORT

By

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Acronym

Vietnamese Institutions Acronyms

DARD	Department of Agriculture and Resource Development
DECAFIREP	Department of Capture Fisheries & Resource Exploitation and Protection
DECAFSIH	Department of Capture Fisheries, under General Directorate of Fisheries (D-Fish)
DECAP	Department of Conservation and Aquatic Development, under D-Fish
MARD	the Ministry of Agriculture and Resource Development
NIO	Nha Trang Institute of Oceanography
PPC	Provincial People's Committees
RIMF	Research Institute for Fisheries Management
TFMC	Tuna Fisheries Management Council
VASEP	Vietnam Association of Seafood Exporters and Producers
VINATUNA	Vietnamese Tuna Association
WWF	World Wildlife Fund (Vietnam)

Fisheries Management Acronyms

CCM	Cooperating Commission Member
CMM	Conservation and Management Measure
CNM	Cooperating Non Member
EEZ	Exclusive Economic Zone
FMA	Fisheries Management Area
IUU	Illegal, Unreported and Unregulated
MSC	Marine Stewardship Council
MoU	Memorandum of Understanding
NPOA	National Plan of Action
NTMP	National Tuna Management Plan
RFMO	Regional Fisheries Management Organisation
SC	Scientific Committee
SPC	Secretariat of the Pacific Community
TCC	Technical Conservation Committee
TAC	Total Allowable Catch
TURF	Territorial User Rights in Fisheries
UNFSA	United Nations Fish Stocks Agreement
VDS	Vessels Days Scheme
UNFSA	United Nations Fish Stocks Agreement
VMS	Vessel Monitoring Scheme
WCPFC	Western Central Pacific Fisheries Commission
WCPO	Western Central Pacific Ocean
WPEA OFM	West Pacific East Asia Oceanic Fisheries Management Project

MSC Acronyms

BMT

EAFM

ETP

FIP

MSC

PSA

RBF

SICA

MSC FIP Benchmarking and Monitoring Tool

Ecosystem Approach to Fisheries Management

Endangered, Threatened and Protected

Fishery Improvement Project

Marine Stewardship Council

Productivity Sensitivity Analysis

Risk Based Framework

Scale Intensity Consequence Analysis

1. INTRODUCTION

The original fisheries improvement project (FIP) Action Plan was developed following a FIP stakeholder meeting held in Qui Nhon, Vietnam in September 2012 and was finalized in November 2013. There was also a Progress Review held in Nha Trang, August, 2014 and a further review held in Nha Trang, Vietnam on October 8, 2015. The purpose of this document is to update the Action Plan for 2017, based on results of the FIP review meeting held at WWF offices on 29 November 2016, and to provide background information on the number of completed, ongoing and new activities that are underway, reconfirm activities which have not yet been implemented, and revise activities based on new information. Most specifically, a short paper was prepared by Poseidon to assess Vietnam's status as a Cooperating Non Member of the Western and Central Pacific Fisheries Commission (WCPFC); and the context of transition to Marine Stewardship Council (MSC) Status, even if operating outside the RFMO. The 2015 Review also took account of changes to MSC Fisheries Assessment Methodology (FCR) (Version 2) and the fact that Vietnam has not as yet set apart the both data collection and management of the longline and handline fisheries, both of which generate potentially different outcomes vis a vis bycatch

Some minor revisions have been made to the Milestones. This updated Action Plan includes information on the proposed milestones for each activity, the scoring guideposts met, the stakeholder organization responsible for implementation, the expected timeframe to complete the task and the current status. Work plans for each outcomes are also described, along with a proposed Road Map towards the implementation of a Harvest Strategy which is both compactible with the Commission Members, and should, if implemented, allow Vietnam to comply with Para 47 of CMM 2015-01¹, detailing the appropriate harvest control tools for Vietnam's 'other commercial fisheries'. The project logframe has also been adjusted to reflect any amendments. The document also includes the use of MSCs Benchmark Tracking Tool.

The Units of Certification identified from the 2013 pre-assessment were:

- Yellowfin tuna caught by handline in the Vietnamese EEZ;
- Yellowfin tuna caught by longline in the Vietnamese EEZ.

This document identifies the activities and range of activities required in the Action Plan for the fisheries to meet the Marine Stewardship Council (MSC) standard. The most important feature to this is that all target species (Principle 1), must focus on the stock status and management activities throughout the range of the stock, whilst ecosystem interactions (for secondary species², and Endangered, Threatened, and Protected (ETP) species) relate specifically to the fishery under assessment.

This document serves to improve the guidance for the activities and milestones required in the Action Plan to reach the MSC Standard, integrating changes and clarifying any areas of uncertainty which may have been identified by the stakeholders during the FIP review meeting in November 2016.

¹ Revisions are made to this text in 2016-01, agreed at the WCPFC General Session, December, 2016

² There are no primary species as there are no supporting stock assessments for these species.

The Action Plan itself incorporates reference to Stakeholder Terms of Reference (Section 4), which are revised and developed to include changes to timelines and associated budgets. The results generated from the Action Plan are reviewed by the WWF FIP Coordinator (Thuy Nguyendieu)³ and the WWF FIP consultant (Richard Banks, Poseidon)⁴.

It is anticipated that the VINATUNA will facilitate the development of the FIP Action Plan, supported by WWF Vietnam. The overarching management issues fall to the Ministry of Agriculture and Rural Development (MARD), in association with defined management actions prepared by WCPFC (Western and Central Pacific Fisheries Commission). The associated fisheries management tasks fall to responsibility of Department of Capture Fisheries, under General Directorate of Fisheries (D-Fish) and sub DFISH. Research functions may be supported by the Secretariat of the Pacific Community (SPC), but with a critical role to be played by Research Institute for Marine Fisheries (RIMF). The Plan is further developed to include a FIP tracking document with activities linked to the MSC scoring guideposts and more specific milestones. The results generated from the Action Plan are subject to periodic internal and external reviews to ensure they will meet the MSC standard.

It is noteworthy that an assessment would normally identify separate Units of Association (UoA) (and associated UoCs) for each discrete gear type or fishing method that would be assessed under MSC. Where there are discrete variations in the type of gear used (such as handline and longline), an assessment CABs could include these within a single UoA. In this case, the impacts of each gear variant should be fully assessed and reported using a 'scoring elements' approach consistent with that applied to the P2 species components. Where two or more clearly different gears are used, with differences in both impact areas and management arrangements, such gears should normally be assessed as separate UoAs.

Where a fishing gear is only very occasionally used in a fishery as an alternative to the main gear, it may be included as a part of the main UoA so long as it is clearly described and considered in the scoring (and any conditions included as normal for <80 scores, etc.). Such a flexible approach is allowed to minimise the complexity of assessment reports as far as possible while still ensuring that all fishing practices are fully assessed. As an example, such scoring could be appropriate in a mussel fishery where spat are mainly collected by dredge, but fishers also occasionally engage in some hand raking at low tide to maintain supplies, e.g., during the most extreme spring tides.

The Client should note that when two gear types are scored together the lower score will determine the result for both gear types. Decisions on the UoA should thus reflect the benefits of joint scoring against the risk of an individual analysis on one gear resulting in a fail for all the others in the UoA. The outcome of this, based on the work to date, and the significant differences in bycatch species composition, that handline would be likely to pass P2, whereas longline would be less likely. Much of this would depend on showing that bigeye caught in the

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handline fishery is < 2% ('minor' vulnerable species). Data available to date does not show that this is the case, and all PIs are scored the same irrespective of method.

An assessment of current status of the fisheries against the principle guideposts is summarized below.

Table 1: Summary of pre-assessment scoring

Principle	Component	PI number	Performance Indicator	Likely scoring level	2016
1	Outcome	1.1.1	Stock status – yellowfin tuna	Pass	Pass
			Stock status – bigeye tuna	Fail	Fail
		1.1.3	Stock rebuilding – bigeye tuna	Fail	Fail
	Management	1.2.1	Harvest Strategy – yellowfin tuna	Fail	Fail
			Harvest strategy – bigeye tuna	Fail	Fail
		1.2.2	Harvest control rules and tools – yellowfin tuna	Fail	Fail
			Harvest control rules and tools – bigeye tuna	Fail	Fail
		1.2.3	Information and monitoring – yellowfin tuna	Pass with condition	Pass
		1.2.3	Information and monitoring – bigeye tuna	Pass with condition	Pass
		1.2.4	Assessment of stock status - yellowfin tuna	Pass	Pass
		1.2.4	Assessment of stock status - yellowfin tuna	Pass	Pass
	2	Primary species	2.1.1	Outcome - handline	Fail
Outcome – longline				Fail	Fail
2.1.2			Management - handline	Fail	Fail
			Management – longline	Fail	Fail

		2.1.3	Information – handline	Fail	Pass with condition
			Information – longline	Pass with condition	Pass with condition
	Secondary	2.2.1	Outcome - handline	Fail	Pass with condition
			Outcome – longline	Fail	Pass with condition
		2.2.2	Management - handline	Fail	Fail
			Management – longline	Fail	Fail
		2.2.3	Information – handline	Fail	Pass with condition
			Information – longline	Fail	Pass with condition
		ETP species	2.3.1	Outcome - handline	Fail
			Outcome – longline	Fail	Pass
			Management - handline	Fail	Pass
			Management – longline	Fail	Pass
	2.3.3		Information – handline	Fail	Pass
			Information – longline	Fail	Pass
	Habitats	2.4.1	Outcome - handline	Pass	Pass
			Outcome – longline	Pass	Pass
		2.4.2	Management - handline	Pass	Pass
			Management – longline	Pass	Pass
		2.4.3	Information – handline	Pass with condition	Pass with condition
			Information – longline	Pass with condition	Pass with condition
	Ecosystem	2.5.1	Outcome - handline	Fail	Pass but requires clarification in an RBF report
			Outcome – longline	Fail	Pass but requires clarification in an RBF report
		2.5.2	Management - handline	Fail	Pass but requires clarification in an RBF report

			Management – longline	Fail	Pass but requires clarification in an RBF report
		2.5.3	Information – handline	Pass with condition	Pass but requires clarification in an RBF report
			Information – longline	Pass with condition	Pass but requires clarification in an RBF report
3	Governance and Policy	3.1.1	Legal and customary framework	Pass with condition	Pass
		3.1.2	Consultation, roles and responsibilities	Pass with condition	Pass
		3.1.3	Long term objectives	Pass with condition	Pass
	Fishery specific management system	3.2.1	Fishery specific objectives – handline	Fail	Pass
		3.2.1	Fishery specific objectives – longline	Pass with condition	Pass
		3.2.2	Decision making processes – handline	Fail	Pass with condition
		3.2.2	Decision making processes – longline	Fail	Pass with condition
		3.2.3	Compliance and enforcement – handline	Fail	Fail
		3.2.3	Compliance and enforcement – longline	Fail	Fail
		3.2.4	Management performance evaluation	Pass with condition	Pass with condition

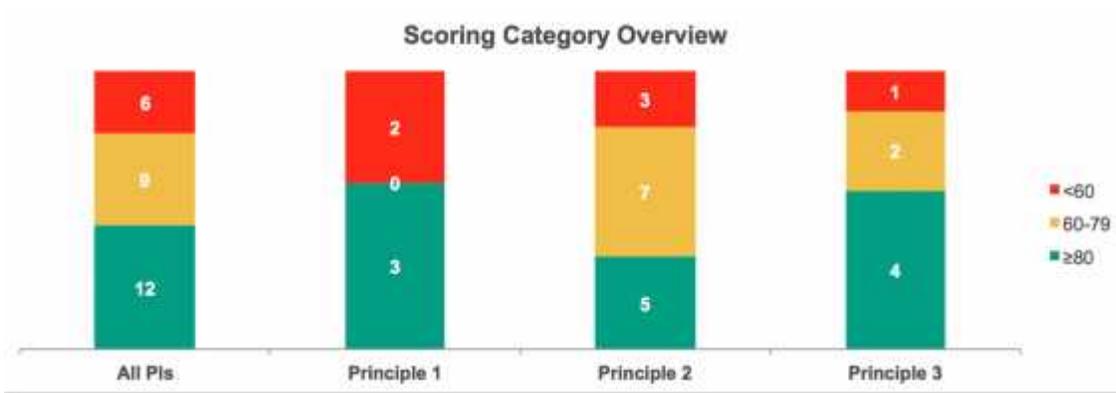
A summary of FIMP-BMT⁵ index sheet is shown in Tables 2 to 4. Longline and handline are combined as there is no variance between the two fisheries. Separate BMT sheets are provided to WWF VNM, and the activities described below highlight specific fishery weaknesses.

⁵ The MSC FIP Benchmarking and Monitoring Tool (BMT) is used to assess the performance of each FIP over its project period. It may also be used by MSC to compare the progress of one FIP against the other.

Table 2: MSC BMT Index summary table for the Vietnam tuna longline fishery

Scoring Level	All PIs	Principle 1 Number of PIs	Principle 2 Number of PIs	Principle 3 Number of PIs
≥80	12	3	5	4
60-79	9	0	7	2
<60	6	2	3	1
BMT Index	0.61	0.60	0.57	0.71

Figure 1: MSC BMT scoring overview Vietnam tuna longline fishery



Expected BMTindex table

	BMT Index					
	Year 1	Year 2	Year 3	Year 4	Year 5	
Principle 1	Actual	0.50	0.50	0.40	0.60	
	Expected		0.50	0.70	0.70	1.00
Principle 2	Actual	0.37	0.30	0.30	0.57	
	Expected		0.37	0.57	0.90	1.00
Principle 3	Actual	0.36	0.43	0.64	0.71	
	Expected		0.36	0.64	0.93	1.00
Overall	Actual	0.39	0.37	0.41	0.61	
	Expected		0.39	0.61	0.67	1.00

Figure 2: BMT Progress tracker

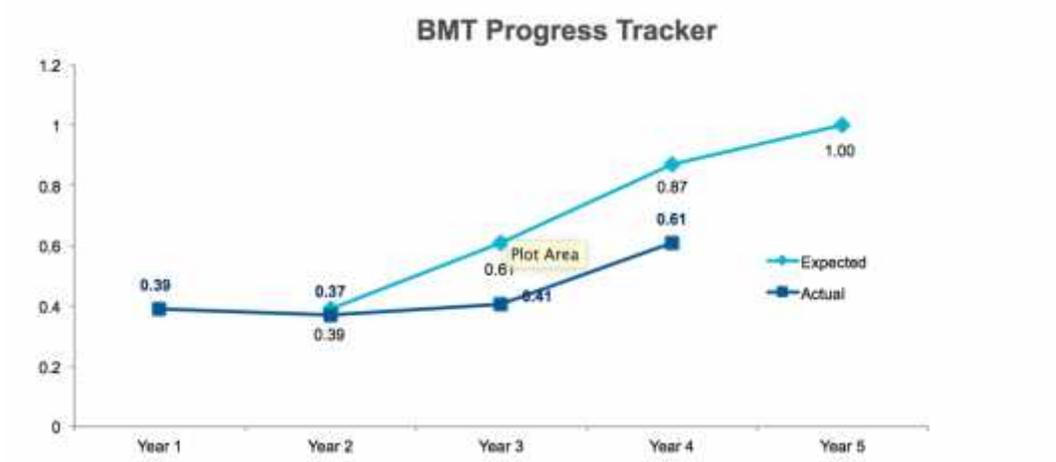


Table: 4
BMT Report
sheet

Principle	Component	Performance Indicator	Expected Scoring Category: Year 4	Actual Scoring Category: Year 4	Status
1	Outcome	1.1.1 Stock status	≥80	≥80	On Target
		1.1.2 Reference points	—	—	
	Management	1.2.1 Harvest Strategy	60-79	<60	Behind
		1.2.2 Harvest control rules and tools	60-79	<60	Behind
		1.2.3 Information and monitoring	60-79	≥80	Ahead
1.2.4 Assessment of stock status		≥80	≥80	On Target	
2	Primary species	2.1.1 Outcome	60-79	<60	Behind
		2.1.2 Management	60-79	<60	Behind
		2.1.3 Information	≥80	60-79	Behind
	Secondary species	2.2.1 Outcome	≥80	60-79	Behind
		2.2.2 Management	60-79	<60	Behind
		2.2.3 Information	≥80	60-79	Behind
	ETP species	2.3.1 Outcome	≥80	≥80	On Target
		2.3.2 Management	≥80	≥80	On Target
		2.3.3 Information	≥80	≥80	On Target
	Habitats	2.4.1 Outcome	≥80	≥80	On Target
		2.4.2 Management	≥80	≥80	On Target
		2.4.3 Information	≥80	60-79	Behind
	Ecosystem	2.5.1 Outcome	≥80	60-79	Behind
		2.5.2 Management	≥80	60-79	Behind
		2.5.3 Information	≥80	60-79	Behind
3	Governance and Policy	3.1.1 Legal and customary framework	≥80	≥80	On Target
		3.1.2 Consultation, roles and responsibilities	≥80	≥80	On Target
		3.1.3 Long term objectives	≥80	≥80	On Target
	Fishery specific management system	3.2.1 Fishery specific objectives	≥80	≥80	On Target
		3.2.2 Decision making processes	≥80	60-79	Behind
		3.2.3 Compliance and enforcement	60-79	<60	Behind
		3.2.4 Management performance evaluation	≥80	60-79	Behind
Total number of PIs equal to or greater than 80			20	12	
Total number of PIs 60-79			7	9	
Total number of PIs less than 60			0	6	

2. THE ACTION PLAN

A summary logframe is provided in a separate attachment. It contains three basic goals, 15 outcomes, 21 activities and 55 milestones.

