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A photograph of several colorful fishing boats (blue, red, yellow, green) docked in a harbor. The boats have identification numbers on their sides, such as 'BD 797TS', 'BD 0597TS', 'BD 7337TS', and 'BD 8630TS'. The boats are equipped with masts, rigging, and various fishing gear. The water is a light greenish-grey, and the sky is overcast. In the background, there are buildings and a mountain range.

Fisheries Improvement Project for the Vietnamese Yellowfin Tuna Handline & Longline Fisheries Sector

FIP ACTION PLAN

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Yellowfin Tuna Handline and Longline Fisheries Sector**

FIP ACTION PLAN

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ACRONYMS

Vietnamese Institutions Acronyms

DARD	Department of Agriculture and Resource Development
DECAFIREP	Department of Capture Fisheries & Resource Exploitation and Protection
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

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	MSC FIP Benchmarking and Monitoring Tool
EAFM	Ecosystem Approach to Fisheries Management
ETP	Endangered, Threatened and Protected
FIP	Fishery Improvement Project
MSC	Marine Stewardship Council
PSA	Productivity Sensitivity Analysis
RBF	Risk Based Framework
SICA	Scale Intensity Consequence Analysis
BMT	MSC FIP Benchmarking and Monitoring Tool

1. INTRODUCTION

The purpose of this document is to provide background information on the number of activities and outcomes required to support the Fishery Improvement Project (FIP) for longline and handline tuna in Vietnam. This follows on from a pre-assessment and scoping study for these fisheries conducted in November-December, 2012, and a subsequent FIP stakeholder workshop held in Qui Nhon, Vietnam in June 2013.

The document is divided into a number of sections and includes a summary **Action Plan** containing information on expected outcomes, activities and milestones, which when completed will meet the Marine Stewardship Council (MSC) scoring guideposts for each of the Principle, the assigned stakeholder responsible for implementing the plan, the current status (ongoing or new) and the expected timeframe to complete the initial tasks. This document is supported by two annexes:

- a logframe, which summarizes the activities, with assigned milestones, sets Objectively verifiable indicators and Means of Verification, and for reference purposes, links these to the relevant scoring guidepost; and
- a FIP Tracking document which lays out the delivery schedules against the milestones

The second section of the document covers Terms of reference for each of the participating stakeholders assigned to complete specific activities; and the required budget. Decisions on the co-funders will be decided for each of the activities.

The Units of Certification identified from the Preassessment were:

- Yellowfin tuna caught by longline;
- Yellowfin tuna caught by handline.

A range of tuna and tuna-like species, as well as bycatch and Endangered, Threatened and Protected (ETP) species, are taken in tuna fisheries, so actions and activities defined will also relate to these species. This document identified the activities and range of tasks required in the Action Plan for the fisheries to reach the Marine Stewardship Council (MSC) standard. The current MSC fisheries methodology, Version 2, is used to define the actions.

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 other retained, bycatch and ETP species) relate specifically to the fishery under assessment. Further changes to the Action Plan may be required, if MSC changes some of the scoring guideposts as part of its review process.

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 Resource 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 & Resource Exploitation and Protection (DECAFIREP) and sub DECAFIREP.

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 Fisheries Management (RIMF).

The Plan is further developed to include a FIP tracking document with activities linked to the MSC scoring guideposts and more specific milestones and. The results generated from the Action Plan should have periodic internal and external reviews to ensure they will meet the MSC standard.

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 #	Performance Indicator	Likely scoring level		
1	Outcome	1.1.1	Stock status – yellowfin tuna	Pass		
			Stock status – bigeye tuna	Fail		
		1.1.2	Reference points – yellowfin tuna	Pass with condition		
			Reference points – bigeye tuna	Pass with condition		
		1.1.3	Stock rebuilding – bigeye tuna	Fail		
		Management	1.2.1	Harvest Strategy – yellowfin tuna	Fail	
	Harvest strategy – bigeye tuna			Fail		
	1.2.2		Harvest control rules and tools – yellowfin tuna	Fail		
			Harvest control rules and tools – bigeye tuna	Fail		
	1.2.3		Information and monitoring – yellowfin tuna	Pass with condition		
			Information and monitoring – bigeye tuna	Pass with condition		
	1.2.4		Assessment of stock status - yellowfin tuna	Pass		
			Assessment of stock status - yellowfin tuna	Pass		
	2		Retained species	2.1.1	Outcome - handline	Fail
					Outcome – longline	Fail
		2.1.2		Management - handline	Fail	
Management – longline				Fail		
2.1.3		Information – handline		Fail		
		Information – longline		Pass with condition		
Bycatch species		2.2.1	Outcome - handline	Pass		
			Outcome – longline	Pass		
		2.2.2	Management - handline	Pass		
			Management – longline	Pass with condition		
		2.2.3	Information – handline	Pass with condition		
			Information – longline	Pass with condition		
2.3.1		Outcome - handline	Pass with condition			

