



**OPAGAC**

**Fishery Improvement Project Work Plan**

**September 2016**

**FINAL**



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## 1 Introduction

This document presents a final draft work plan for the global tuna Fishery Improvement Project (FIP) by OPAGAC. This document incorporates initial comments by WWF and OPAGAC on the draft, as well as the outcome of the meeting of the FIP Advisory Group, held in Rome, 10 July 2016. A list of the members of the FIP and Advisory Group who attended the meeting is provided in Appendix 1. Note that participation in the Advisory Group and attendance at this meeting do not imply agreement with the content of this Work Plan.

The document is structured as follows: the main report provides brief background into the current situation in each RFMO and the outcome of the pre-assessment and scoping phases (updated to July 2016). It then sets out the initial actions proposed for the FIP in five detailed work plans setting out the FIP activities; one for each ocean for Principle 1 and Principle 3 and one combined for Principle 2. These detailed work plans are based on the conclusions of the Advisory Group meeting. The work plans for Principles 1 and 3 (Work Plans 1-4) cover only Year 1 of the five-year project, since the detailed FIP actions for Years 2-5 are clearly subject to progress within each RFMOs (whether due to this FIP or not) and hence subject to change, noting the details are to be modified within the agreed timeframe of the Improved Performance Goal to which they relate (see Appendix 2). The work plan for Principle 2 (Work Plan 5) covers all five years since it is less subject to RFMO progress and more within the power of OPAGAC to deliver itself.

It was agreed that the Advisory Group will meet again at the end of Year 1 to review progress and consider the best future course, at which it is proposed that the FIP prepare detailed work plans for Year 2 along the lines of those presented here from Year 1 – and so forth as the project progresses. Following WWF requirements, however, a preliminary work plan has been prepared for Year 2-5 for Principles 1 and 3 (Work Plan 6).

Appendix 2 of this report provides the milestones, responsible parties and timelines for the full five years of the FIP; as agreed in the FIP Scoping Document for the high-priority Performance Indicators (PIs, those scoring <60) but with medium priority PIs (those scoring 60-79) also added. An MSC benchmarking spreadsheet has also been prepared for each UoC.

Note that this report should be read alongside the other FIP documents – the pre-assessment (MRAG 2014), a review/update of Principle 2 of the pre-assessment (Gascoigne 2015), a review of the draft scoping document (Gascoigne 2016) and the final FIP scoping document (WWF 2016).

## 2 Background on the FIP and work plan

### 2.1 Unit of certification – species, geographic location and gears covered by the FIP

The Marine Stewardship Council (MSC) defines the unit of certification (UoC) as *the target stock(s) combined with the fishing method/gear and practice (including vessel type/s) pursuing that stock, and any fleets, or groups of vessels, or individual fishing operators that are covered by an MSC fishery certificate* (MSC-MSCI Vocabulary, 2014).

The FIP encompasses all global tropical tuna stocks of three species: bigeye (*Thunnus obesus*), skipjack (*Katsuwonus pelamis*) and yellowfin (*Thunnus albacares*). Units of certification are given in Table 1.

Table 1. Units of certification

Species	Bigeye tuna (BET)	Skipjack tuna (SKJ)	Yellowfin tuna (YFT)
<b>Geographic Location (Regional Fisheries Management Organisation)</b>	Atlantic Ocean (International Commission for the Conservation of Atlantic Tunas; ICCAT) Indian Ocean (Indian Ocean Tuna Commission; IOTC) Eastern Pacific Ocean (Inter-American Tropical Tuna Commission; IATTC) Western and Central Pacific Ocean (Western and Central Pacific Fisheries Commission; WCPFC)		
<b>Gear &amp; Method</b>	Purse seine: Free school, Fish Aggregating Devices (FADs), natural log and others		
<b>Units of Certification (UoCs)</b>	13		

## 2.2 Considerations for Improved Performance Goal (IPG) development

The basis for the development of the FIP work plan is a preliminary scoring of the fishery under the MSC standard. The scoring information is used to identify where OPAGAC fisheries will need to demonstrate improved performance in order to meet that MSC Fisheries Standard. Observed deficiencies were used to formulate a set of specific milestones individually for each MSC PI scoring below 80 (given in Appendix 2). These are labelled by WWF as ‘improved performance goals’ (IPGs). An IPG relating to a PI scoring <60 is rated ‘high priority’ and an IPG relating to a PI scoring 60-79 is rated ‘medium priority’ or in some cases ‘low-priority’ (see below). High-priority IPGs were agreed between WWF and OPAGAC prior to drafting this work plan, but medium- and low-priority IPGs have been added.