The project goals are as follows:

- Stock status and fisheries management: *To ensure that the tuna catches do not exceed sustainable levels*
- Ecosystem management: *To promote the ecosystem based approach to fisheries management*
- Governance systems: *To strengthen governance systems in Vietnam's Tuna fishery*

The fifteen outcomes⁶ are as follows:

1. Stock status improved and reference points applied in management
2. Data collection and Information systems strengthened
3. Management strategies applied and supported by tools and the application of strong information and research
4. Retained and bycatch species subject to a management strategy
5. Shark management measures implemented
6. Turtle management strengthened
7. Habitats subject to a management strategy
8. Ecosystems and biodiversity assessments made for the Vietnamese and South China Sea region
9. Fisheries Law effectively implemented
10. Roles and responsibilities and consultation processes fully implemented
11. Positive incentives promoted
12. Fishery specific management objectives applied
13. Decision making process strengthened
14. Effective application of compliance systems
15. Strengthening of national tuna research, guided by a research plan

The specific activities will be addressed in the section below.

This section represents a summary of the current positions on the milestones set to evaluate the achievement of outcomes in the Vietnam Fisheries Improvement Plan facilitated by WWF-VN and WWF-CTP. The Fisheries Improvement activities were agreed at a workshop held in June, 2013 and progress reviewed for those milestones in Q4 2016. The timelines have been adjusted to reflect outcomes to be achieved by Q 4 2017, and Q34 2018.

It is important to note that MSC requires vigorous assessment and public consultation processes, with a facility for objections and adjudication. For this reason very specific milestones have been set, which require validation through Means of Verification (MoVs). These will be recorded in a Dropbox, and outputs evaluated by the FIP consultant to test whether these outputs are sufficient, or if not, require strengthening. The Dropbox system will be created following this

⁶ There is no milestone for Performance evaluation, as performance outcomes are integrated into the Tuna Management Plan

report, and will be linked to the existing FIP stakeholder communication channels. Having the specific MoVs in place will allow the MSC assessors to confirm if the MSC scoring guideposts have been met. It also provides clear evidence of outcomes to any prospective challenge to fishery specific certification.

The FIP consultant notes that milestone achievement against previously agreed timelines has **been inadequate**, and recommends that a further **FIP review not to take place until the milestones set for completion on 2017 are actually implemented**. These include:

1. Development of a national tuna harvest strategy, which:

- implements Limit and Target Reference points for yellowfin and bigeye tuna based on research undertaken by RIMF.
- Workshopping with industry to determine the limits set, where the limits are compatible with WCPFC measures for other commercial fisheries (Indonesia and Philippines)
- Adopts management limits for all Vietnamese commercial fisheries, which are applied by Province and by fishing method

The strategy must contain a different strategy for yellowfin and bigeye tuna, where there must be a conscious effort to reduce the catch of bigeye tuna by 36%, and maintain, and not to increase catches of yellowfin tuna;

2. Development of a shark action plan, which

- Establishes limits which prevent the targeting of sharks, and limits, as much as possible, the bycatch of at risk species, including hammerhead, blue and thresher sharks.

3. Development of ecosystem research, as an integral part of the WPEA III programme

4. Strengthening the Tuna Management Plan to incorporate:

- Linking the harvest strategy and harvest rules and tools (quota, effort limits etc) to the RFMO Target Reference Points for each species; and ensuring that actions will be taken by Vietnam if any tuna species reaches the Point of Recruitment Impairment
- Adding 'Implement bycatch based risk assessment to determine the impacts of fisheries on the ecosystem' as a separate action point under II 'Collecting data to serve for management of the oceanic tuna fisheries'.
- Adding technical measures to protect any vulnerable bycatch species, especially sharks and turtles, under III Implementing the management measures
- Incorporation of an external review procedure which can critically assess the implementation of the Plan, identify bottlenecks and make recommendations for change

5. Strengthening the transparency in the decision -making process to include:

- Clarifying the decision-making processes that results in measures and strategies to achieve the fishery-specific objectives
- Ensure that the decision-making processes responds to **serious and other important issues identified in relevant research, monitoring, evaluation and consultation**, in a transparent, timely and adaptive manner
- That the decision-making processes use the precautionary approach and are based on best available information and that **Information on fishery performance and management action is available on request, and** explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring evaluation and review activity.
- Provide explanations for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.

6. Implementing a compliance strategy to ensure that fishers conform to the harvest control tools and bycatch management requirements.

The progress of the actions completed in 2015/2016 are as follows:

Goal 1: Stock status improved and reference points applied in management

The status of the Milestones for Goal 1 are listed below:

Blue = Completed

Green = Ongoing

Red = No done

Goal 1: To ensure that the tuna catches do not exceed sustainable levels

Outcome 1.1: Stock status improved and reference points applied in management

Milestone 1: MARD/RIMF participating in SC WGs and WCPFC general session discussions on reference points

Milestone 2: Setting of LRPs and TRPs at WCPFC for all species (YFT, BET)

Milestone 3: MARD/RIMF participating in SC WGs for the revision of the core WCPFC CMM on bigeye and yellowfin strategy

Milestone 4: Catch and / or effort limits set for bigeye and yellowfin tuna for Vietnam other commercial fisheries (WCPFC CMM 2015-01, para 46/47) (either 2001-2004 levels or an alternative) and based on an historic reference point

Outcome 1.2: Data collection and Information systems strengthened

Milestone 5: Logbook coverage > 75% for LL and HL, and improved coverage of other fisheries

Milestone 6: Port sampling for key gear types implemented in all main ports/provinces

Milestone 7: Tuna vessel register operational at Provincial level linked to National recording system

Milestone 8: National tuna data collection system implemented and fully effective

Outcome 1.3: Management strategies applied and supported by tools and the application of strong information and research.

Milestone 9: Vietnam compliant with CMM 2016-01 or any subsequent amendment

Milestone 10: Compliance reporting and annual report on the effectiveness of the CMM

Milestone 11: Workshop on exploring options for input (effort) and output (quotas) for longline and handline fisheries based on TRPs and LRP and CMM 2012-01 (years 2001-2004 levels)

Milestone 12: Establishing a framework within which harvest control rules would be set and delegating appropriate responsibilities to the Provinces

Milestone 13: Introduction Vietnamese management measures for all tuna fisheries in Vietnam

Milestone 14: Fisher awareness programme

Milestone 15: Undertake and assess evidence that the measures established are effective

Goal 2: To promote the ecosystem based approach to fisheries management

Outcome 2.1: Primary and secondary species subject to a management strategy

Milestone 16: Establish an observer scheme to monitor all catches of retained species and document the level of discarding from the handline and longline fisheries

Milestone 17: Extend port sampling procedures to cover primary and secondary species (and informed by the observer scheme)

Milestone 18 Document observer data and port sampling verification, and prepare summary reports of main and vulnerable species (retained) interactions other than bigeye tuna

Milestone 19 Training in risk assessment and the application of EAFM

Milestone 20 Prepare a risk assessment report based on observer data

Milestone 21: Workshop to analyse risk mitigation strategies

Milestone 22 Implement retained species mitigation measures for at risk species defined in the Risk Based Framework (other than those covered already by CMMs) where necessary

Milestone 23 Evaluate the effectiveness of management mitigation measures for vulnerable primary, secondary, bait and ETP species

Outcome 2.2: Shark management measures implemented

Milestone 24a: Implement shark CMMs 2010-07 and CMM 2011-03/CITES App 2

Milestone 24b: Prohibit shark finning at sea

Milestone 25: Ensure that all shark species are covered under observer reporting above

Milestone 26: Fisher shark awareness programme

Milestone 27: Evaluate the effectiveness of management measures for shark species identified in the CMMs and CITES

Outcome 2.3: Turtle management strengthened

Milestone 28: Ongoing monitoring of turtle bycatch and life status in the handline and longline fisheries (Milestone 13 and 15)

Milestone 29a: Implement effective management mitigation measures for turtles which are as close to zero as possible and Implement an optimum management mitigation strategy with support measures which aim to (a) reduce turtle interactions as close to zero as feasible and (b) are consistent with national and international (WCPFC) obligations and the NPOA-Turtles, consistent with national and international (WCPFC) obligations.

Milestone 30: Fisher awareness programme

Milestone 31: Evaluate the effectiveness of management mitigation measures for turtles based on best practice

Outcome 2.4: Habitats subject to a management strategy

Milestone 32a: Gear losses incorporated into observer reporting

Milestone 32b: Include an assessment of habitat impacts as part of the SICA/PSA assessment

Outcome 2.5: Ecosystems and biodiversity assessments made for the Vietnamese and South China Sea region

Milestone 33: Collection of biological samples to adequately assess in support of wider SPC Pacific ecosystem work

Milestone 34: Training in ecosystem modeling

Milestone 35: Ecosystem analysis and reporting to support adoption of EAFM

Goal 3: To strengthen governance systems in Vietnam Tuna management

Outcome 3.1: Fisheries Law effectively implemented

Milestone 36: Clarification of the application of the Convention (and CMMs) to Vietnam

Milestone 37: Vietnam becomes a WCPFC CCM

Milestone 38: National legal system effective and organised and effective cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2

Milestone 39: Applying relevant tuna regulations/decrees (catch/effort limits etc)

Milestone 40: Tuna Fishery Consultation Council fully operational and all roles & responsibilities defined

Outcome 3.2: Roles and responsibilities and consultation processes fully implemented

Milestone 41: Explicit reference would have to ensure that any change in fleet capacity takes account of the precautionary approach to fisheries management, and adherence to appropriate scientific advice, most specifically adhering to the LRPs set in management

Milestone 42: Evidence would need to show that the Precautionary Approach to Fishery Management (PAFM) is explicitly understood and enacted at both national and provincial level

Milestone 43: Definitions to include handline fisheries and all target species

Milestone 44: Management Plan finalised, complies with MSC principles and contains a consultation process and includes a monitoring & performance component

Milestone 45: Evidence that the management plan is being applied and its effectiveness is assessed by a process of regular internal and external reviews

Outcome 3.3: Decision making process strengthened

Milestone 46: Introduce clear guidelines for taking management decisions, probably as a component of the management plan.

Milestone 47: Evidence is available that explanations to be provided for decisions taken, and should follow the basis of the management plan when introduced, which may include precautionary actions

Outcome 3.4 Effective application of compliance systems

Milestone 48: Risk assessment of enforcement actions following the introduction of P1 and P2 associated management measures

Milestone 49: Review of sanctions for non-compliance

Milestone 50: Effective evidence of systematic compliance and an effective system of sanctions

Outcome 3.5: A national research plan is in place

Milestone 51: A research plan prepared publically available

Milestone 52: Research results are disseminated to all interested parties

THE REVISED ACTION PLAN

GOAL 1. STOCK STATUS AND FISHERIES MANAGEMENT: TO ENSURE THAT THE TUNA CATCHES DO NOT EXCEED SUSTAINABLE LEVELS

Outcome 1.1 Stock status improved and reference points applied in management

A new WCPFC stock assessment for yellowfin, were published in 2014 (Davies, et al, 2014)⁷ and bigeye (Harley et al, 2014⁸). Yellowfin tuna remains above BMSY. The yellowfin assessment shows that the stock is **highly likely to be above the PRI** (MSC V2, P1.1.1SG 80 a). The problem issues are that: Reportedly large increases in catches of small yellowfin tuna have been occurring in WCPFC Region 3 (Indonesia, Philippines and Papua New Guinea) since 2012; and that the latest catches are close to or exceed MSY by up to 13%. Yellowfin is at SB_{CURR}/SB_{MSY} 0.93-1.13.

In contrast, overfishing is occurring for WCPFC bigeye tuna, ($F_{CURR}/F_{MSY} = 0.94$; Harley *et al*, 2014) and the stock is now overfished to beyond the PRI. Scored as a P1 MSC species, bigeye tuna would therefore have to be subject to rebuilding, which would require a timeframe shorter than 20 years or 2 times its generation time. It is highly unlikely that bigeye tuna can achieve recovery targets in a five year timeframe because the management measures in place are not sufficient to allow recovery on the scale required (Pilling, 2014)⁹. This means that for all Vietnamese fishing methods where bigeye features as a catch > 2% of the total – handline and longline, bigeye tuna may only be considered as a primary species. This would mean that bigeye tuna is assessed under P2 where it will have to satisfy the criteria: *either evidence of recovery or a demonstrably effective strategy in place between all MSC UoAs and to ensure that they collectively do not hinder recovery and rebuilding*. PI 1.1.1 is likely to achieve higher than a pass score for yellowfin,

Activity 1.1.1: WCPFC would have to set explicit limit reference points which are consistent with the MSC definition of BLIM (0.2 B₀), and for these to be applied to the harvest strategy (1.2.1).

The associated milestones are:

- **Milestone 1:** MARD/RIMF participating in SC WGs and WCPFC general session discussions on reference points

⁷ Davies, N., Harley S, and J Hampton (2014) Stock assessment of yellowfin tuna in the Western and Central Pacific Ocean. WCPFC-SC10-2014/SA- WP-04, Majuro, Republic of the Marshall Islands 6-14 August 2014. Available at https://www.wcpfc.int/system/files/SC10-SA-WP-04%20%5BYFT%20Assessment%5D_rev1_25July.pdf

⁸ https://www.wcpfc.int/system/files/SC10-SA-WP-01%20%5BBET%20Assessment%5D_rev1_25July.pdf

⁹ Pilling, G., Williams, P., Hampton, J., and Harley, S. (2013) Analysis of the implementation and effectiveness of key management measures for tropical tunas, WCPFC-SC9-2013/MI-WP-01 REV1. Available at <http://www.wcpfc.int/system/files/MI-WP-01-evaluation-measures-trop-tuna-Rev1.pdf>

- Milestone 2: Vietnam Setting of LRPs and TRPs at for all species caught including specifically for YFT, and BET.

The first component falls to the explicit responsibility WCPFC in setting limit and target reference points. However, the introduction of these reference points will also have to apply as a component of Vietnam's tuna management strategy (Activity 1.3.1).

Limit Reference points were set for all three species at the WCPFC General Session (WCPFC, 10) at $20\%SB_{recent, F=0}$. (WCPFC 10). Target Reference points are under development and likely to be adopted for skipjack at least at WCPFC 13. PNA has been developing Target Reference Point Scenarios that take account of uncertainties in line with their MSC recommendation. WCPFC CMM 2014-06¹⁰ has also sought to encourage the development of TRPs for yellowfin and bigeye tuna, but there are no timelines for their adoption.