	ETP species	2.3.2	Outcome – longline	Pass with condition
			Management - handline	Pass with condition
			Management – longline	Pass with condition
		2.3.3	Information – handline	Pass with condition
			Information – longline	Pass with condition
		Habitats	2.4.1	Outcome - handline
	Outcome – longline			Pass
	2.4.2		Management - handline	Pass
			Management – longline	Pass
	2.4.3		Information – handline	Pass with condition
			Information – longline	Pass with condition
	Ecosystem	2.5.1	Outcome - handline	Fail
			Outcome – longline	Fail
		2.5.2	Management - handline	Fail
			Management – longline	Fail
		2.5.3	Information – handline	Pass with condition
			Information – longline	Pass with condition
	3	Governance and Policy	3.1.1	Legal and customary framework
3.1.2			Consultation, roles and responsibilities	Pass with condition
3.1.3			Long term objectives	Pass with condition
3.1.4			Incentives for sustainable fishing	Pass with condition
Fishery specific management system		3.2.1	Fishery specific objectives – handline	Fail
			Fishery specific objectives – longline	Pass with condition
		3.2.2	Decision making processes – handline	Fail
			Decision making processes – longline	Fail
		3.2.3	Compliance and enforcement – handline	Pass with condition
			Compliance and enforcement – longline	Pass with condition
		3.2.4	Research plan	Pass with condition
		3.2.5	Management performance evaluation	Pass with condition

A summary of the current status (FIMP-BMT¹ index sheet) is shown in Figures 1 (longline tuna) and 2 (handline tuna).

Figure 1: MSC BMT Index for the Vietnam tuna longline fishery

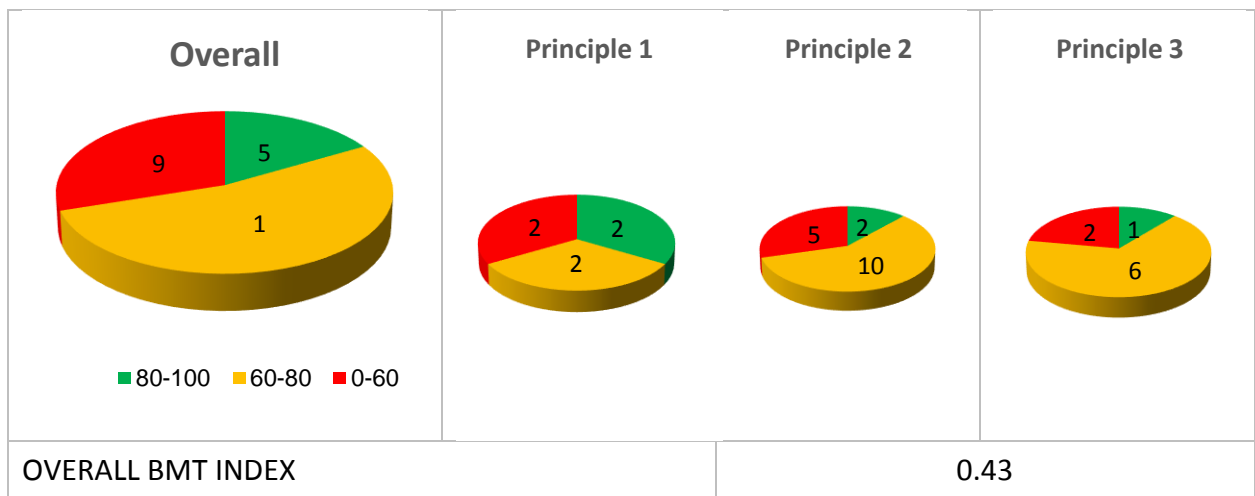
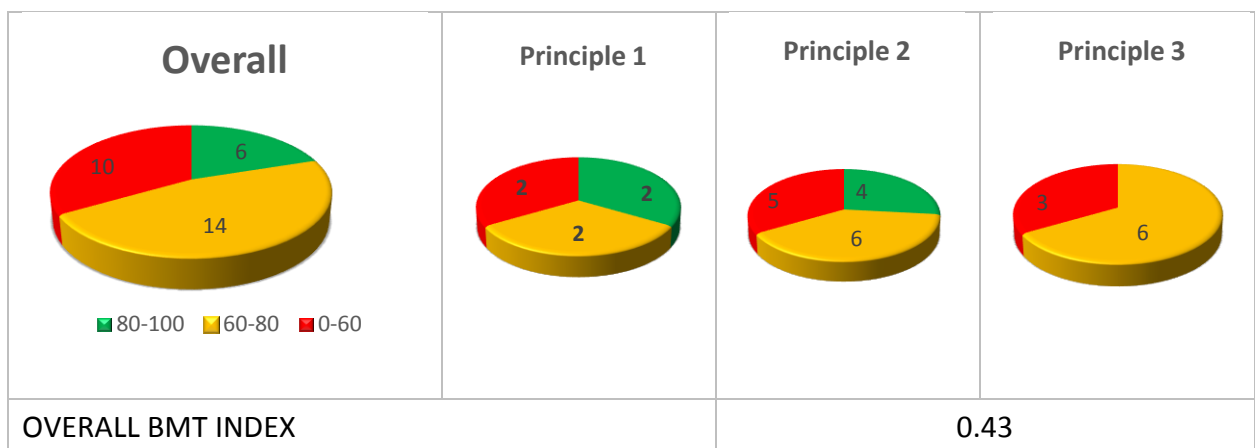