In the case of this fishery, the initial scoring was complex, because various different sets of scores are given in different documents or sources:

- The initial pre-assessment (MRAG 2014) provides a relatively detailed scoring of the fishery for all three Principles under MSC standard version 1.3.
- Principle 2 of the pre-assessment was reviewed and updated to version 2.0 in Gascoigne (2015).
- Some elements of the pre-assessment (mainly Principle 1) are now somewhat out of date in the Scoping Document (WWF 2016), so where necessary, updated information has been provided in this document (below) and scoring has been updated for some PIs (where the scoring is summarised below this updating is indicated).
- Various WWF and other sources (e.g. WWF comments on ongoing and completed MSC assessment, the adjudication on the Echebastar objection) indicate that some scores should be different to those given in the pre-assessment, as well as those that have been harmonised by MSC Conformity Assessment Bodies (CABs) as part of completed or ongoing MSC assessments and those suggested by MSC interpretation on the scoring of the PI on harvest control rules (circulated to CABs 16 December 2015) (these are also indicated in the scoring summary below). In the case where there is conflict between different interpretations, by agreement with WWF and OPAGAC, the interpretation favoured by WWF has been used to define the score. PIs scoring <60 based on this scoring system are always high-priority, but

those where the WWF score is 60-79 while other interpretations suggest a score of 80 or above have been ranked as low rather than medium priority.

WWF initially proposed developing an IPG for each deficient PI. However, where practical, it has been agreed that closely-related issues should be combined into a single IPG. For example, there is one IPG per stock that requires improvement for PI 1.1.1 (stock status) and PI 1.1.2 (rebuilding). IPGs were also aggregated across stocks if they applied equally to all stocks in a given ocean (e.g. developing a harvest strategy for all stocks under a given RFMO). Under Principle 2, PIs were aggregated where the same species falls under a different PI in different oceans (e.g. some sharks are protected in some oceans but not others – hence would fall under 2.3.1-3 where they are protected, but otherwise 2.2.1-3). Otherwise, the approach to writing IPGs follows WWF guidelines on action plans for Fisheries Improvement Projects (WWF 2013).

### **2.3 Considerations for work plan development**

The work plans have been developed based on the milestones set out in the IPGs, but focus on the concrete actions to be taken by the FIP rather than the measure of overall progress in the management of each fishery. There is therefore necessarily some disconnect between the IPGs in Appendix 2 and the work plans set out below, since it is not within the power of OPAGAC alone to deliver improved management (this is always a feature of a FIP). Nevertheless, the work plans cross-reference to each IPG, to ensure that the FIP is taking action to address each individual IPG. (The exception to this is the low-priority IPGs, where no concrete actions have been defined for the meantime, although the FIP may choose to do so at a later date.)

The detailed Year 1 work plans are based largely on the outcome of the Advisory Group meeting. The more general work plan for Years 2-5 assumes that the project will continue in the same vein, but as noted above it is subject to review and revision after Year 1.

It has been agreed that Year 1 will start when this work plan is finalised (i.e. autumn 2016).

## **3 Current status of fisheries**

This section provides a brief summary of the situation in each ocean as of July 2016: status of each stock, progress towards a harvest strategy framework, MSC-certified fisheries and their conditions. It then provides a summary of the conclusions of the various pre-assessment reports for this fishery in table form.

### **3.1 Atlantic (ICCAT)**

The most recent stock assessments for ICCAT stocks are summarised in Table 2. Note that for bigeye, the assessment post-dates the pre-assessment (MRAG 2014), and the estimate of stock status has deteriorated since the pre-assessment – it is now considered that the stock is overfished and overfishing is occurring (2015 stock assessment). This is taken into account in the FIP work plan.

Table 2. Summary of stock status in relation to reference points for ICCAT tropical tuna stocks, according to the most recent assessments (see MRAG 2014, except for bigeye – ICCAT 2015). Colour-coding: green = stock on right side of reference point; yellow = stock on wrong side of reference point; white = stock has ~equal probability of above or below reference point. (Note: Don't confuse this colour-coding with MSC scoring.) Probability of conclusion in relation to confidence intervals given where possible (confidence intervals not given for skipjack). Note: B refers to spawning biomass.