A harvest strategy exists for WCPFC tuna species in WCPFC CMM 2015-01¹¹. The strategy makes explicit reference to the PNA purse seine VDS scheme, effort controls for other purse seine fisheries and the implementation of limits for other commercial fisheries. If Vietnam wishes to pursue WCPFC membership, as well as MSC Certification, it will have to address the issue of compatible measures and the implementation of input or output controls on its commercial fisheries where catches exceed 2,000 metric tonnes (yellowfin, bigeye and skipjack) in any of Vietnam's commercial fisheries¹². These controls will have to demonstrate that management measures are in place to implement actions, if the stock falls below the Limit Reference point, or approaches the Point of Recruitment Impairment (PRI). The Government of Vietnam has set a unilateral TRP of 19,000 mt increasing to 21,000 mt by 2020 for both yellowfin and bigeye tuna would not be considered as a compatible measure with the WCPFC.

A decision to set Target Reference Points (TRP) for Yellowfin and Bigeye tuna is now subject to annual working group (CMM 2015-06) sessions and is unlikely to be established until the WCPFC General meeting scheduled in 2017. MARD officials usually attend these meetings, when there is a need for stock assessment specialists to attend.

It is accepted that RIMF has the necessary stock assessment skills, following donor assisted training, to participate in these meetings. A three country stock assessment workshop was held in Haiphong, Vietnam (WPEA, November, 2015). These showed the bigeye biomass below the LRP; and the Yellowfin biomass in decline.

Figure 1: Bigeye stock status, 2009-2015

¹⁰ WCPFC CMM 2014-06. Available at <https://www.wcpfc.int/system/files/CMM%202014-06%20Conservation%20and%20Management%20Measures%20to%20develop%20and%20implement%20a%20harvest%20strategy%20approach%20for%20key%20fisheries%20and%20stocks%20in%20the%20WCPO.pdf>

¹¹ WCPFC CMM 2015-01. Available at <https://www.wcpfc.int/doc/cmm-2015-01/conservation-and-management-measure-bigeye-yellowfin-and-skipjack-tuna-western-and>

¹² Commercial fisheries are defined as national commercial fisheries as opposed to specific Provinces. As such a catch of 2,000 mt refers to the tuna catch by a single fishing method in Vietnam.

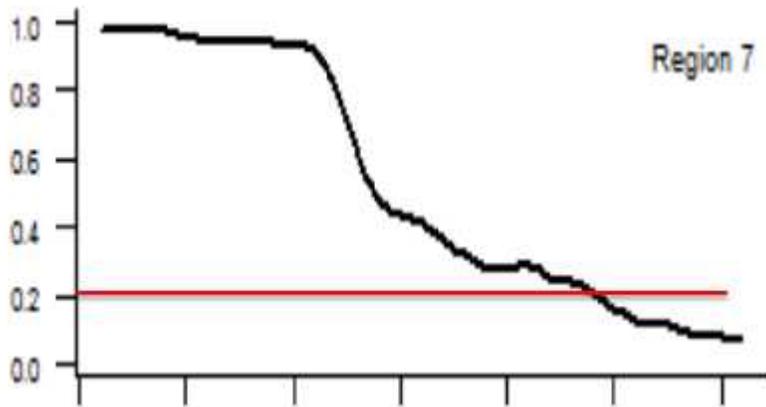
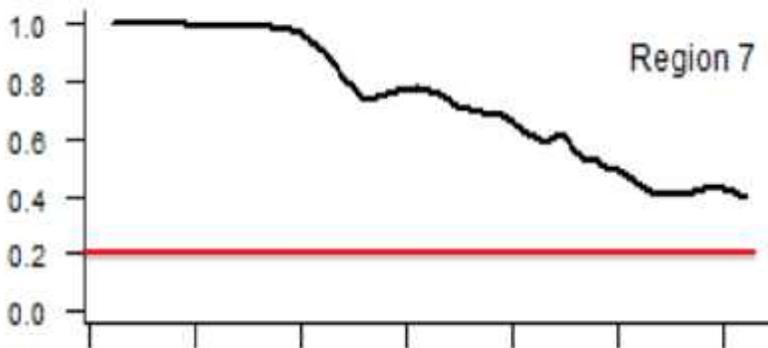


Figure 2: Yellowfin stock status, 2009-2015



Source: WPEA stock status report. Note Region 7 refers to the eastern most range of the tuna stocks.

Assigned stakeholders	WCPFC with MARD and RIMF participation
Priority	High
Status	Priority for implementation
Timeframe	2017
MSC Performance Indicator(s)	1.1.1 Stock status and 1.2.3 Stock Assessment.

Activity 1.1.2: An effective rebuilding strategy would have to be implemented for bigeye tuna. This will require CCM and CNMs to implement effective measures, but could only be achieved in the much longer term, i.e. 5-10 years, or greater.

The associated milestones are:

Milestone 3: MARD/RIMF participating in SC WGs for the revision of the core WCPFC CMM on bigeye and yellowfin strategy

Milestone 4: Catch and / or effort limits set for bigeye and yellowfin tuna for Vietnam consistent with WCPFC methodology (either 2001-2004 levels or an alternative) and based on an historic reference point.

WCPFC 2012-01 has reaffirmed a number of measures and highlights the basis for extending WCPO management actions to include the following relevant actions:

- Management measures for both purse seine and longline fisheries to reduce fishing mortality of bigeye,
- Alternative measures intended to reduce the catch of juvenile tunas, such as a limit on FAD set numbers,
- Management of the fishing capacity.

These measures will be advanced by a working Group, tasked with responsibility to develop a multi-year management program for 2014-2017.

Vietnam fishery managers, D-FISH (national) and scientists (RIMF) need to participate at the SC, but also at any specific WG. These meetings are held at the annual WCPFC Science Committee meetings, or any specific sub regional meetings such as those conducted under WPEA.

Assigned stakeholders	WCPFC with MARD and RIMF participation;
Priority	High
Status	Priority for implementation
Timeframe	2017
MSC Performance Indicator(s)	1.1.3 and 2.1.1 Target species and rebuilding (retained bigeye)

Outcome 1.2 Data collection and Information systems strengthened

Activity 1.2.1: Continue to improve national data collection and monitoring at all levels

The associated milestones are:

Milestone 5: Logbook coverage > 75% for LL and HL, and improved coverage of other fisheries e.g. purse seine, gillnet

Milestone 6: Port sampling for key gear types implemented in all main ports/provinces

Milestone 7: Tuna vessel register operational at Provincial level linked to National recording system

Milestone 8: National tuna data collection system implemented and fully effective

Collection of catch and landings data for Vietnamese oceanic tuna fisheries is primarily undertaken at provincial level, with provincial fisheries organizations (Sub D-Fish) based in the main landing sites. The collection of provincial data has been considerably strengthened with support since 2010 from the [West Pacific East Asia Oceanic Fisheries Management Project](#) (now about to enter WPEA OFM III) and covers improved logbook recording, landings records and port sampling. These data are fed from Sub DARD to D-Fish, where they are entered and collated, then incorporated in mandatory reporting to WCPFC. The national data collection system (VN-Fishbase) developed for the oceanic tuna fishery by FiCen is operational.

The milestone has arguably achieved its objective, but not at the intended target of 75%. Considerable progress has been made from no data collection to collection of data in each tuna fishery. The management authorities use TUFMAN to manage and report on their data and will move to TUFMAN 2 over the next year or so. Logbook coverage of the longline/handline fishery is reasonably strong in the seven main producing provinces, including Binh Dinh, Phu Yen, Khanh Hoa. The range of returns is from around 15%-57%, but considered sufficiently representative (Williams, pers comm, December, 2016). Coverage of port sampling and landings is reasonable. Data are provided to SPC, but not the WCPFC, and the data is included in the SPC stock assessments.

Logbook training has been applied by D-Fish/VINTUNA and WWF. Industry companies support the LB programme and promote purchasing policies from those vessels working with the logbook training programme.

The vessel registry is now fully operational. Central database linked to the Provinces. This is encoded at Provincial level. This is reported to MARD. Provinces also send a copy to RIMF and incorporated into commercial fishery database.

The principal partners for these activities are fishermen sub DARD and D-FISH.

Assigned stakeholders	WCPFC with MARD and RIMF participation;
Priority	High
Status	Ongoing and subject to continual improvement
Timeframe	Ongoing
MSC Performance Indicator(s)	1.2.3 Target species information

Outcome 1.3 Management strategies applied and supported by tools and the application of strong information and research.

Activity 1.3.1: Implementation of a compatible harvest strategy in Vietnam waters (and compliance with CMMs), which would include longline, purse seine and other gears (including handline and gillnet), and would be consistent with Vietnam’s obligations developed through any future changes to 2012-01.

The following Milestone is in place:

Milestone 9: Vietnam's compliant with CMM 2016-01, or any subsequent amendment

Clarification of Vietnam’s management obligations to WCPFC (Activity 3.1.1) have been evaluated in a paper submitted by Poseidon on behalf of WWF to the FIP group. The paper concludes that irrespective of the issue of the South China Sea falling outside the Convention Area, if Vietnam is serious about pursuing membership of WCPFC, it must implement the CMMs, and most specifically, must formulate compatible management strategies consistent with those required of ‘other commercial fisheries’ catching > 2,000 mt of skipjack, yellowfin and bigeye tuna. It is also noteworthy that in order to achieved MSC status, irrespective of the Convention issues, Vietnam must should implement CMM 2016-01.

Assigned stakeholders	WCPFC/MARD/D-Fish/sub D-Fish/DARD;
Priority	High
Status	Strengthening existing understanding
Timeframe	2018
MSC Performance Indicator(s)	1.2.1 Harvest strategy

Activity 1.3.2: Setting a monitoring system in place (consistent with CMM 2010-03) which evaluates the effectiveness of the management measures

Milestone 10: Compliance reporting and annual report on the effectiveness of the CMM

This component falls to the explicit responsibility MARD and D-Fish to monitor the application of measures at sub DARD level. D-Fish will have to design, and amend a set of measures that follow the above CMMs, and then monitor compliance. An annual report will be submitted from sub DARD to D-Fish to MARD.

The Confidential Part 2 Compliance report reportedly contains reference to ‘Non Applicable’ for these measures. D-Fish has indicated a willingness to comply with these standards, but this requires a higher level decision (MARD) to support this initiative..

Assigned stakeholders	WCPFC/MARD/D-Fish/sub D-Fish/DARDP;
Priority	High
Status	Changing status to implementing the measures and having these evaluated
Timeframe	2018

MSC Performance Indicator(s)	1.2.1 Harvest strategy
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Activity 1.3.3: Establishing national harvest control rules (input and output restrictions) across the range of tuna fisheries which allow for limits to be implemented as reference points are approached. The rules and tools will need to take account of best practice examples to illustrate their appropriateness (e.g. overall capacity limits, quotas and closed seasons).

The following milestones are in place, but have yet to be implemented

Milestone 11: Workshop on exploring/establishing limits based on TRPs and LRPs and CMM 2012-01 (years 2001-2004 levels), and making allowances for uncertainties

Milestone 12: Establishing a framework within which harvest control rules would be set and delegating appropriate responsibilities to the Provinces

Milestone 13: Introduction Vietnamese management measure for the Vietnam tuna fishery

Milestone 14: Fisher awareness programme

Milestone 15: Undertake and assess evidence that the measures established are effective.

Once Reference Points Have Been Set In Management, The Government Of Vietnam Will Need To Review Its System Of Management Tools For All Its Fisheries. These Would Cover Either Output Controls (Quotas) Or Input Controls (Limits To Vessels, Days Or Closed Season. It Is Noted that a workshop was convened on development of the management strategy for Vietnam tuna fishery, at Hai Phong, 24-25 November 2016. This is seen as work in progress as no specific outcomes appeared to have been agreed, i.e., the workshop contained useful discussions, but no actions have been forthcoming, with a further workshop planned.

For this milestone to be advanced there needs to be evidence that actions are to be implemented.

Assigned stakeholders	MARD/D-Fish/sub D-Fish/fishers; WWF
Priority	High
Status	Priority for implementation
Timeframe	2017
MSC Performance Indicator(s)	1.2.1 Harvest Strategy and 1.2.2 Harvest control rules and tools

Recommendation 1 for 2016/2015 is for Vietnam to develop its harvest strategy for all its fleets catching more than 2,000 mt in conformity with Para 28/47. As part of this strategy,

Vietnam should work with Indonesia and Philippines to explore an acceptable reference period that is reflective of a realistic level of effort (e.g. 2010 which is consistent with the reference period set for the PNA on the VDS).

The following actions would therefore need to be considered:

1. Implement species specific Limit Reference Points for yellowfin and bigeye tuna at 20% SBO.
2. Analyse catch data by species to determine fleet catches > 2,000 mt
3. Discuss alternative reference year strategies, from 2001-2004, with Indonesia and Philippines
3. Develop national limits for longline, handline and other Vietnamese commercial fisheries
4. Extend these limits to each Province
5. Provide detailed breakdown of fishery limits to WCPFC.
6. Ensure that the Provinces implement a monitoring system to ensure compliance.

Section 4.4 contains a specific Terms of Reference for a series of workshops. Funding for this initiative will have to be investigated.

GOAL 2. ECOSYSTEM MANAGEMENT: TO PROMOTE THE ECOSYSTEM BASED APPROACH TO FISHERIES MANAGEMENT

Outcome 2.1: Primary and secondary species subject to a management strategy

Activity 2.1.1: Document the catch of bigeye tuna, shark, billfish, baitfish and other species in the handline and longline fisheries (See FIP action 2.1.3). Note that there are already WCPFC CMMs in place that require selected pelagic shark species catches to be recorded

Milestone 16: Establish an observer scheme to monitor all catches of retained species and document the level of discarding from the handline and longline fisheries

Milestone 17: Extend port sampling procedures to cover retained species (and informed by the observer scheme)

Milestone 18: Document observer data and port sampling verification, and prepare summary reports of main and vulnerable species (retained) interactions other than bigeye tuna.

Accurate information has been collated on total removals from the fishery including for primary and secondary species. However, insufficient information remains on bait species. There are no ETP species caught in this fishery, nor oceanic whitetip or silky sharks, which are subject to management and a CMM. The status of baitfish stocks harvested for longline and handline fisheries is also unknown.

An observer programme has commenced and is aimed at collecting operational and by-catch/ETP species data. Current deployment is estimated to be less than 2% of the total trips. Much of the early work has been through the support of WWF. The observer training has commenced and follows the SPC training modules. The early work is intended to guide eventual industry-funded larger scale observer placement. Support, notably training of trainers, has been provided by WWF, and will be expanded under WPEA II. VinaTuna is identifying ways to expand the observer scheme and will establish a cost recovery system.

WPEA II is also committed to strengthening the port sampling programme set up under WPEA I. This will incorporate identification of secondary species and ETPs species, as well as implement testing of key target species inputs such as weight size and trophic content sampling.

Assigned stakeholders	sub DECAFIREP/RIMF/Fishers/private sector;
Priority	High
Status	Implemented
Timeframe	Q4 2015
MSC Performance Indicator(s)	2.1.3, 2.2.3 and 2.3.3 Retained species (including bait), bycatch and ETP status

Activity 2.1.2: Undertake primary species and secondary management strategy for all billfish and bait stocks (e.g. squid and flying fish) and any other retained or bycatch species, if data shows catch rates to be 5% or more.

The following milestones are in place.

Milestone 19: Training in risk assessment and the application of EAFM

Milestone 20a: Prepare a risk assessment report based on observer data (*Revised wording*)

Milestone 20b: Conduct a SAFE assessment for at risk species

Milestone 21: Workshop to determine management mitigation measures.