Figure 2: MSC BMT Index for the Vietnam tuna Handline fishery



¹ 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.

2. THE ACTION PLAN

A summary logframe is provided in Appendix 1. It contains three basic goals, 15 outcomes, 21 activities and 54 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 outcomes² 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

² There is no milestone for Performance evaluation, as performance outcomes are integrated into the Tuna Management Plan

The specific activities will be addressed in the section below.

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

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 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).

Vietnam’s scientists (RIMF) need to be engaged in the annual WCPFC Scientific Committee, scheduled for August 2013.

Reference points may be established at the next WCPFC General meeting schedule for Cairns, 2013, but most probably, are not likely to materialize until 2015.

It is accepted that RIMF has the necessary stock assessment skills, following donor assisted training, to participate in these meetings.

The associated milestones are:

- **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) by Quarter 1 2014. As indicated above, this outcome may be delayed by one year

Assigned stakeholders	WCPFC with MARD and RIMF participation
Priority	High
Status	Expanding on existing activity
Timeframe	1-2 years (development) and ongoing
MSC Performance Indicator(s)	1.1.2 Target species reference points

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.

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 of the non-SIDS CCMs

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, DECAFIREP (national) and scientists (RIMF) should participate in this WG.

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

Assigned stakeholders	WCPFC with MARD and RIMF participation;
Priority	High
Status	Expanding on existing activity
Timeframe	Q 1 2014, and annual revisions
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

Collection of catch and landings data for Vietnamese oceanic tuna fisheries is primarily undertaken at provincial level, with provincial fisheries organizations (Sub DECAFIREP) 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](#) (WPEA OFM) and covers improved logbook recording, landings records and port sampling.

These data are fed from Sub DECAFIREP to DECAFIREP, where they are entered and collated, then incorporated in mandatory reporting to WCPFC. It is hoped that a national data collection system initially to be developed for the oceanic tuna fishery can be initiated by FiCen as soon as possible. It is currently believed to be in the final stages of approval.

Logbook coverage of the longline/handline fishery in the three main producing provinces (Binh Dinh, Phu Yen, Khanh Hoa) is currently around 50%, catch estimates by species and gear are compiled on an annual basis, and port sampling coverage of the main gear types is good.

Current tuna fishery catch estimates are still considered incomplete but there is a reasonably good record of catch for the longline sector, with new data emerging from the handline fishery, which only commenced from November 2011. Incomplete data applies more specifically to retained species/bycatch and ETP species, and to another eight provinces which provide lesser amounts of catch but are not currently monitored in detail.