ICCAT stock	Limit ref. point	Target ref. points	Date of most recent assessment	Conclusion of assessment relative to ref. point:	
				$F_{MSY}$	$B_{MSY}$
Skipjack E.	none	$F_{MSY}$ , $B_{MSY}$	2014		
Skipjack W.	none	$F_{MSY}$ , $B_{MSY}$	2014		
Yellowfin	none	$F_{MSY}$ , $B_{MSY}$	2011	$p < 0.9$	$p < 0.9$
Bigeye	none	$F_{MSY}$ , $B_{MSY}$	2015	$p < 0.9$	$p < 0.9$

In Recommendations 14-01 and 15-01, ICCAT established a multi-annual management plan for tropical tunas, updating catch limits on bigeye and yellowfin put in place originally in 2010 (Rec. 10-01). In Rec. 15-07 ICCAT has set a framework for developing a harvest strategy for each stock, which includes the elements required by MSC (i.e. suitable objectives or targets and limits, harvest control rules and management strategy evaluation). Both of these Recommendations post-date the pre-assessment, but are taken into account here.

There are currently no Atlantic fisheries for these species which are MSC certified or in assessment.

### 3.2 Indian Ocean (IOTC)

The most recent stock assessments for IOTC stocks are summarised in Table 3. For skipjack and yellowfin, the assessments post-date the pre-assessment (MRAG 2014), and the estimate of stock status for yellowfin has deteriorated since the pre-assessment – it is now considered that the stock is overfished and overfishing is occurring (2015 stock assessment). This is taken into account in the FIP work plan.

Table 3. Summary of stock status in relation to interim reference points for IOTC tropical tuna stocks, according to the most recent assessments (MRAG 2014 for bigeye; the others are available here: <http://www.iotc.org/science/status-summary-species-tuna-and-tuna-species-under-iotc-mandate-well-other-species-impacted-iotc>). Colour-coding: green = stock on right side of reference point; yellow = stock on wrong side of reference point; white = stock has ~equal probability of above or below reference point. (Note: Don't confuse this colour-coding with MSC scoring.) Probability of conclusion in relation to confidence intervals given where possible (confidence intervals not given for bigeye). Note: B refers to spawning biomass.

IOTC stock	Limit ref. points	Target ref. points	Date of most recent assessment	Conclusion of assessment relative to ref. point:				
				$F_{lim}$	$B_{lim} (MSY)$	$B_{lim} (B_0)$	$F_{MSY}$	$B_{MSY}$
Skipjack	$0.4B_{MSY}$ , $1.5F_{MSY}$ or $0.2B_0$ , $F_{0.2B0}$	$F_{MSY}$ , $B_{MSY}$	2014		$p > 0.95$	$p > 0.95$		$p > 0.9$
Yellowfin	$0.4B_{MSY}$ , $1.4F_{MSY}$ or $0.2B_0$ , $F_{0.2B0}$	$F_{MSY}$ , $B_{MSY}$	2015	$p < 0.9$	$p > 0.9$	$p > 0.9$	$p > 0.9$	$p > 0.9$
Bigeye	$0.5B_{MSY}$ , $1.3F_{MSY}$ or $0.2B_0$ , $F_{0.2B0}$	$F_{MSY}$ , $B_{MSY}$	2013					

IOTC's Conservation and Management Measure (CMM) 15-10 (replacing 13-10) sets interim target and limit reference points and a 'decision framework' which sets management objectives (based on the interim reference points) and requires the Scientific Committee to propose harvest control rules for evaluation by the Commission. CMM 15-11 (replacing 13-11) requires Contracting Parties and Cooperating Non-Contracting Parties (CPCs) to limit capacity, including fish aggregating devices (FADs). The 2013 versions of these are taken into account in the pre-assessment, and the updated versions are not greatly different. In 2016, IOTC adopted an interim rebuilding plan for the yellowfin stock (CMM 16-01), recognising that this measure does not meet the Scientific Committee's advice on the catch reduction required to rebuild the stock. IOTC also adopted a formal interim harvest control rule for skipjack (CMM 16-02). These have been included in the FIP work plan.