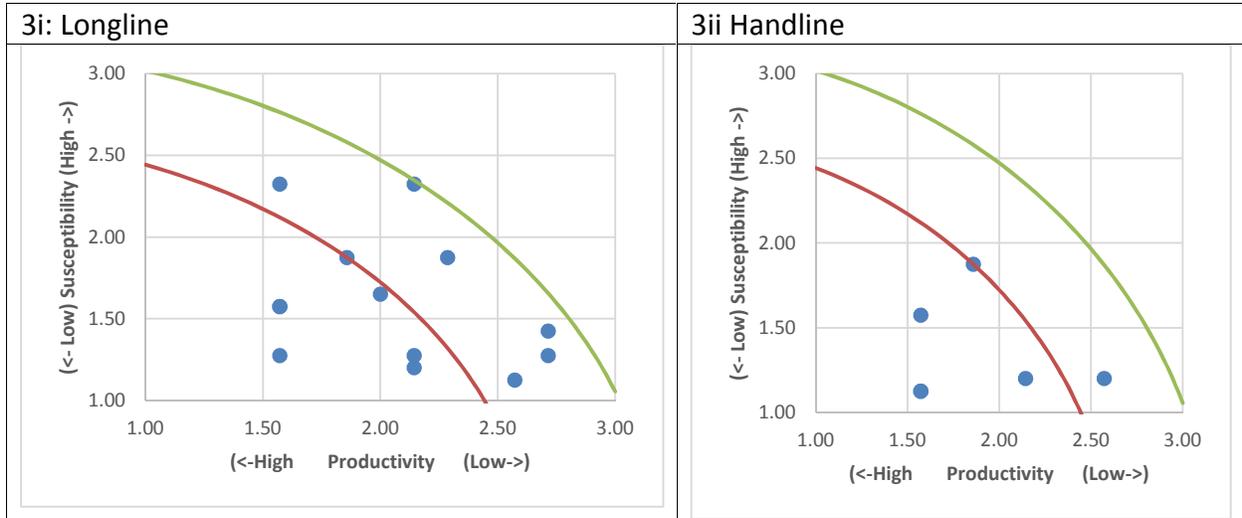
Milestone 22: Implement retained species mitigation measures (other than those covered already by CMMs) where necessary

Milestone 23: Evaluate the effectiveness of management mitigation measures for vulnerable retained and bait species.

Secondary species information has been reviewed and subject to a risk assessment by RIMF. The Risk Based framework for longline (Figure 3) and handline (Figure 4), has identified 13 and 6 main species for longline and handline respectively. In respect to longline, 6 species are assessed as medium risk. These include Indo Pacific sailfish, escolar and wahoo, as well as three species of

shark, pelagic thresher, scalloped hammerhead and blue shark. Blue shark is assessed at medium risk for handline fisheries.

Figure 3 Risk assessment conducted for the longline and handline fisheries



Source: RIMF (Appendix 1)¹³

From this exercise, it is recommended that RIMF assesses these medium risk species using the SAFE methodology (Zhou et al¹⁴). The SAFE methodology allows for a more quantitative assessment of individual species risk. For example, using SAFE in the Australian Eastern Tuna and Billfish fishery identified these species of shark as precautionary high risk.

The Risk Assessment would suggest that shark species are especially vulnerable. Protective measures would appear to be required, and as such should be incorporated into the NPOA-sharks. It is also noteworthy that MSC does not allow shark finning, unless shark species are landed with carcass. A series of mitigation measures should be explored for shark species including non retention / catch and release. Since these species are readily consumed, it is likely that any measures are unlikely to work, unless there is a financial incentive not to catch and land sharks. Mitigation measures implemented in the Australian Eastern Tuna and Billfish fishery comprised:

- Banning of wire trace in 2005 to reduce the capture of sharks
- Implementation of 20 carcass limit in 2000
- Banning of shark finning in 2000

¹³ Vu Viet Ha, Tran Van Thanh, Dao Thi Lien and Vu Thi Hau, Research Institute for Marine Fisheries. Risk Assessment of Retained species caught by TUNA fishery IN VIETNAM, November, 2016

¹⁴ <https://www.environment.gov.au/system/files/pages/0c373548-1124-4e99-bda8-5f2bb7e99362/files/sbt-attachmentd-safe.pdf>

This issue should be evaluated by the FIP partners, as a failure to act will prevent these fisheries from being certified¹⁵.

Assigned stakeholders	RIMF/NIO, DECAFIREP/sub DECAFIREP/fishers & processors
Priority	High
Status	Implemented as a priority in 2017
Timeframe	2017
MSC Performance Indicator(s)	2.1.1, 2.2.1, 2.3.1, 2.1.2, 2.2.2, 2.3.2 Primary and Secondary species.

Outcome 2.2: Shark management measures implemented

Activity 2.2.1: If certain sharks (Oceanic and silky) are proved to be found in the fishery and are retained in the LL and HL fisheries, implement a partial strategy consistent with CMM 2010-07. Implement full strategy to prevent their retention capture of oceanic whitetip (CMM 2011-03/CITES App 2) and scalloped, great and smooth hammerheads (CITES App 2).

Milestone 24a: Implement shark CMMs 2010-07 and CMM 2011-03/CITES App 2 including all data collection requirements

Milestone 24b: Prohibit shark finning at sea

Milestone 25: Ensure that all shark species are covered under observer reporting above

Milestone 26: Fisher awareness programme

Milestone 27: Evaluate the effectiveness of management measures for shark species identified in the CMMs and CITES

The WPEA OFM programme will include provision to ensure the accurate recording of shark species in order to determine the numbers caught and to assess potential risks to these species. Observer training will also strengthen the capacity of observers and port samplers to identify shark species. WWF will also apply and educational programme for fishers aimed at identifying shark species and adopting the management controls set by the Vietnamese Government.

Assigned stakeholders	DECAFIREP/sub DECFIREP/fishers and processors; WWF
Priority	High
Status	To be implemented post strategy
Timeframe	2017
MSC Performance Indicator(s)	2.1.2, 2.2.2 ETP and secondary (shark) management

¹⁵ Australian Fisheries Management Authority, 2009, [Ecological Risk Management, Report for the Eastern Tuna and Billfish fishery May 2009](http://afma.gov.au/wp-content/uploads/2010/06/ETBF_ERM_May09.pdf). Available at http://afma.gov.au/wp-content/uploads/2010/06/ETBF_ERM_May09.pdf

Recommendation 2: RIMF should apply the SAFE assessment to the secondary species caught in longline and handline fisheries

Recommendation 3: The FIP partners should explore an incentive scheme to eliminate the capture of sharks.

Outcome 2.3 Turtle management strengthened

Activity 2.3.1: Monitor and implement a turtle management mitigation policy.

Milestone 28: Monitor of turtle bycatch and life status in the handline and longline fisheries (Milestone 13 and 15)

Milestone 29 a: Implement an optimum management mitigation strategy with support measures which aim to (a) reduce turtle interactions as close to zero as feasible and (b) are consistent with national and international (WCPFC) obligations and the NPOA-Turtles (*New wording*)

New Milestone 29 b: Where risks are identified, instigate trials to reduce the interactions. Once incorporated, this is likely to achieve a pass.

Milestone 30: Fisher awareness programme

Milestone 31: Evaluate the effectiveness of management mitigation measures for turtles based on best practice

IUCN/DECAP has prepared a Marine Turtles Action Plan 2015-2020, to be approved by MARD by 2016

There has been work in measuring the specific impact of the longline fishery and the life status of the turtles when caught (WWF-MARD, 2011, Report: Results of Testing Circle Hooks in the Tuna Longline Fisheries). Since 2011 the collection of at-sea encounters with sea turtles has been periodically documented through a series of observer trips under WPEA and continued under the FIP (with additional support from industry partners). Overall, observer data do tend to show low levels of interaction, and low mortality rates (1 in 5 dead on capture). Whilst Vietnam has not introduced the turtle CMM (2008-03), it has its own prescribed Decree 82/2006/ND-CP which prohibits the landing of turtles. Turtle avoidance also forms part of the occasional Sub D-Fish educational process at regional level. Since 2008, de-hooker and line cutter kits have been distributed to the fleet, with over 200 kits being distributed.

Evidence from workshops and published work, however, suggests that mitigation measures in the form of circle hooks are not systematically applied, and while some vessels are adopting circle hooks they have not been fully adopted across the fleet... WWF and Vina Tuna, with industry partners Anova and Sea Delight, have secured support from captains of 4 vessels to conduct circle

hook tests in 2017. These were originally planned for October 2016 but postponed due to weather. Moreover, in 2016, VinaTuna delivered training on turtle mitigation, including the use of de-hookers and the benefits of circle hooks, reaching more than 200 fishermen and with 400 handbooks delivered including protocols for sea turtle (and shark) handling.

Informal distribution and testing of over 12,000 circle hooks in the handline fleet was conducted in 2012-13 by Sea Delight, with WWF technical support. The reported data from 235 trips activities suggest that interactions between the handline fishery and turtles are relatively rare. However, as a mitigation strategy some measures (e.g. compulsory use of de-hookers) will need to be put in place.

WWF, Vina Tuna and industry partners will continue to apply educational programmes and training for fishers aimed at preventing turtle interactions, and support the continued distribution of de-hooker kits and supporting onboard placards.

Assigned stakeholders	MARD/WWF/VINATUNA/D-Fish/sub D-Fish/DARD; WWF
Priority	High
Status	Ongoing strengthening
Timeframe	Q1 2014-Q1 2015
MSC Performance Indicator(s)	2.1.3 ETP status

Outcome 2.4. Habitats subject to a management strategy

Activity 2.4.1: Incorporate a requirement to record gear losses into the national observer programme

Milestone 32a: Gear losses incorporated into observer reporting

Milestone 32b: Include an assessment of habitat impacts as part of the SICA/PSA assessment

Recording gear loss has been incorporated into the observer scheme.

Habitat issues will also need to be explored as part of the RBF assessment.

Assigned stakeholders	D-Fish/sub D-Fish/DARD/fishers
Priority	Medium
Status	Undertaking a new activity and supported by WPEA 2
Timeframe	2017
MSC Performance Indicator(s)	2.4.1 Habitat status

Outcome 2.5: Ecosystems and biodiversity assessments made for the Vietnamese and South China Sea region

Activity 2.5.1: Assess the ecosystem impact for the Vietnam EEZ /South China Sea Sub region

Milestone 33: Collection of biological samples to adequately assess Pacific ecosystems

Milestone 34: Training in ecosystem modeling

Milestone 35: Ecosystem analysis and reporting to support adoption of EAFM

Some work has been undertaken by SPC on the ecological effects within the western Pacific as a whole. These indicate a very diverse ecosystem and broad resilience of the ecosystem to high levels of exploitation whilst the biomass remains high. However, if the biomass is reduced for apex predators including yellowfin, bigeye and shark species, the dynamics may well change for the worse. This therefore requires an extension of the trophic ecosystem modeling work to include the South China Sea.

Modeling the impact of fishery removals on the ecosystem has been undertaken as part of the SEAPODYM research provided by CLS. WPEA II also provides for the collection of additional trophic data and biological samples to adequately assess Pacific ecosystems. This can be incorporated into the modeling work undertaken by SPC (ECOPATH).

Recommendation 4: WPEA extends its activity to include ecosystem modeling in Vietnam, Indonesia and Philippines

Assigned stakeholders	D-Fish / WPEA
Priority	Intermediate
Status	Requirement to implement as part of WPEA II
Timeframe	2017
MSC Performance Indicator(s)	2.5.1, 2.5.2, 2.5.3 Ecosystem status:

3. GOVERNANCE SYSTEMS: TO STRENGTHEN GOVERNANCE SYSTEMS IN VIETNAM'S TUNA FISHERY

Outcome 3.1: Fisheries Law effectively implemented

Activity 3.1.1: Clarification of Vietnam's status within the convention, and extension of the convention area to the Vietnam

Milestone 36: Clarification of the application of the Convention (and CMMs) to Vietnam

Milestone 37: Vietnam becomes a WCPFC CM (Commission Cooperating Member Member)

There is presently no clarity on how WCPFC CMMs are presently treated in Vietnam. Whilst Vietnam is a CNM, as the convention area does not extend to the South China Sea, the binding nature of the country is uncertain and requires clarification. However, WPEA II accepts that CMMs should be mainstreamed and implemented with the programmes support. Whilst

Vietnam’s status as a CNM is linked to support to data collection, pursuit of full membership is likely to require CMM implementation.

Fisheries Law and Decree No 33/2010/ND-CP states that the government needs to cooperate with other parties, where necessary, to enhance effective management of fisheries. The Law of the Land supports this by providing land title/exclusive rights for clam cooperatives. The Fisheries Law also includes protection of environment and habitat (Article 15).

Others laws also provide a framework for Principle 2; e.g. Biodiversity Protection Law (see Luu. 2009, p22), Law of Marine Resources and Environment, Law on Environment Protection. There are various decrees underneath these laws

Vietnam Civil Law sets out requirements for the Ministry to collaborate with other sectors and local government to achieve objectives of laws. No other countries are involved – no international binding procedures are required.

Amendments to the current National fisheries law are still in progress 2017. The amendments will need to be checked to ensure that the law supports management outcomes consistent with MSC Principles 1 and 2. It is highly probably that legal drafting has taken account of advice (Nguyen, et al).

Assigned stakeholders	WCPFC/MARD
Priority	High
Status	Developing existing activity
Timeframe	2017
MSC Performance Indicator(s)	3.1.1 Legal and customary framework

Activity 3.1.2: Revise fisheries legislation containing the core elements which prioritise sustainable fisheries, and contain provisions for automatic implementation of international conventions including the WCPFC CMMs

Milestone 38: National legal documentary system, effective and organised and effective cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2

Milestone 39: Applying of relevant tuna regulations/decrees (catch/effort limits etc)

Vietnam should also introduce a number of core principles into its legislation

- *Adherence to WCPFC’s regulations and CMMs in order to comply with Article 25 of WCPFC. This includes extension to Decree 31, stipulating regulation on financial penalties with fishing vessels violating WCPFC’s regulations.*
- *to ensure fishing operations must be associated with economic efficiency and protecting and restocking marine resources; conserving related marine ecosystems and biodiversity,*

protecting marine environment and its natural landscapes. Fisheries sector development strategies must be planned to be associated with national and local fisheries management plans.

Assigned stakeholders	MARD
Priority	High
Status	Expansion of existing activities
Timeframe	2017
MSC Performance Indicator(s)	3.1.1 Legal and customary framework

Outcome 3.2: Roles and responsibilities and consultation processes fully implemented

Activity 3.2.1: Implementation of the Consultation Council through the NTMP process

Milestone 40: Tuna Fishery Consultation Council fully operational and all roles & responsibilities defined

The Tuna Fisheries Consultation Council (TFCC), created by the Government of Vietnam, under the management of VINATUNA, serves the important purpose of closely re-evaluating current management measures to formulate interim precautionary management measures, as well as long term, management measures. The composition of the TFCC includes: MARD, relevant members of the Peoples Committee, D-Fish, DARD, relevant sub DECAFIREP/DARD management and compliance officials, RIMF, VINATUNA, nominated industry representatives and WWF.

Assigned stakeholders	VINATUNA and all stakeholders
Priority	High
Status	Ongoing
Timeframe	Ongoing
MSC Performance Indicator(s)	3.1.2 Consultation, roles & responsibilities

Activity 3.2.2: Revise the a tuna fisheries strategy so that long term and short term objectives demonstrate effective implementation of sustainable fisheries management systems

Milestone 41: Explicit reference would have to ensure that any change in fleet capacity takes account of the precautionary approach to fisheries management, and adherence to appropriate scientific advice, most specifically adhering to the LRPs set in management

Milestone 42: Evidence would need to show that the Precautionary Approach to Fishery Management (PAFM) is explicitly understood and enacted at both national and provincial level

MSC scoring requires strategic long-term objectives to guide decision making, consistent with MSC principles 1 and 2, and the precautionary approach. The current national strategy (2010) focuses heavily on growth and objectives, but with one reference to sustainability development. Hence, either there needs to be some provision to revise the strategy, or incorporate changes into law (Activity 3.1.2). Note that assessors will have to satisfy themselves that sustainability objectives are not secondary to growth objectives.