There are also significant gaps in knowledge of biological parameters of tuna stocks such as growth, reproduction, natural mortality etc which might be required as inputs for stock assessments. Some specific details on the core information requirements are as follows:

- **Catch and species composition:** Logsheet data are increasingly being supplied by the longline fishery (currently 50% coverage). Work has also commenced on the collection of logbook data for handline vessels.
- **Stock abundance:** Port sampling provides data on size and species composition of the catch of target species for each fishery, and is now established in the major tuna fishery ports, with some strengthening taking place in other ports where tuna landings occur.
The catch of juvenile yellowfin and bigeye by other gears e.g. gillnet and purse seine (day and especially night) is incompletely documented at present and requires attention.
- **Fleet composition:** Information on fleet structure is available but requires consolidation of Sub DECAFIREP records into a national recording system.

The principal partners for these activities are fishermen Sub DECAFIREP and DECAFIREP,

The associated milestones are:

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

Assigned stakeholders	WCPFC with MARD and RIMF participation;
Priority	High
Status	Expanding on existing activity, supported by WPEA OFM
Timeframe	Q 4 2016
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

A significant part of this outcome is to first have clarification of Vietnam’s management obligations to WCPFC (Activity 3.1.1), since WCPFC still perceive Vietnam to fall outside the convention area. Since tuna is a transboundary stock and migrates through Vietnamese waters, this interpretation is inconsistent with reality.

The expectation is that WCPFC CMMs will be binding on Vietnam. This includes a number of current obligations relating specifically to yellowfin and bigeye tuna as contained in CMM 2008-01 and 2012-01:

Purse seine

- A three (3) months (July, August and September) prohibition of setting on FADs shall be in place for all purse seine vessels fishing in EEZs and high seas between 20N and 20S in the Convention Area.
- Submitting a FAD management Plan
- Other coastal States with effort in their EEZs exceeding 1,000 days annually over the period of 2006-2010 shall limit effort in their EEZs to 2001-04 average or 2010 levels; OR Other coastal States within the Convention Area other than those referred to in shall establish effort limits or equivalent catch limits for purse seine fisheries within their EEZs that reflect the geographical distributions of skipjack, yellowfin, and bigeye tunas, and are consistent with the objectives for those species.
- Each CCM shall take measures not to increase purse seine fishing days on high seas.
- CCMs are encouraged to take measures not to increase their catch of yellowfin tuna.
- 100% observer coverage
- Catch retention of all target tuna species

Longline

- Longline catch not to exceed 2,000 tonnes (but Vietnam is not listed in the Appendix to the CMM)
- CCMs with catch limits shall report monthly the amount of bigeye catch by its flagged vessels to the Secretariat by the end of the following month. Reports shall include catch of the month and catch for the year to date. When 90% of the catch limit for a CCM is reached, the Secretariat shall notify that to all CCMs.
- CCMs are encouraged to take measures not to increase their catch of yellowfin tuna.
- Each CCM shall report to WCPFC10 its 2013 catch of yellowfin tuna as of October 31.
- 5% observer coverage

Other fisheries (Handline and gill net)

- CCMs shall take necessary measures to ensure that the total effort and capacity of their respective other commercial tuna fisheries for bigeye, yellowfin and skipjack tuna but excluding those fisheries taking less than 2,000 tonnes of bigeye, yellowfin, and skipjack, shall not exceed the average level for the period 2001-2004 or 2004.
- CCMs shall provide the Commission with estimates of fishing effort for these other fisheries or proposals for the provision of effort data for these fisheries for 2013 and future years.

- **Milestone 9**

Vietnam's compliant with CMM 2008-01, 2012-01 or any subsequent amendment

Assigned stakeholders	WCPFC/MARD/DECAFIREP/sub DECAFIREP;
Priority	High
Status	Strengthening existing understanding
Timeframe	Q1 2016
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

This component falls to the explicit responsibility MARD and DECAFIREP to monitor the application of measures at sub DECAFIREP level. DECAFIREP 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 DECAFIREP to DECAFIREP to MARD.

- **Milestone 10**

Compliance reporting and annual report on the effectiveness of the CMM

Assigned stakeholders	WCPFC/MARD/DECAFIREP/sub DECAFIREP;
Priority	High
Status	Undertaking a new activity
Timeframe	Q 3, 2013 and annual sessions
MSC Performance Indicator(s)	1.2.1 Harvest strategy

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).