Vietnam must ensure that it conforms to the strategy to reduce effort on bigeye tuna, and not increase effort on yellowfin. Proposals to expand catches offshore and on the high seas are not consistent with the requirements of WCPFC. It is accepted however, that issues such as the 2001-2004 reference years may be inappropriate, and these are issues where Vietnam could work together with Philippines and Indonesia.

Assigned stakeholders	VINATUNA and MARD
Priority	High
Status	Currently in process
Timeframe	2017
MSC Performance Indicator(s)	3.1.3 Short and long term objectives

Outcome 3.3: Fishery specific management objectives applied

Activity 3.3.1: The handline fishery is included along with the other tuna fisheries contained within the management plan

Milestone 43: Definitions to include handline fisheries and all target species

Milestone 44: Management Plan finalised, complies with MSC principles and contains a consultation process and includes a monitoring & performance component

Milestone 45: Evidence that the management plan is being applied and its effectiveness is assessed by a process of regular internal and external reviews

MARD Circular 42 adopts the Tuna Management Plan. This is supported by Decision 3562 (Tuna Management National Action), 10 September 2015, gazetting the Plan into Law. The Plan contains all the appropriate requirements, i.e. short and long term objectives, as well as a commitment to ecosystem-based tuna fisheries management. The plan also contains a list of outcomes, activities and measurable indicators. The current TMP refers to 'cau' which includes both handline fisheries and longline fisheries.

The application of the management system, as defined in the Plan, is reviewed internally every year (as per law). However, it is noteworthy that for MSC purposes, an external performance review would be appropriate. The definition of external review includes a government or

research department external to the management organisation. External review could therefore include either MARD Policy Unit, or independent qualified consultant.

Some explicit actions should be reviewed in respect to the Plan.

Activities and Implementation Plan:

- Linking the harvest strategy and harvest rules and tools (quota, effort limits etc) to the RFMO Target Reference Points for each species; and ensuring that actions will be taken by Vietnam if any tuna species reaches the Point of Recruitment Impairment
- Adding ‘Implement bycatch based risk assessment to determine the impacts of fisheries on the ecosystem’ as a separate action point under II ‘Collecting data to serve for management of the oceanic tuna fisheries’.
- Adding technical measures to protect any vulnerable bycatch species, especially sharks and turtles, under III Implementing the management measures
- Incorporation of an external review procedure which can critically assess the implementation of the Plan, identify bottlenecks and make recommendations for change

Assigned stakeholders	MARD/D-Fish
Priority	High
Status	Developed from existing activity (currently in draft)
Timeframe	Q4 2016
MSC Performance Indicator(s)	3.2.1 Fishery specific objectives

Outcome 3.4: Decision making process strengthened

Activity 3.4.1: Clarify decision making structure which is defined with the NTMP

Milestone 46: Introduce clear guidelines for taking management decisions, probably as a component of the management plan;

Milestone 47: Evidence is available that explanations to be provided for decisions taken, and should follow the basis of the management plan when introduced, which may include precautionary actions.

The MSC requires:

- *There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.*(SG 3.2.2 80 (a))
- *That the decision-making processes respond to **serious and other important issues identified in relevant research, monitoring, evaluation and consultation**, in a*

transparent, timely and adaptive manner and take account of the wider implications of decisions; (SG 3.2.2 80 (b))

- *That the decision-making processes use the precautionary approach and are based on best available information. **Information on fishery performance and management action is available on request, and** explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring evaluation and review activity (SG 3.2.2 80 (c)).*
- *Explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity ((SG 3.2.2 80 (d)).*

The pre-assessment identified a need to improve the inadequacy of the decision making process at across all level of fishery management. Decisions would have to incorporate binding decisions at EEZ level and compatible measures for territorial waters. The process also requires that stakeholders are informed of decisions with explanations provided and provides information and explanations to stakeholders on request, including when judicial decisions have been implemented. The vehicle to implement the decision makig process would be best placed in the Tuna Management Plan.

Assigned stakeholders	MARD/D-FISH
Priority	High
Status	Requires implementation into the TMP
Timeframe	2017
MSC Performance Indicator(s)	3.2.2 Decision making

Outcome 3.5: Effective application of compliance systems

Activity 3.5.1: Strengthen the compliance monitoring system

Milestone 48: Risk assessment of enforcement actions following the introduction of P1 and P2 associated management measures

Milestone 49: Review of sanctions for non-compliance

Milestone 50: Effective evidence of systematic compliance and an effective system of sanctions

Enforcement systems in Vietnam are gradually being strengthened following an emphasis on improved enforcement requirements to satisfy the EU IUU regulation. These include a strengthening of the sanction system (Decree No 103). Fishery specific management measures will be applied as part of the target species and ecosystem management strategies, rules and tools. In order to illustrate an effective compliance system, it is important to first establish a process of optimizing control activities through use of risk assessment techniques. The assessors

will also need to ensure that the compliance system is effective and that there is no systematic non-compliance.

Evidence of enforcement actions will need to be demonstrated through the application of the harvest control limits and other management measures, and will need to extend to monitoring requirements such as VMS and catch logbook reporting. The compliance system will need to demonstrate that the industry is compliant with the measures.

Assigned stakeholders	Department of Fishery surveillance/DECAFIREP/Sub DECAFIREP
Priority	High
Status	Improvement from current developments
Timeframe	2017
MSC Performance Indicator(s)	3.2.3 Compliance and enforcement

Recommendation 5 is to clarify the main non-compliance issues once the harvest strategies have been formulated. Non-compliance reporting issues will need to be documented, and a risk assessment and operational plan prepared, probably in 2017.

Outcome 3.6: Research plan is in place

Activity 3.6.1: A national research plan in place which addresses P1 and P2 requirements

Milestone 51: A research plan prepared publically available

Milestone 52: Research results are disseminated to all interested parties

A Research Plan needs to be prepared which provides a coherent and strategic approach to research and information needs across all three sustainability principles, in a timely and reliable manner.

This integrated plan needs to take account of national and international requirements and obligations, and be backed by secure funding secured from industry, Government and donors. The plan should include the following components, in all cases backed by an increased commitment to data collection to fill the considerable existing gaps in knowledge:

- Information gathering, review and interpretation of available information to identify information gaps and guide research planning;
- Input into the development of Target and Limit Reference points in partnership with other WPEA nations, as well as the wider WCPFC
- Tactical focus on critical target and retained species, recognizing that there is currently Insufficient focus on the regional/migratory nature of these stocks;
- Overall risk assessment, with a strong focus on retained/bycatch and ETP species;
- Application of ecosystem modeling;
- Capacity building to support all activities;

- Raising awareness of research needs, outcomes and application at district, provincial and national level
- Periodic review and assessment of the research plan (and subject to an external review process).

Assigned stakeholders	RIMF
Priority	Intermediate
Status	Implemented
Timeframe	2017
MSC Performance Indicator(s)	3.2.5 Research Plan

3. TERMS OF REFERENCE

4.1 DATA COLLECTION FOR TARGET, OTHER RETAINED, BYCATCH, ETP SPECIES

SUB DECAFIREP

BACKGROUND

VINATUNA, supported by the WWF Asia Pacific Seafood Trade Network and national government agencies (MARD and DECAFIREP), industry bodies, VASEP, private sector exporters, are engaged in a Fishery Improvement Project (FIP). This project will be carried out over a period of 5 years, to support the long-term goal of Marine Stewardship Council certification of Pacific Ocean yellowfin tuna in the handline and longline fisheries. To this end, all stakeholders have endorsed an Action Plan which, when implemented, will satisfy the MSC standards, but will also embrace activities required to support WCPFC management measures and are expected to underline the outcomes of the Vietnamese Tuna Management Plan. As part of this process, the Government of Vietnam will support a data collection programme which will produce the required data for input into stock assessments conducted by SPC, but will also link to the work of Research Institute for Fisheries Management in providing information to the MARD and D-Fish and other stakeholders on tuna stock status and ecosystem and Environmental Risk Assessments (ERA) within the Vietnamese EEZ and will further support the development of a national tuna management strategy consistent with WCPFC requirements.

DESCRIPTION OF the ASSIGNMENT

Global objective

The expected position by year 5 is that:

- Sufficient relevant information related to stock structure, stock productivity and other data available to support the harvest strategy;
- There is good information on all other fishery removals (secondary species)

- Stock abundance and fishery removals are regularly monitored at a level of accuracy consistent to cover Harvest Control Rules
- Sufficient information is available to allow fishery related mortality and the impact of fishing to be quantitatively estimated for **at risk species, especially sharks**;
- Information is sufficient to measure trends and support a full strategy to manage impacts on **shark** species.
- Sufficient data are available to allow the nature of **habitat** impacts to be identified
- There is evidence that the fishery is highly unlikely to disrupt the key elements underlying **ecosystem** structure and function to a point where there would be a serious or irreversible harm

Specific objectives

The purpose of the TOR is to set out the requirements for D-Fish to implement a data collection system consistent with SPC/WPEA requirements in order to support stock assessments and Environmental Risk Assessment for other retained, ETP species and habitats (ERA) in support of regional and national fishery research management decision making.

Requested Services

Sub D-Fish/DARD will implement data collection for a period of 5 years and beyond, contributing to assessment of stock status and guiding the implementation of a number of measures that support a regional and national Harvest Control Strategy (HCS) for yellowfin (YFT) and bigeye tuna, other retained, bait species bycatch in the Vietnam EEZ. A number of specific outputs need to be introduced along with supporting measures, which require deliberation by sub D-Fishes. These are:

- Continue to improve national data collection and monitoring of tunas at all levels and across all fisheries;
- Continue to document the catch of shark, billfish, bait species and other species in the handline and longline fisheries.
- Monitor of turtle bycatch and life status in the handline and longline fisheries
- Support the assess the ecosystem impact for the Vietnam EEZ /South China Sea Sub region by collecting trophic information through port sampling
- Strengthen the system of data collection on tuna to ensure that there is a high confidence that the information is robust for data collected from the full range of national tuna fisheries (handline, longline, purse seine and gill net);

As part of the sub D-Fish's undertakings, the team of data collectors will:

- Identify information requirements and gaps which will support knowledge of stock structure, stock productivity, stock abundance, fishery removals and other information such as environmental variables;

- Implement a catch logbook data collection system, following WCPFC and MAR Circular (549KTPBVNL, 2013) requirements
- Strengthen the data collection and port sampling system on stock structure, stock productivity, stock abundance, trophic data and fishery removals, by preparing a standard sampling protocol,
- Develop a comprehensive observer scheme to international standards (equivalent to established Regional Observer Programme (ROP standards) which will include adoption of observer modules, implement a training programme, and initiate an observer monitoring programme (with established debriefing and verification processes).
- Strengthen the system of data collection for other retained, bycatch and bait species and ensure that there is a high confidence that the information is robust for data collected from the handline and longline fisheries;
- Implement a fisheries information system to record, integrate, and analyse the potentially large quantity of data, according to an agreed plan that integrates data collection from across the range of fisheries and allows for access and compatibility with data bases (e.g. TUFMAN) used at regional level.

The available information should be:

- of a standard to quantifiably support the SPC and RIMF stock data and assessment requirements;
- sufficiently accurate to support a comprehensive strategy to manage tuna and to assess whether the strategy is achieving its objective;
- support a comprehensive strategy on managing other secondary species and bait removals;
- data continually collected to detect any increase in risk to tuna, other secondary species and bait species.

The outputs that must be achieved are as follows:

- Tuna vessel register operational at Provincial level linked to National recording system
- Logbook coverage > 75% for LL and HL, and improved coverage of other fisheries (by Q4 2018)
- Port sampling implemented in main ports/provinces (by Q4 2016)
- Extend port sampling procedures to cover retained species (and informed by the observer scheme) (by Q4 2016)
- Establish an observer scheme to monitor all catches of retained species and document the level of discarding from the handline and longline fisheries (by Q4 2016)
- Ensure that all shark species are covered under observer reporting (by Q4 2016)
- Monitor of turtle bycatch and life status in the handline and longline fisheries (by Q4 2015)

- Incorporate a requirement to record gear losses into the national observer programme (by Q4 2015)
- Document observer data and port sampling verification, and prepare summary reports of main and vulnerable species (retained) interactions other than bigeye tuna

The expectation is that a tuna data collection system implemented and fully effective by Q5 2016

- Sub D-Fish collectors engaged in all the main fishing ports
- Port sampling data collection system fully operational in all the main tuna ports
- Observer programme fully operational longline and handline (5% or more)
- Catch and effort database operational and supporting interrogation both at national and RFMO level (e.g. TUFMAN II)
- Longer term training needs identified and implemented
- Training a pool of observers and coordinating their deployment, according to the required international standards¹⁶

The following funding assumptions are made and are to be explored in more depth

- Enumerators, observers and a data base manager based in each sub DECAFIREP office. Funding will be provided directly from the Donor funds, Provincial Peoples Committee Central Government funds and the private sector.
- The observer scheme (observers and debriefers) will be partly private sector funded but will fall under the responsibility of sub DECAFIREP. The number of observers recommended, will conform to international requirements or best practice. Coverage is expected to be 5% for all longline and handline vessels, but may increase if additional funding is available;

EXPERTS' PROFILE

The following experts are expected to be in place. D-Fish and sub DARD already have assigned managers, statistical officers, enumerators and data collectors in place, and will need to ensure implementation of the appropriate manpower and system support to apply these. The programme will include Binh Dinh, Phu Yen, Khanh Hoa, Quang Nam, Quang Ngai, Da Nang, Ninh Thuan, Binh Thuan, Baria-Vung Tau.

National Tuna coordinator

1. Qualifications and skills

¹⁶ WCPFC CMM 2008-01 requires observer 100% observer coverage for all purse seine vessels fishing in the EEZ. Some countries apply 100% purse seine coverage to archipelagic waters, e.g. Papua New Guinea on the grounds that the WCPFC requires application of equivalent measures. WCPFC presently requires 5% observer coverage for Long Liners. IOTC requires 5% observer coverage for all vessels over 25 metres LOA.

- Masters or Doctorate in biological or social sciences
- A high level of computer literacy with experience in data entry and extraction
- Working experience in dealing with fisheries data
- Familiarity with the WCFPC TUFFMAN data base

2. *General professional experiences*

- Strong communication skills to support problem solving in data collection

DECAFIREP Technicians

1. *Qualification and skills*

- A degree in fisheries or agricultural science or engineering
- Training in process or completed at international level

Training of trainers will be provided by SPC under the WPEA Programme

Data base managers (9, 1 per centre)

3. *Qualifications and skills*

- A high level of computer literacy with experience in data entry and extraction
- Working experience in dealing with fisheries data
- Familiarity with the WCFPC TUFFMAN data base

4. *General professional experiences*

- Strong communication skills to support problem solving in data collection

Enumerators / data verifiers (3-6 per Province)

5. *Qualifications and skills*

- A bachelors degree in marine science and / or statistics is preferred
- A high level of numeracy with experience in data entry and extraction, preferably from the one of the two externally funded programmes (WPEA or other donor support).

6. *General professional experiences*

- Working knowledge of data collection
- Strong communication skills to support problem solving in data collection

Observer trainers (4)

1. *Qualifications and skills*

- A degree in marine science and / or statistics is preferred

- Experience in training and lecturing to University Standard

Senior observer/debriefers (6)

1. *Qualifications and skills*

- A bachelors degree in marine science and / or statistics is preferred
- A high level of computer literacy with experience in data entry and extraction

2. *General professional experiences*

- Field experience in data collection
- Strong communication skills to support problem solving in data collection

Observers (At a rate of 5% coverage for 700 longliners and 1,500 handliners)

3. *Qualifications and skills*

- A bachelors degree in marine science and / or statistics is preferred
- A high level of computer literacy with experience in data entry and extraction

4. *General professional experiences*

- Successfully completed a training course in observer duties
- Strong communication skills to support problem solving in data collection

DURATION

DECAFIREP are expected to have completed a revised WPEA incorporating the above within 3 years with an initial programme extending for a 5 year period, up to the date of the MSC Assessment.

PLANNING

The assignment comprises a combination of scientific and technical input supported for data collection, sampling.

BUDGET

Annual operational costs to be decided in consultation with DECAFIREP. Broad budget outlines are provided in the supporting excel sheet (Tab Budget FIP tracking June workshop.xls).

EXPECTED MILESTONES AND REPORTING

The required outputs are set out in the table below:

MILESTONES	Timeline	REPORTING MEANS OF VERIFICATION
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Logbook coverage > 75% for LL and HL, and improved coverage of other fisheries	Ongoing	WPEA data reports
Port sampling implemented in main ports/provinces	Ongoing	WPEA data reports
Tuna vessel register operational at Provincial level linked to National recording system	Ongoing	MARD statistical tables
National tuna data collection system implemented and fully effective	Ongoing	MARD statistical tables
Establish an observer scheme to monitor all catches of retained species and document the level of discarding from the handline and longline fisheries	Ongoing	Observer deployment and reporting system endorsed by voluntary or statutory agreement
Extend port sampling procedures to cover retained species (and informed by the observer scheme)	Ongoing	Port sampling reports
Document observer data and port sampling verification, and prepare summary reports of main and vulnerable species (retained) interactions other than bigeye tuna	Ongoing	Statistical data and summary reports
Implement shark NPOA and introduce measures to protect at risk shark species	Q 4 2017	Decree implemented sharks (and billfish)
Ensure that all shark species are covered under observer reporting above (Milestone 13 and 15)	Q 1 2017	Observer reports and estimate of shark catches by species
Monitor of turtle bycatch and life status in the handline and longline fisheries	Ongoing	Observer reports and estimate of turtles catches
Incorporate a requirement to record gear losses into the national observer programme	Implemented	Observer reports on gear loss in longlines
Collection of biological samples to adequately assess Pacific ecosystems	Ongoing	WPEA output

4.2 STOCK ASSESSMENT AND ECOSYSTEM MODELING

VINATUNA, supported by the WWF Asia Pacific Seafood Trade Network and national government agencies (MARD and DECAFIREP), industry bodies, VASEP, private sector exporters, are engaged a Fishery Improvement Project (FIP). This project will be carried out over a period of 5 years, to support the long term goal of Marine Stewardship Council certification of Pacific Ocean yellowfin tuna in the handline and longline fisheries. To this end, all stakeholders have endorsed a an Action Plan which, when implemented, will satisfy the MSC standards, but will also embrace activities required to support WCPFC management measures and are expected to underline the outcomes of the Vietnamese Tuna Management Plan. As part of this process, the Government of Vietnam will provide input into the WCPFC Scientific Committee (SC), as well as undertaking its own research through RIMF to assess the biomass within the Vietnamese EEZ. RIMF will be responsible for interpretation of the national stock assessment results, and MARD responsible for directing activities relating to the adoption of reference points.

DESCRIPTION OF the ASSIGNMENT

Global objective

The expected position by year 5 is that:

- It is **highly likely** that the stock is above the point where recruitment would be impaired;
- The stock is at or fluctuating around its target reference point;
- The assessment is appropriate for the stock and for the harvest control rule;
- The assessment takes uncertainty into account;
- Trophic interactions are fully understood

Specific objectives

The purpose of the TOR is to set out the requirements for RIMF to provide scientific support to stock assessment support, working with the scientists of the Oceanic Fisheries Programme, SPC. The work of RIMF will be to provide scientific advice to MARD for the establishment of catch limits or equivalent catch limits against the Target and Limit Reference Points set by WCPFC.

Requested Services

RIMF will provide services supported by DECAFIREP data (3.1) for a period of 5 years and beyond, contributing to assessment of stock status and guiding the implementation of a number of measures that support a regional and national Harvest Control Strategy (HCS) for skipjack (SKJ), yellowfin (YFT) and bigeye (BET) tuna in the Pacific Ocean including the EEZ and territorial waters of Vietnam. A number of specific outputs need to be introduced along with supporting measures, which will require deliberation by the Tuna Fisheries Management Council in order to set harvest strategies. These are:

- Contributing to the discussion on Limit Reference Points (LRPs) for yellowfin and bigeye, at the relevant WCPFC SC and General Sessions. The LRP would have to be set at a point

above the level at which there is an appreciable risk of impairing reproductive capacity; The TRP set such that the stock is maintained at a level consistent with B_{MSY} or some measure or surrogate with similar intent or outcome¹⁷;

As part of the institution's undertakings, the team of scientists and technicians will:

- Prepare a Research Plan for the tuna and other retained species caught by all fisheries (Which will also includes ecosystem research (section 3.3));
- Identify information requirements and gaps which will support knowledge of stock structure, stock productivity, stock abundance, fishery removals and other information such as environmental variables and ensure that these are incorporated into WPEA support activities;
- Undertake training in stock assessment, ecosystem modelling (MULTIFAN-CL, ECOSIM, ECOPATH, SEAPODYM) and risk assessment to promote a higher level of input from Vietnamese scientists into WCPFC Scientific Committee deliberations;
- Support increasing awareness of research needs, outcomes and application at provincial and national level to all stakeholders;
- Provide technical advice to the TMC and MARD, which will lead to the establishing of a robust and precautionary harvest strategy for Vietnamese fisheries, and will support the extension of WCPFC Commission Management Measures to Vietnamese waters.

The outputs that must be achieved are as follows:

- 5 year RIMF Tuna Research Plan containing the above services (and following international best practice and MSC requirements) established by year 1
- Improving scientists' knowledge in stock assessment techniques completed by OFP, SPC, within 3 years¹⁸
- Target and limit reference available for Western Central Pacific by the end of year 3.
- An annual review of the research programme, and by year 4 have completed an external review.
- Attending technical committee meetings at WCPFC (dealing with stock assessment and the LRP/ TRP context, and on stock rebuilding)

The following funding assumptions are made and are to be explored in more depth

- A senior scientist and technician are to be employed by RIMF, funded by MARD.

¹⁷ MSC requires a level set at $0.5 B_{MSY}$. Any variation to this would require justification, but most explicitly must be shown to be sufficiently precautionary.

¹⁷ P4KSDI have had one PhD graduate trained in Hobart (CSIRO) – Lilis Saydeh. Proposed expert for this assignment, with the appropriate expertise, could be Don Bromhead

¹⁸ P4KSI have had one PhD graduate trained in Hobart (CSIRO) – Lilis Saydeh. Proposed expert for this assignment, with the appropriate expertise, would be Don Bromhead

EXPERTS' PROFILE

The following experts are expected to be in place. RIMFP already has an assigned scientist and will need to ensure implementation of the appropriate manpower and system support to apply these)

Senior scientist

1. Qualifications and skills

- A post graduate qualification in stock assessment
- Training in process or completed at a regional or international centre of excellence
- Knowledge of tropical tuna fisheries

2. General professional experiences

- Proven track record in stock assessment from a Vietnamese Research Centre and at least 5 years of professional experience in the provision of advice to fishery managers
- Experience in the application of stock assessment techniques, data requirements and models

Technicians

2. Qualification and skills

- A degree in fisheries or agricultural science or engineering
- Training in process or completed at international level

Stock assessment training will be provided by SPC under the WPEA Programme

DURATION

RIMF is expected to have completed a revised Research Programme incorporating the above within 1 year, with an initial programme extending for a 5 year period, up to the date of the MSC Assessment.

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PLANNING

The assignment comprises a combination of scientific and technical input supported by the WPEA data collection (3.1).

BUDGET

Annual operational costs to be determined by MARD. Broad budget outlines are provided in the supporting excel sheet (*Tab Budget FIP tracking June workshop.xls*)

The required outputs are set out in the table below:

EXPECTED MILESTONES AND REPORTING

The required outputs are set out in the table below:

MILESTONES	Timeline	REPORTING MEANS OF VERIFICATION
MARD/RIMF participating in SC WGs and WCPFC general session discussions on reference points	Ongoing	WCPFC SC (11th Regular Session) (http://www.int/meetings)
Setting of LRPs and TRPs for YFT and BET at national level that are compatible with WCPFC requirements.	Ongoing	Scientific papers on RPs and General Session report
MARD/RIMF participating in SC WGs for the revision of the core WCPFC CMM on bigeye and yellowfin strategy	Ongoing	WCPFC attendance records
Advice provided on catch and / or effort limits set for bigeye and yellowfin tuna for Vietnam consistent with WCPFC methodology (either 2001-2004 levels or an alternative) and based on an historic ref	Priority Action	Technical paper submitted to a National Workshop with proposed LRPs and TRPs to be set for yellowfin and bigeye tuna
Training in ecosystem modeling	To be implemented	WPEA Reports
Ecosystem analysis and reporting to support adoption of EAFM	To be implemented	SPC training
A research plan prepared publically available	Ongoing	Research results are disseminated to all interested parties
Research results are disseminated to all interested parties	Ongoing	

4.4 BYCATCH & ECOSYSTEM IMPACT ANALYSIS

RESEARCH INSTITUTION: To be nominated (RIMF)

BACKGROUND

VINATUNA, supported by the WWF Asia Pacific Seafood Trade Network and national government agencies (MARD and DECAFIREP), industry bodies, VASEP, private sector exporters, are engaged a Fishery Improvement Project (FIP). This project will be carried out over a period of 5 years, to support the long term goal of Marine Stewardship Council certification of Pacific Ocean yellowfin tuna in the handline and longline fisheries. To this end, all stakeholders have endorsed a an Action Plan which, when implemented, will satisfy the MSC standards, but will also embrace activities required to support WCPFC management measures and are expected to underline the outcomes of the Vietnamese Tuna Management Plan. As part of this process, RIMF, supported by DECAFISH and the WPEA data collection programme, will set up a Retained Species Assessment Programme (RSAP), which will be responsible for determining risks, and developing management mitigation proposals, that will support the TMC in proposing a management strategy that will meet the MSC standard by year 5.

DESCRIPTION OF the ASSIGNMENT

Global objective

The expected position by year 5 is that:

- The fishery does not pose a risk of serious or irreversible harm to the bait species, retained and ETP species, bycatch or habitats and does not hinder recovery for managing species associated with the tuna ecosystem ensuring that the fishery does not pose a risk of serious or irreversible harm to retained species;
- There is a strategy in place for managing retained, bait species, bycatch, ETP species or habitats interactions in order to avoid the risk of serious irreversible harm from the fishery;
- Information on the nature and extent of retained species is adequate to determine the risk posed by the fishery and the effectiveness of management mitigation strategy.

Specific objectives

The purpose of the TOR is to set out the requirements for NIO to provide support services for fishery specific support activities at national and provincial level. These services, all of which will relate to:

- Analysing information collected by DECAFIREP on primary and secondary species, bait species, ETPs and on bycatch and ecosystem interactions;
- Exploring management mitigation strategies with stakeholders, including fisher associations, private sector companies and fisher communities;
- Promoting the concept of stakeholder led management actions; and awareness training;

- Advising Government of any required measures that are required in addition to CMM implementation requirements.

Requested Services

Working with fishing companies NIO will provide services to the TFMC. The following outputs must conform to the following principles:

- Ensuring that accurate and verifiable information is available on catches of all retained, bycatch (including bait fish) and ETP species;
- That the information available is sufficient to estimate the risks with respect to productivity and susceptibility limits, including mortalities and injuries to all bycatch species;
- That the distribution of habitat types is known over the range, with particular attention to the occurrence of vulnerable habitat types;
- That changes in habitat distribution over time are recorded;

The tasks to be implemented will include:

- Review bycatch mitigation measures appropriate for each fishery which might include:
 - Longline – use of circle hooks, TORI lines and lures, no catch retention of sharks, seasonal or area closures.
 - Hand-line – FAD management (if required)
- Undertake training in the Risk Based Framework to allow scientists to assess, with stakeholders, the risks posed to ALL retained, bycatch (billfish, sharks, other commercial and bycatch species), bait species and ETP species identified in the national regulations. This will form part of the training process outlined in Section 3.1.
- Undertake, fishery by fishery, bycatch mitigation stakeholder workshop, working from international best practice examples
- Prepare recommendations to the TFMC for a retained species management plan, if required;
- Prepare recommendations to the TFMC for a bait species management plan, if required
- Raise awareness on bycatch avoidance and ecosystem interactions, and developing a system that measures the effectiveness of the strategy.
- Support awareness of research needs, outcomes and application at provincial and national level to all stakeholders;
- Make an annual assessment to detect whether there are changes to risk levels for associated bycatch species

RIMF

Senior Researcher

1. *Qualifications and skills*

- A post graduate degree in fisheries science or marine studies
- Experience in environmental risk assessment
- At least 10 years research experience
- Strong communication skills

2. *General professional experiences*

- Knowledge of Vietnamese fisheries
- Demonstrated skills in report dissemination and report writing
- Clear knowledge of suitable bycatch mitigation strategies
- A working knowledge of English

Junior researcher

1, *Qualifications and skills*

- A graduate qualification in marine sciences

General professional experiences

- Strong communication skills to facilitate problem solving in data collection
- A working knowledge of English

DURATION

The assignment will be for 5 years with a view to establishing long term linkages thereafter based on performance.

PLANNING

The assignment comprises a combination of scientific and technical input supported by a data collection, sampling and marine survey programmes.

BUDGET

Annual operational costs to be decided in consultation with VINATUNA and MARD. Broad budget outlines are provided in the supporting excel sheet (Tab Budget FIP tracking June workshop.xls)

EXPECTED MILESTONES AND REPORTING

The required outputs are set out in the table below:

MILESTONES	Timeline	REPORTING Means of Verification

Training in risk assessment and the application of EAFM	Completed	wwF Training certificates
Workshop to determine risks applying the risk based framework (SICA and PSA)	Completed	Risk assessment workshop report
Workshop to analyse risk mitigation strategies for sharks	2017	Management mitigation workshop report
Implement retained species mitigation measures for sharks	2017	Decrees
Evaluate the effectiveness of management mitigation measures for vulnerable retained and bait species	2018	Performance Review of measures undertaken

4.4 DEVELOPMENT OF HARVEST STRATEGIES RULES AND TOOLS AND BYCATCH MITIGATION MEASURES

VINATUNA, supported by the WWF Asia Pacific Seafood Trade Network and national government agencies (MARD and DECAFIREP), industry bodies, VASEP, private sector exporters, are engaged a Fishery Improvement Project (FIP). This project will be carried out over a period of 5 years, to support the long term goal of Marine Stewardship Council certification of Pacific Ocean yellowfin tuna in the handline and longline fisheries. To this end, all stakeholders have endorsed a an Action Plan which, when implemented, will satisfy the MSC standards, but will also embrace activities required to support WCPFC management measures and are expected to underline the outcomes of the Vietnamese Tuna Management Plan. As part of this process, the Government of Vietnam will provide input into the WCPFC General Sessions, but will also be responsible for ensuring that national and international (WCPFC) measures are implemented into a national harvest strategy, with associated harvest rules and tools implemented.

DESCRIPTION OF THE ASSIGNMENT

Global objective

The expected position by year 5 is that:

- There is a robust and precautionary harvest strategy in place in Vietnam which is responsive to the state of the stock, reflects the requirements of WCPFC Conventions and

is designed to achieve stock management objectives set as target and limit reference points;

- There are well defined and effective harvest control rules in place that are consistent with International harvest strategies and ensure that the exploitation rate is reduced as the limit reference points are approached, and provide a management mechanism to allow recovery of depleted stocks;
- There is a strategy in place for managing secondary and bait species or habitats interactions in order to avoid the risk of serious irreversible harm from the fishery;

Specific objectives

The purpose of the TOR is to set out the requirements for MARD and D-Fish in relation to implementing a harvest strategy, in cooperation with the Tuna Management Council.

Requested Services

MARD and D-Fish will appoint two persons, a fisheries management specialist, and they will undertake the following tasks in response to international requirements to implement a harvest strategy at national level. The implemented actions will be provided by D-Fish and sub D-Fish/DARD.