Once Reference points have been set in management, the Government of Vietnam will need to establish a system of effort management (purse seine) and output controls (bigeye and yellowfin tuna) for all of its fisheries.

The following milestones are set:

- **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

Assigned stakeholders	MARD/DECAFIREP/sub DECAFIREP/fishers; WWF
Priority	High
Status	Undertaking and new activity
Timeframe	Q1 2014 – Q 1 2016
MSC Performance Indicator(s)	1.2.2 Harvest control rules and tools

GOAL 2 - Ecosystem Management: To promote the ecosystem based approach to fisheries management

Outcome 2.1 - Retained and bycatch 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

Accurate information is required on total removals from the fishery i.e., including retained species (all commercial catches excluding the main tuna species), bait species and ETP species, and any discards. This is not currently available and is not known with certainty. The status of baitfish stocks harvested for longline and handline fisheries is also unknown.

This information needs to be gathered and reviewed, to identify gaps in knowledge that would be required for risk assessment/Ecosystem Approach to Fisheries Management (EAFM) and to determine if management strategies need to be implemented for particular fisheries or species (Activity 2.1.2).

Information on other species catches, other than target species, is typically collected by observer programmes. The observer programmes should build on the experience gained from the WCPFC observer programmes and the trainings and periodic deployment of observers sponsored by NOAA-WWF and led by RIMF. Observers would initially be scientific observer programmes rather than compliance, and may also involve collection of biological samples, including material for ecosystem studies/modelling.

Target coverage levels, reflecting available resources and manpower, would need to be developed but for indicative purposes, might initially be between 5%-10% for EEZ longliners and handliners.

Coordinated observer training will be required, which will require use of NOAA/SPC training modules and funding support from industry, NGOs and Government.

It is also proposed to extend the current port sampling programme, coordinated through the WPEA OFM, to incorporate identification of retained species.

Where high ecological risk situations have been identified, observer programmes will need to be ongoing, to support management strategies introduced and ensure compliance.

- **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.

Assigned stakeholders	sub DECAFIREP/RIMF/Fishers/private sector;
Priority	High
Status	Undertaking a new activity and supported by WPEA 2
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 retained species and bycatch 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.

A Risk-Based Assessment (RBA) framework needs to be completed for retained, bycatch ETP, and baitfish species as well as habitat impacts. This would draw on the information review as outlined above (Activity 2.1.1), and anticipating data deficiencies, would involve the application of SICA (Scale Intensity Consequence Analysis - qualitative analysis, requiring information from stakeholders) and PSA (Productivity-Susceptibility Analysis, involving semi-quantitative analysis).

The RBA would identify ecological risk from species/fishery interactions, recognizing that risk will vary across species and fisheries, and may result in national limits for ETP (and other interactions) being established and enforced (see Activity 2.1.1 above for the role of observer programmes, which would characterize operational aspects of all tuna fisheries). It would utilize information obtained from the literature and experience with similar or same species elsewhere in the WCPO.

Key requirements would be identification of the SICA3 components:

- The main risk bearing activities, which would in this case be fishing;
- The spatial scale of the fishery, i.e., the percentage range of the stock that overlaps with the fishing activity;
- The Temporal Scale, the time spent on the fishing grounds where the interactions will occur;
- The level of fishing intensity, identifies the direct impacts as defined as Negligible, Minor, Moderate, Major, Severe and Catastrophic;
- Consequence of fishing activity on either population size or reproductive capacity.

Key requirements would be identification of PSA components:

- Average age of maturity
- Average size of maturity
- Average maximum age
- Average maximum size
- Fecundity
- Trophic level
- Reproductive capacity
- The overlap of the fishery with the species distribution (Availability)
- Species overlap with the type of gear (Encounterability)
- Gear Selectivity
- Post capture mortality

³ See pages 86-106 of the MSC FAM version 2.

Training in risk assessment methods and the application of EAFM to Vietnam tuna fisheries will be required for Vietnamese scientists in key agencies, Universities and NGOs, and also requiring funding support and development of links with external research bodies, RFMOs and eNGOs. The workshops should also be participatory, requiring industry input.

Where high risks have been identified, **develop an overall management strategy for management and mitigation of ecosystem impact risks**, involving all stakeholders in the development and implementation of the system.