Implementation and development of Proposed Strategy:

A. Fisheries management strategy

- Formulate a stock assessment, for yellowfin and bigeye respectively
- Assign LRPs at 0.2 B0 MSY and a preliminary TRP of 0.4 MSY
- Develop fishery specific harvest controls for handline and longline, and apply at Provincial level
- Introduce the Decree/Circular implementing these controls
- Submit evidence that these measures have been applied to WCPFC

B. Ecosystems and bycatch strategy

- Undertake a workshop to explore management mitigation actions for sharks (Box 1)
- Introduce the Decree/Circular banning finning at sea
- Implement effective management mitigation measures for sharks and turtles which are consistent with ecosystem risk assessment

C. Performance evaluation

- Undertake a review of all management actions – harvest control tools and ecosystem management actions

Review of and adoption of proposed management tools:

- Coordinate a workshop comprising managers and stakeholders, to identify an acceptable system of management controls and to identify the appropriate rules to be applied to each fishery
- Determine the responsibility framework established within which harvest control rules would be set and delegating appropriate responsibilities to the Provinces

Among the best practice measures to be explored would include:

- Establishing a Vessel Day System (VDS) for longline vessels; or
- Evaluate the prospects for a species specific quota system to be applied across the various fleets operational in Vietnamese waters

These measures will require monitoring by D-Fish, and monitoring of the performance of sub D-Fish in implementing these rules and tools.

National Fisheries Management Expert

1. Qualifications and skills

- Post-doctoral degree in fisheries sciences, economics or community and social studies
- At least 10 years-experience in fisheries management planning and implementation within Vietnam, with a preference for experience gained in input and output controls.

2. General professional experiences

- Knowledge of Vietnamese fisheries
- Working knowledge of English

Ecosystems and bycatch Management Expert

3. Qualifications and skills

- Post-doctoral degree in fisheries sciences, economics or community and social studies
- At least 10 years-experience in fisheries management planning and implementation within Vietnam, with a preference for experience gained in input and output controls.

4. General professional experiences

- Knowledge of Vietnamese fisheries
- Working knowledge of English

EXPECTED MILESTONES AND REPORTING

The required outputs are set out in the table below:

MILESTONES	Timeline	REPORTING MEANS OF VERIFICATION

Vietnam's compliant with CMM 2016-01, or any subsequent amendment	2017	FAD Management Plan and Regulations confirming limits set for YFT and BET
Workshop on exploring options for input (effort) and output (quotas) for longline and handline fisheries based on TRPs and LRPs and CMM 2012-01 (years 2001-2004 levels)	2017	Workshop report and recommendations
Responsibility framework established within which harvest control rules would be set and delegating appropriate responsibilities to the Provinces	2017	Organogram showing delegated responsibilities and reporting functions
Vietnamese management measures introduced for all tuna fisheries in Vietnam	2017	Regulations and Decrees
Undertake and assess evidence that the measures established are effective	2018	Performance review report (as per management plan requirement)
Implement shark mitigation measures	2017	Decree endorses CMM on sharks (and billfish)
Implement a decree banning shark finning at sea	2017	Decree
Ensure that all shark species are covered under observer reporting (3.1)	Ongoing	Observer reports and estimate of shark catches by species
Implement effective management mitigation measures for turtles which are consistent with national and international (WCPFC) obligations	Ongoing	Report demonstrating that requirements for protection and rebuilding are in place - non retention and dehooking; and evidence that the fishery is unlikely to hinder recovery.
Where risks are identified, instigate trials to reduce the interactions	Ongoing	Report on risks and sea trials

Fisher awareness	To be implemented	Workshop attendance records
Evaluate the effectiveness of management measures for shark species identified in the Risk Assessments	2018	Evaluation report of the effectiveness to the CMM, also included within Par 2 report to TCC
<i>Timeline priority</i>		

DURATION

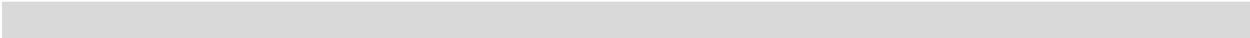
The assignment will be for 6 years ending at the end of 2018.

PLANNING

The work output comprises specialist management inputs from two assigned specialists under MARD, but linking to DECAFOREP and sub DECAFIREP.

BUDGET

Annual operational costs to be decided in consultation with VINATUNA and MARD. Proposed budget outlines are provided in the supporting excel sheet (Tab Budget FIP tracking June workshop.xls)



4.5.1 INSTITUTIONAL STRENGTHENING: GOVERNANCE, CONSULTATION AND DECISION MAKING

The Ministry of Agriculture and Resource Development, Department of Capture Fisheries & Resource Exploitation and Protection and the Tuna Fisheries Management Council

BACKGROUND

VINATUNA, supported by the WWF Asia Pacific Seafood Trade Network and national government agencies (MARD and DECAFIREP), industry bodies, VASEP, private sector exporters, are engaged a Fishery Improvement Project (FIP). This project will be carried out over a period of 5 years, to support the long term goal of Marine Stewardship Council certification of Pacific Ocean yellowfin tuna in the handline and longline fisheries. To this end, all stakeholders have endorsed a an Action Plan which, when implemented, will satisfy the MSC standards, but will also embrace activities required to support WCPFC management measures and are expected to underline the outcomes of the Vietnamese Tuna Management Plan. As part of this process, the FIP proposes to strengthen Vietnamese tuna fisheries management processes in accordance with international obligations and will identify institutional strengthening actions which are consistent with MSC principles 1 and 2. This includes a clear understanding of roles and responsibilities by the policy (MARD), management organisations (DECAFIREP) and supporting Tuna Fisheries Management Council.

DESCRIPTION OF THE ASSIGNMENT

Global objective

The expected position by year 5 is that:

- The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of information and explains how it is used or not used;
- The legal system in place is effective and consistent with local, national or international laws or standards that are aimed at achieving sustainable fisheries in accordance with MSC Principles 1 and 2
- The consultation process provides opportunity and encouragement for all interested affected parties to be involved, and facilitates their effective engagement;
- Clear long and short term objectives are in place that guide decision making are in place, and are explicit within a Fishery Specific Management Plan;
- The national decision making processes responds to all issues identified in relevant research, monitoring, evaluation and consultation, in a transparent , timely and adaptive manner and take account of the wider implications of decisions;

- The national Decision-making processes uses the precautionary approach and are based on best available information. Information on fishery performance and management action is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring evaluation and review activity;
- Explanations are provided for any actions taken and recommendations emerging from research, monitoring and evaluation and review activity;
- The management agencies (MARD and DECAFIREP) have in place mechanisms to evaluate all parts of the management system and is subject to internal and external review processes.

A. MARD

Specific objectives

The purpose of the TOR is to set out the requirements for MARD which undertakes responsibility for core governance issues – the implementation of law, creating an appropriate consultative process, the decision making processes, ensuring adherence to long term objectives and compliance with the WCPFC Convention.

Requested Services

As part of the requirement to strengthen governance functions there are some core activities that MARD needs to address, more specifically as an requirement as a Cooperating Commission Member (CCM) or WCPFC. If endorsed these core requirements will also be consistent with the outcomes required of the MSC, which recognizes the achievements made in good governance by countries.

Specific supporting activities have been identified as follows:

- Clarification of Vietnam's status within the convention, and extension of the convention area to the Vietnam
- Implementation of the new Fisheries Law containing the core elements which prioritise sustainable fisheries, and contain provisions for automatic implementation of international conventions including the WCPFC CMMs
- Implementation of the Advisory Board through the NTMP process
- Revise the a tuna fisheries strategy so that long term and short term objectives demonstrate effective implementation of sustainable fisheries management systems
- Implementation of a compatible harvest strategy in Vietnam waters (and compliance with CMMs), which would include longline, purse seine and other gears (including handline and gillnet), and would be consistent with Vietnam's obligations developed through any future changes to 2012-01

- Establishing national harvest control rules (input and output restrictions) across the range of tuna fisheries which allow for limits to be implemented as reference points are approached. The rules and tools will need to take account of best practice examples to illustrate their appropriateness (e.g. overall capacity limits, quotas and closed seasons)
- Setting a monitoring system in place (consistent with CMM 2010-03) which evaluates the effectiveness of the management measures
- Review negative and positive incentives against the background of stock status for yellowfin and bigeye, as well as the impact on bycatch
- Finalize draft NTMP and add inclusion of the handline fishery to the NTMP
- Clarify decision making structure which is defined with the NTMP

EXPECTED MILESTONES AND REPORTING

The required outputs are set out in the table below:

MILESTONES	Timeline	REPORTING MEANS OF VERIFICATION
MARD/RIMF participating in SC WGs and WCPFC general session discussions on reference points	Ongoing	WCPFC Report of the Annual Regular Session (9/10th Regular Session) (http://www.int/meetings)
Vietnam becomes a WCPFC CM (Contracting Member)	2018	VNM as an acknowledged CCM as per the General Assembly
National legal system, effective and organised and effective cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2	2017	Fisheries Law
Tuna Fishery Management Council fully operational and all roles & responsibilities defined	Ongoing	TFMC roles and responsibilities enshrined in Law
Evidence would need to show that the Precautionary Approach to Fishery Management (PAFM) is explicitly	2017	National strategy document

understood and enacted at both national and provincial level		
Management Plan finalised, complies with MSC principles and contains a consultation process and includes a monitoring & performance component	2017	NTMP
Management Plan: External Review	2017	Independent expert
Evidence that the management plan is being applied and its effectiveness is assessed by a process of regular internal and external reviews	2017	Review of management plan OVIs
Introduce clear guidelines for taking management decisions, probably as a component of the management plan	2017	Minutes of decisions taken, including use of available information
Evidence is available that explanations to be provided for decisions taken, and should follow the basis of the management plan when introduced, which may include precautionary actions	2017	Minutes of decisions taken, including use of available information

DURATION

The assignment will be for 5 years ending at the end of 2017.

PLANNING

The work output comprises strengthening of law and compliance with management decision making consistent with WCPFC requirements, but also following principles advanced by the Marine Stewardship Council.

Annual operational costs to be decided in consultation with VINATUNA and MARD. Proposed budget outlines are provided in the supporting excel sheet (Tab Budget/FIP tracking June workshop.xls)

B. D-Fish

Specific objectives (D_FISH)

The purpose of the TOR is to set out the requirements for D-FISH which undertakes responsibility for fishery management issues – the implementation of the Tuna Management

Plan, following guidance in policy from MARD and the TFMC, Compliance and monitoring performance of these core functions.

- Participate in decision making process in establishing rules and tools
- Implement national harvest control rules (input and output restrictions) across the range of tuna fisheries
- Implement shark CMMs 2010-07 and CMM 2011-03/CITES App 2
- Implement effective management mitigation measures for turtles which are consistent with national and international (WCPFC) obligations.

EXPECTED MILESTONES AND REPORTING

The required outputs are set out in the table below:

MILESTONES	Timeline	REPORTING MEANS OF VERIFICATION
Introduction Vietnamese management measures for all tuna fisheries in Vietnam (with sub D_FISH)	2018	Regulations and Decrees
Undertake and assess evidence that the measures established are effective (with sub DECAFIREP, MARD and VINATUNA)	2018	Performance review report (as per management plan requirement)
Implement secondary species mitigation measures (other than those covered already by CMMs) where necessary (with sub DECAFIREP)	2017	Decrees
Evaluate the effectiveness of management mitigation measures for sharks	2017	Performance Review of measures undertaken
Implement a decree banning shark finning at sea	2017	Decree
Ensure that all shark species are covered under observer reporting above	2016	Observer reports and estimate of shark catches by species
Ongoing monitoring of turtle bycatch and life status in the handline and longline fisheries (Milestone 13 and 15)	Ongoing	Observer reports and estimate of turtles catches

Implement effective management mitigation measures for turtles which are consistent with national and international (WCPFC) obligations	Ongoing	Report demonstrating that requirements for protection and rebuilding are in place - non retention and dehooking; and evidence that the fishery is unlikely to hinder recovery.
Fisher awareness programme for shark and turtle interactions	Ongoing	Curriculum and fisher attendance records
Evaluate the effectiveness of management mitigation measures for sharks and turtles based on best practice	2018	Updated evaluation report on the measures applied and evidence that interactions are declining.

DURATION

The assignment will be for 6 years ending at the end of 2018.

PLANNING

The work output comprises specialist management inputs from two assigned specialists under MARD, but linking to DECAFOREP and sub DECAFIREP.

BUDGET

Annual operational costs to be decided in consultation with VINATUNA and MARD. Broad budget outlines are provided in the supporting excel sheet (Tab Budget/FIP tracking June workshop.xls)

C. TUNA FISHERIES MANAGEMENT COUNCIL

Requested Services

As part of the requirement to strengthen consultation and decision making process, MARD are requested to create a Tuna Fishery Management Council, under the management and supervision of VINATUNA.

Specific objectives (TFMC)

The purpose of the TOR is to set out the requirements for the Tuna Fishery Management Council and lay out the basis for the Council’s formation and decision making processes in respect to the management of tuna fisheries.

Requested Services

The functioning of TFMC will be strengthened, and its role supported by national law.

MARD/DECAFIREP must seek to use the TFMC structure as a support tool for consultation and decision making processes, and to undertake specific support processes which strengthen national and provincial tuna fisheries management.

MARD should ensure that the membership of the TFMC is inclusive and provides for participation of an appropriate number of organisations engaged in, or with experience in fishery in relation to which the fishery managers are overseeing.” These should allow for input or membership from/of the national research organisations (RIMF and NIO), Provincial Government representatives, a MCS manager, VASEP, VINAFIS, and WWF. The TFMC and VINATUNA will play a central role in helping MARD meet its objectives by acting as key liaison bodies between MARD and those with an interest in a particular fishery. They will also provide direct advice to MARD on fisheries-management policies and compliance with the activities set out in the Tuna Management Plan, and assist in the development of cost-efficient management arrangements.

The role of the TFMC should be defined in National Law and its decisions promulgated into management regulations. The TFMC’s duties include:

- a) Support the preparation of the Management Plan including setting of management indicators (catch and effort, stock status, and economic indicators);
- b) Propose a management strategy and harvest rules and tools that ensure that the Plan can be implemented effectively;
- c) Promote the co-management of fisheries for artisanal tuna fisheries;
- d) Promote research, education, and training in relation to fisheries and the management of fisheries, to all stakeholder in district, province and national;
- e) Report on the outcomes of the plan, most specifically on how the management system responds to findings and relevant recommendations emerging from research.
- f) Monitoring and evaluation of the effectiveness of the management system;
- g) Determine the fee structure to pay for a research and development fund, the operating expenses for the Council, and an independent peer review;
- h) Evaluate the performance of the TMFC structure in line with the roles and responsibilities determined by MARD.

The core requirements of the TFMC would be:

- To ensure a coherent decision making process that results in measures and strategies to achieve fishery specific objectives, as laid down in the Tuna Fishery Management Plan (TFMP);
- That the decisions taken respond to all issues identified in relevant research, monitoring and evaluation and consultation in a transparent and timely manner, and take account of the wider implications of decisions;
- That the decision making process use the Precautionary Approach to Fisheries Management (PAFM) and the Ecosystem Approach to Fisheries Management (EAFM), based on best available information;
- That formal reporting systems are implemented to ensure stakeholder awareness of the decisions taken;

- Consultation processes that regularly seek to accept relevant information and encourages all interested and affected parties to participate.

VINATUNA support actions

VINATUNA organisational roles and responsibilities must include the following:

- Coordinating with MARD, DECAFIREP, VASEP, VINAFIS, WWF and the supporting researchers and fishery managers on inputs from supporting organisations, as required;
- Providing advice on statutory decisions (management measures) following the deliberation of the Council;
- Monitoring the implementation of the Harvest strategy, rules and tools including by Provincial and District levels;
- Organising training and awareness programmes for DECAFIREP fishery managers and fishers;
- Organising stakeholder workshops to optimise the receipt of relevant information, to promote the harvest strategy and explain the decisions taken by the MARD and supported by the TMFC.

The required outputs:

- Precautionary Approach to Fisheries Management and Ecosystem Approach to Fisheries Management incorporated into National and Provincial Law, and prescribed as a component of the TFMP
- Draft Tuna Management Plan endorsed, but updated annually;

BUDGET

Annual operational costs to be decided in consultation with MARD. Proposed budget outlines are provided in the supporting excel sheet (*Tab Budget/FIP tracking June workshop.xls*)

EXPECTED MILESTONES AND REPORTING

The required outputs are set out in the table below:

MILESTONES	Timeline	REPORTING MEANS OF VERIFICATION
Tuna Fishery Management Council fully operational and all roles & responsibilities defined	Ongoing	Decision making and consultation trees and Statutes of the Advisory Board and meeting minutes

4.6 COMPLIANCE

JOINT TUNA COMPLIANCE WORKING GROUP

BACKGROUND

VINATUNA, supported by the WWF Asia Pacific Seafood Trade Network and national government agencies (MARD and DECAFIREP), industry bodies, VASEP, private sector exporters, are engaged a Fishery Improvement Project (FIP). This project will be carried out over a period of 5 years, to support the long term goal of Marine Stewardship Council certification of Pacific Ocean yellowfin tuna in the handline and longline fisheries. To this end, all stakeholders have endorsed a an Action Plan which, when implemented, will satisfy the MSC standards, but will also embrace activities required to support WCPFC management measures and are expected to underline the outcomes of the Vietnamese Tuna Management Plan. As part of this process, the FIP proposes to strengthen the fishery compliance system in order to ensure effective enforcement of the fishery management measures. This includes an effective system of compliance resources deployed and sanctions, all of which when introduced will ensure systematic compliance by fishers.

DESCRIPTION OF THE ASSIGNMENT

Global objective

The expected position by year 5 is that:

- A comprehensive monitoring, control and surveillance system has been implemented in the fishery and has demonstrated a consistent ability to enforce the management measures set by DECAFIREP;
- Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide an effective deterrent;
- Evidence exists that fishers comply with the management system, including providing information of importance to the effective management of the fishery;
- There is no evidence of systematic non-compliance.

Specific objectives

The purpose of the TOR is to set out the requirements for the Joint Tuna Compliance Working Group and lay out the support requirements and activities required to implement an effective compliance and enforcement system.

Requested Services

The Joint Tuna Compliance Working Group (JTCWG) will be the implementing body to enforce the management measures set by DECAFIREP. An elected officer from the JTCWG will be a member of the TFMC.

The JTCWG's duties include:

1. Following decisions made by the DECAFIREP, and resulting Legal decisions put in place, the JTCWG should prepare, with the support of an international compliance consultant,

a risk assessment, to determine appropriate deployment strategies. This will form part of the National Plan of Action against IUU;

2. The systems of sanctions should be applied appropriate to the levels of risk identified;
3. Organisations and individuals involved in the compliance process should be well understood with a clear hierarchy of decision making and active coordination functioning between the various groups – Department of Fishery surveillance, the Navy and Border Police;
4. Evidence should be in place of deployment actions taken (collection centre checks, boardings at sea), and results (penalties and confiscations). A time series of these activities and results should illustrate a demonstrably effective deterrent;
5. Awareness workshops should be promoted in cooperation with all stakeholder groups to explain the reasons for the measures and drawing on information received from fishers to support the effective implementation of the enforcement system.
6. A continual internal review process of effectiveness of the Compliance system, through upgrading of the annual risk assessment exercise
7. An external review process on the effectiveness of the compliance system

WORKING GROUP MEMBER'S PROFILE

The working group should comprise all those organisations actively engaged in enforcement activities, notably Department of Fishery Surveillance, the Navy and Border Police.

The outputs that must be achieved as follows:

- Evidence that awareness groups are taking place and that these act as a supporting deterrent as well as a source of valuable information to the enforcement organisations by year 2
- Evidence that a risk assessment system is being applied by year 3 and ongoing
- Evidence that inspections are taking place and compliance is increasing by year 3
- Evidence that sanctions are acting as an effective deterrent by year 3

DURATION

Following the adoption of management measures by the TFMC

PLANNING

To be decided by DECAFIREP.

BUDGET

Annual operational costs to be decided in consultation with MARD/DECAFIREP. Proposed budget outlines are provided in the supporting excel sheet (*Tab Budget/FIP tracking June workshop.xls*)

EXPECTED MILESTONES AND REPORTING

The required outputs are set out in the table below:

MILESTONES	Timeline	REPORTING MEANS OF VERIFICATION
Risk assessment of enforcement actions following the introduction of P1 and P2 associated management measures	2017	Risk assessment Report
Review of sanctions for non compliance	In progress	Sanction schedule
Effective evidence of systematic compliance and an effective system of sanctions	2017	Review of infringements

4.7 PROJECT MANAGEMENT

BACKGROUND

VINATUNA, supported by the WWF Asia Pacific Seafood Trade Network and national government agencies (MARD and DECAFIREP), industry bodies, VASEP, private sector exporters, are engaged a Fishery Improvement Project (FIP). This project will be carried out over a period of 5 years, to support the long term goal of Marine Stewardship Council certification of Pacific Ocean yellowfin tuna in the handline and longline fisheries. To this end, all stakeholders have endorsed a an Action Plan which, when implemented, will satisfy the MSC standards, but will also embrace activities required to support WCPFC management measures and are expected to underline the outcomes of the Vietnamese Tuna Management Plan. As part of this process, WWF will manage this project on behalf of the Asia Pacific Seafood Trade Network secure placement for a Regional Coordinator to supervise the implementation of the project and a National Project Manager, to monitor and support the application of the FIP. The Project will also require the support of an international consultant with specific strengths in Monitoring and Evaluation, facilitation of management processes as well as knowledge of MSC Fisheries Assessment Methodology.

A. WWF REGIONAL COORDINATOR

DESCRIPTION OF THE ASSIGNMENT

Global objective

The expected position by year 5 is that:

- The fishery is suitable for advancement to MSC Full assessment and has met with all the Assessment criteria that link to the outcomes and activities described in the FIP.

Specific objectives

The purpose of the TOR is to set out the requirements for the WWF Regional Coordinator who will be responsible for overall Project coordination, as well as liaising with stakeholders and funders (Industry Government and Donors).

Requested Services

The Coordinator will be appointed by the WWF Asia Pacific Seafood Trade Network and will be based in Vietnam. He/she will be responsible for the overall management of the Project and will act as the contact point for funding contributions, as well as liaison with the importers. The Project Coordinator will work with the National country manager and provide support as and when required.

The following duties are required:

- Coordinate the implementation of the FIP in partnership with the National Manager
- Access funding channels
- Develop, implement and track FIP Partner Agreements with private sector, including developing and monitoring communication protocols and managing of market recognition
- Managing the budget on behalf of WWF , and monitoring programme expenditure
- Liaise with stakeholders, especially the foreign partners and WWF Network
- Liaise with the International M&E consultant in issues relating to project out turns and contractual commitments
- Supporting the Project in a number of duties including preparing support input to reports for funders and the WWF Asia Pacific Seafood Trade Network
- Communicate FIP progress, developments, examples etc. to WWF and broader sustainable seafood community internationally, including managing communications around the FIP in the APSSTN website and other platforms and fora

Expert's profile

WWF Regional Coordinator

1. Qualifications and skills

- A higher degree in social sciences, fisheries science and/or business management
- Experience in Project management

2. General professional experiences

- Extensive knowledge of Vietnamese fisheries and / or Vietnamese rural development
- Knowledge of the WWF network

- Working knowledge of English

DURATION

Following the signature of the contract, the international consultant will be available for mobilisation within 10 working days. The exact date shall be agreed with WWF.

The assignment will be for 5 years with a view to establishing long term linkages thereafter based on performance.

REPORTING

- With the assistance of the National Project manager, prepare a quarterly report for the WWF Asia Pacific Seafood Trade Network which will include summary FIP outcomes and Budget expenditure;
- With the assistance of the National project Manager, prepare a regular newsletter on FIP progress for circulation for all stakeholders

B. WWF NATIONAL MANAGER

DESCRIPTION OF THE ASSIGNMENT

Global objective

The expected position by year 5 is that:

- The fishery is suitable for advancement to MSC Full assessment and has met with all the Assessment criteria that link to the outcomes and activities described in the FIP.

Specific objectives

The purpose of the TOR is to set out the requirements for the National Project Manager to support the implementation and monitoring of the Vietnam Tuna Fisheries Improvement Project.

Requested Services

The Project Manager will be expected to undertake a series of activities during his/her tenure. The national officer will report directly to WWF and the M&E consultant, and will be responsible for coordinating the FIP budget and tracking quarterly progress of the FIP

Requested Services

The following duties are required:

- Monitoring the progress of each Activity as defined in the Programme LogFrame, and the above defined reports as provided in the above TORs

- Communicating with VINATUNA, MARD, DECAFIREP, and other stakeholders, as required
- Participating in workshops, and the activities of the TFMC
- Reporting and liaising with Regional Coordinator and the International M&E consultant
- Mentoring to various stakeholders as required
- Supporting the Project in a number of duties including preparing support input to reports for funders and the WWF Asia Pacific Seafood Trade Network.

Expert's profile

WWF Project Manager

3. Qualifications and skills

- A degree in environmental science
- Experience in Project management
- Knowledge of the Marine Stewardship Council Fisheries Assessment methodology

4. General professional experiences

- Knowledge of Vietnamese fisheries and / or Vietnamese rural development
- Working knowledge of English and Vietnamese

DURATION

Following the signature of the contract, the international consultant will be available for mobilisation within 10 working days. The exact date shall be agreed with WWF.

The assignment will be for 5 years with a view to establishing long term linkages thereafter based on performance.

REPORTING

- Updating the WWF FIP Tracking document
- Collating FIP milestone outturns and proving these to the M&E consultant
- Preparing a quarterly report
- With the assistance of the National project Manager, preparing a regular newsletter on FIP progress for circulation for all stakeholders

C. INTERNATIONAL M&E CONSULTANT

DESCRIPTION OF THE ASSIGNMENT

Global objective

The expected position by year 5 is that:

- The fishery has in place mechanisms to evaluate all parts of the management system and is subject to regular internal and external review;
- The fishery is suitable for advancement to MSC Full assessment and has met with all the Assessment criteria that link to the outcomes and activities described in the FIP;

Specific objectives

The purpose of the TOR is to set out the requirements for an International MSC/FIP specialist to monitor activities and outcomes for the Vietnamese Tuna FIP.

Requested Services

The International consultant will be deployed annually and will review outcomes, with the support of the WWF country manager. The consultant will report directly to WWF Asia Pacific Seafood Trade Network and VIETTUNA.

The following duties are required:

- Create management templates that support the monitoring of the activities described in the FIP;
- Participate in workshops to recommend changes to FIP actions;
- Assist in redrafting Terms of Reference (TORs) for FIP activities, as required;
- Rescore the fishery against the MSC standard and update the FIP action plan accordingly.

Expert's profile

International consultant

5. Qualifications and skills

- Post-doctoral degree in fisheries sciences, economics or community and social studies
- At least 10 years' experience in Programme Planning
- An intricate knowledge of the Marine Stewardship Council Fisheries Assessment methodology
- Experience in Institutional Strengthening and Training Needs analysis in South and South East Asia

6. General professional experiences

- Knowledge of Vietnamese fisheries;
- Knowledge of WCPO tuna fisheries management

DURATION

Following the signature of the contract, the international consultant will be available for mobilisation within 10 working days. The exact date shall be agreed with WWF and VINATUNA.

The assignment will be for 5 years with a view to establishing long term linkages thereafter based on performance.

REPORTING

1. Update Terms of Reference Based on the Revised Logframe
2. Revise FIP budget in coordination with WWF Vietnam on an ongoing basis
3. Review all FIP milestones
4. Assist with FIP deliverables
5. Rescore the fishery against the MSC standard and update the FIP action plan accordingly

Appendix 1:

PSA scores for targeted and retained species in longline fishery

SI	SCIENTIFIC_NAME	COMMON_NAME	Productivity Scores [1-3]							Susceptibility Scores [1-3]					PSA scores (automatic)				
			Average age at maturity	Average male age	Fecundity	Average male size	Average size at maturity	Reproductive strategy	Trophic level (fishbase)	Density dependence	Total Productivity	Availability	Exploitable	Susceptibility	Post-capture mortality	Total (multiplicative)	PSA Score	Risk Category	MFC category
111	<i>Thunnus albacares</i>	Yellowfin tuna	1	1	1	2	2	1	3	1.57	2	2	2	3	1.55	7.27	90.6	Low	>30
111	<i>Thunnus obesus</i>	Bigeye tuna	1	1	1	2	2	1	3	1.57	2	2	2	3	1.55	2.22	90.6	Low	>30
211	<i>Alopias pelagicus</i>	Pelagic thresher	2	3	3	2	3	4	3	2.71	1	2	2	3	1.45	4.01	67.5	Med	50-80
211	<i>Niphius gladius</i>	Swordfish	2	2	1	2	2	1	1	1.00	1	1	1	1	1.00	2.21	91.2	Low	>30
211	<i>Prionace glauca</i>	Blue shark	2	2	3	3	2	3	3	2.57	1	1	1	3	1.31	1.31	74.6	Med	50-80
211	<i>Centropomus serpens</i>	Snooks morwong	3	3	1	2	2	1	3	2.14	1	2	2	3	1.23	1.43	64.4	Low	>30
211	<i>Mesistius leuops</i>	Black marlin	1	3	1	3	3	1	3	2.14	1	1	3	3	1.22	2.45	85.37	Low	>30
211	<i>Acanthistius oblongirostris</i>	Wahoo	1	1	1	2	2	1	3	1.57	2	3	3	3	2.11	7.81	74.57	Med	60-80
211	<i>Mesistius mazoni</i>	Indo-Pacific blue marlin	1	3	1	3	2	1	3	2.00	1	3	3	3	1.53	2.50	81.32	Low	>30
211	<i>Lepidocybium flavobrunneum</i>	Escolar	3	3	1	2	3	1	3	2.24	2	2	3	3	1.23	2.95	69.22	Med	50-80
211	<i>Isomphurus platypterus</i>	Indo-Pacific sailfin	3	2	1	2	2	1	1	2.14	2	3	2	2	2.11	1.10	66.70	Med	50-80
211	<i>Coryphaena hippurus</i>	Common dogfish	1	1	1	2	2	1	3	1.57	1	2	2	3	1.23	1.01	94.38	Low	>30
211	<i>Sphyrna tiburo</i>	S. shaped hammerhead	2	3	3	3	2	3	1	2.71	1	2	3	3	1.43	3.07	64.77	Med	50-80

PSA scores for targeted and retained species in handline fishery

SI	SCIENTIFIC_NAME	COMMON_NAME	Productivity Scores [1-3]							Susceptibility Scores [1-3]					PSA scores (automatic)				
			Average age at maturity	Average male age	Fecundity	Average male size	Average size at maturity	Reproductive strategy	Trophic level (fishbase)	Density dependence	Total Productivity	Availability	Exploitable	Susceptibility	Post-capture mortality	Total (multiplicative)	PSA Score	Risk Category	MFC category
111	<i>Thunnus albacares</i>	Yellowfin tuna	1	1	1	2	2	1	3	1.57	2	2	2	3	1.55	7.27	90.6	Low	>30
111	<i>Thunnus obesus</i>	Bigeye tuna	1	1	1	2	2	1	3	1.57	2	2	2	3	1.55	2.22	90.6	Low	>30
211	<i>Trachurus longipinnis</i>	Longfin tuna	1	2	1	2	2	1	1	2.14	1	1	1	1	1.00	2.52	61.3	Low	>30
211	<i>Chromis gladius</i>	Swordfish	2	2	1	2	2	1	1	1.00	1	1	1	1	1.00	2.21	91.2	Low	>30
211	<i>Prionace glauca</i>	Blue shark	2	2	3	3	2	3	3	2.57	1	1	1	3	1.31	1.31	74.6	Med	60-80
211	<i>Centropomus serpens</i>	Snooks morwong	3	3	1	2	2	1	3	2.14	1	2	2	3	1.23	1.43	64.4	Low	>30