The strategy will need to be monitored, and the success of any mitigation measures introduced regularly assessed. Management and mitigation must be incorporated into a strategy, which will be different for each fishery and will likely include, *inter alia*:

- Spatial and seasonal closures;
- Changes to gear configurations, to minimize interactions with juveniles and at-risk species e.g. hook types, minimum mesh sizes, maximum gear dimensions etc.;
- Non-target species catch limits;
- By-catch mitigation policy (where applicable).

These measures will be incorporated into the NTMP:

- **Milestone 19**
Training in risk assessment and the application of EAFM
- **Milestone 20**
Workshop to determine risks to commercial, bycatch, baitfish and ETP 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

Assigned stakeholders	RIMF/NIO, DECAFIREP/sub DECAFIREP/fishers & processors
Priority	High
Status	Undertaking a new activity and supported by WPEA 2
Timeframe	Q1 2016-Q4 2017
MSC Performance Indicator(s)	2.1.1, 2.2.1, 2.3.1, 2.1.2, 2.2.2, 2.3.2 Retained, bycatch and ETP status

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).

WCPFC has an evolving strategy linked to the status of specific shark species. CMM 2011-03 requires that Oceanic whitetip species cannot be landed, and further protection is likely to be extended to silky shark at the forthcoming WCPFC meeting.

Other species (hammerhead, porbeagle, thresher, shortfin and long fin mako and blue sharks also require specific actions such as recording catch and fins attached to the shark. The risk to these species would also need to be considered (Milestone 18).

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.

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

Assigned stakeholders	DECAFIREP/sub DECFIREP/fishers and processors; WWF
Priority	High
Status	Undertaking a new activity and supported by WPEA 2
Timeframe	Q1 2014-Q1 2015
MSC Performance Indicator(s)	2.1.2, 2.2.2 ETP and retained species (shark) management

Outcome 2.3 - Turtle management strengthened

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

There has been some work in measuring the specific impact of the longline fishery and the life status of the turtles when caught, but the reporting is not regular. Nevertheless, observer data do tend to show low levels of interaction, and low mortality rates (1 in 5 dead on capture). Most specifically, whilst Vietnam has not introduced the turtle CMM (2008-03), it has its own prescribed Decree which prohibits the landing of turtles.

Turtle avoidance also forms part of the occasional Sub DECAFIREP educational process at regional level. Evidence from workshops and published work, however, suggests that mitigation measures in the form of circle hooks have not been fully tested scientifically and thus an optimum mitigation strategy has not been developed, nor have circle hooks been adopted widely within the longline fishery.

There is unlikely to be any interaction between the handline fishery and turtles, but this assumption would have to be assessed.

- **Milestone 28**
Monitor of turtle bycatch and life status in the handline and longline fisheries (Milestone 13 and 15)
- **Milestone 29**
Implement effective management mitigation measures for turtles which are 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

Assigned stakeholders	MARD/WWF/VINATUNA/DECAFIREP/sub DECAFIREP; WWF
Priority	High
Status	Undertaking a new activity and supported by WPEA 2
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

Whilst it is unlikely that there will be significant losses of gear or lost gear from these species impacting on target species and ecosystems, it will be important to extend the observer scheme to record any gear loss.

- **Milestone 32**

Gear losses incorporated into observer reporting

Assigned stakeholders	DECAFIREP/DECAFIREP/sub DECAFIREP/fishers
Priority	Medium
Status	Undertaking a new activity and supported by WPEA 2
Timeframe	Q1 2014-Q1 2015
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

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 needs to be undertaken, using existing models developed by SPC. This data-intensive modeling has not been applied to Vietnam, but will require the **collection of additional trophic data and biological samples to adequately assess Pacific ecosystems, with the support of the WPEA OFM.**

- **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

Assigned stakeholders	DECAFIREP / NIO /WPEA
Priority	Intermediate
Status	Undertaking a new activity
Timeframe	Q4 2016
MSC Performance Indicator(s)	2.5.1, 2.5.2, 2.5.3 Ecosystem status:

GOAL 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

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.

- **Milestone 36**
Clarification of the application of the Convention (and CMMs) to Vietnam
- **Milestone 37**
Vietnam becomes a WCPFC CM (Contracting Member)

Assigned stakeholders	WCPFC/MARD
Priority	High
Status	Developing existing activity
Timeframe	Q1 2014
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

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.

- to encourage offshore fishing activities with a sustainable and effective manner to conserve marine resources
- Fishing license should base scientific information on current resource status to issue number of fishing licenses.

- **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)

Assigned stakeholders	MARD/DECAFIREP/sub DECAFIREP/fishers
Priority	High
Status	Expansion of existing activities
Timeframe	Q1 2015-Q4 2016
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 Advisory Board through the NTMP process

A Tuna Fisheries Management Council (TFMC), created by the Government of Vietnam, under the management of VINATUNA, would serve 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 TFMC should include: MARD, relevant members of the Peoples Committee DECAFIREP, relevant sub DECAFIREP management and compliance officials, RIMF, fisher groups, industry representatives and WWF.

- **Milestone 40**

Tuna Fishery Management Council fully operational and all roles & responsibilities defined

Assigned stakeholders	VINATUNA and all stakeholders
Priority	High
Status	New activity
Timeframe	Q 4 2013
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

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) focusses 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.

- **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

Assigned stakeholders	VINATUNA and MARD
Priority	High
Status	Currently in process
Timeframe	1 year
MSC Performance Indicator(s)	3.1.3 Short and long term objectives

Outcome 3.3 - Positive incentives promoted

Activity 3.3.1 - Review negative and positive incentives against the background of stock status for yellowfin and bigeye, as well as the impact on bycatch

The MSC guidance requires that the management system provides for incentives that are consistent with achieving the outcomes consistent with MSC principles, and must ensure that perverse incentives – i.e. incentives that encourage fishermen to fish unsustainably, do not arise.

It has been reported that FAO are providing technical support to MARD in a review of fisheries subsidies. Processor stakeholders are also keen to educate fishers and promote market based (quality) incentives. These issues warrant further exploration in order ensure a movement away from unsustainable fishing practices.

- **Milestone 43**
Review the impact of positive (fish quality drivers) and negative incentives
- **Milestone 44**
Policy focus on positive incentives to promote sustainable fishing

Assigned stakeholders	MARD/FAO/PPC
Priority	High
Status	New development
Timeframe	Q4 2016
MSC Performance Indicator(s)	3.1.4 Incentives

Outcome 3.4 - Fishery specific management objectives applied

Activity 3.4.1 - The handline fishery is included along with the other tuna fisheries contained within the management plan

A tuna management plan is in draft, and this 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 does not refer to handline fisheries, and should be incorporated.

- **Milestone 45**
Definitions to include handline fisheries and all target species
- **Milestone 46**
Management Plan finalised, complies with MSC principles and contains a consultation process and includes a monitoring & performance component
- **Milestone 47**
Evidence that the management plan is being applied and its effectiveness is assessed by a process of regular internal and external reviews

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

Outcome 3.5 - Decision making process strengthened

Activity 3.5.1 - Clarify decision making structure which is defined with the NTMP

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.

- **Milestone 48**
Introduce clear guidelines for taking management decisions, probably as a component of the management plan;
- **Milestone 49**
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.

Assigned stakeholders	MARD/DECAFIREP
Priority	High
Status	New development
Timeframe	Q2 2014-Q4 2016
MSC Performance Indicator(s)	3.2.2 Decision making

Outcome 3.6 - Effective application of compliance systems

Activity 3.5.1 - Strengthen the compliance monitoring system

Enforcement systems in Vietnam are gradually being improved following an emphasis on improved enforcement requirements to satisfy the EU IUU regulation. These include a strengthening of the sanction system. 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.

- **Milestone 50**
Risk assessment of enforcement actions following the introduction of P1 and P2 associated management measures
- **Milestone 51**
Review of sanctions for non-compliance
- **Milestone 52**
Effective evidence of systematic compliance and an effective system of sanctions

Assigned stakeholders	Department of Fishery surveillance/DECAFIREP/Sub DECAFIREP
Priority	High
Status	Improvement from current developments
Timeframe	Q1 2016-Q4 2017
MSC Performance Indicator(s)	3.2.3 Compliance and enforcement

Outcome 3.7 - Research plan is in place

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

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;

- 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 modelling;
- 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).

- **Milestone 53**
A research plan prepared publically available

- **Milestone 54**
Research results are disseminated to all interested parties

Assigned stakeholders	DECAFIREP / RIMF and NIO
Priority	Intermediate
Status	New action
Timeframe	Q1 2015-Q4 2016
MSC Performance Indicator(s)	3.2.5 Research Plan