The only Indian Ocean tuna fishery which has received MSC certification is the Maldives pole and line fishery – Maldives skipjack remains certified following the most recent surveillance audit (April 2016) but their yellowfin fisheries certification is suspended. The Echebstar fishery (for all three species) was not certified, following an objections process relating to PI 1.2.2 (harvest control rules); they are now reportedly also entering a FIP.

### 3.3 Eastern Pacific (IATTC)

The most recent stock assessments for IATTC stocks are summarised in Table 4. For skipjack and yellowfin, the assessment post-dates the pre-assessment (MRAG 2014), and the estimate of stock status for yellowfin has deteriorated since the pre-assessment – it is now considered that the stock is overfished (2015 stock assessment); fishing mortality is approximately at the MSY level. This is taken into account in the FIP work plan. For skipjack, MSY-based reference points cannot be estimated, but a variety of indirect indicators suggest that the stock is in good shape.

Table 4. Summary of stock status in relation to interim reference points for IATTC tropical tuna stocks, according to the most recent assessments (Maunder 2016, Minte-Vera et al. 2016, Aires-da-Silva et al. 2016). Colour-coding: green = stock on right side of reference point; yellow = stock on wrong side of reference point; white = stock has ~equal probability of above or below reference point. (Note: Don't confuse this colour-coding with MSC scoring.) Probability of conclusion in relation to confidence intervals given where possible. Note B refers to spawning biomass which IATTC stock assessments refer to as S, but is called B here for consistency with the other RFMOs.

IATTC stock	Limit ref. point	Target ref. point	Date of most recent assessment	Conclusion of assessment relative to ref. point:			
				F <sub>lim</sub>	B <sub>lim</sub>	F <sub>MSY</sub>	B <sub>MSY</sub>
Skipjack	B <sub>0.5R0</sub> , F <sub>0.5R0</sub>	F <sub>MSY</sub> , B <sub>MSY</sub>	2012				
Yellowfin	B <sub>0.5R0</sub> , F <sub>0.5R0</sub> = 0.28B <sub>MSY</sub> , 2.42F <sub>MSY</sub>	F <sub>MSY</sub> , B <sub>MSY</sub>	2016	p>0.95	p>0.95	close to F <sub>MSY</sub>	close to B <sub>MSY</sub>
Bigeye	B <sub>0.5R0</sub> , F <sub>0.5R0</sub> = 0.38B <sub>MSY</sub> , 1.6F <sub>MSY</sub>	F <sub>MSY</sub> , B <sub>MSY</sub>	2016	p>0.95	p>0.95	close to F <sub>MSY</sub>	close to B <sub>MSY</sub>

Since the pre-assessment (MRAG 2014), IATTC has agreed interim reference points for the tropical tuna stocks and an interim Harvest Control Rule (HCR) (that aims to keep F at or below F<sub>MSY</sub>) (IATTC-87 Minutes, July 2014; IATTC Res. C-16-02; paper SAC-07-07g; Maunder and Deriso 2016). There have also been some measures in place to limit capacity since 2002 (Res. C-02-03). Since 2004, IATTC has established a series of effort-limitation measures, including various area and seasonal closures for the purse seine fleet (Res. C-02-04, C-04-09, C-13-01).

There are no MSC-certified Eastern Pacific tuna fisheries at present. The NE tropical Pacific fishery (Mexico) for yellowfin and skipjack (purse seine dolphin-associated and free school) is in assessment (PCDR published February 2016; SCS 2016) and the CAB proposes certification with no conditions on Principle 1, based largely on Maunder and Deriso 2016 (SAC-07-07g), although this is not final – the CAB is responding to comments at time of writing; the Final Report was due to be published in August 2016 according to the timeline on the MSC website but at time of writing (September 2016) nothing was available. Three purse seine companies in Ecuador are running a FIP, and it has been foreseen that this project will work closely with them in the eastern Pacific.

### 3.4 Western Pacific (WCPFC)

The most recent stock assessments for WCPFC stocks are summarised in Table 5. These post-date the pre-assessment (MRAG 2014), but the conclusions of the assessments have not changed significantly.

Table 5. Summary of stock status in relation to reference points for WCPFC tropical tuna stocks, according to the most recent assessments (Davies et al. 2014, Harley et al. 2014, Rice et al. 2014). Colour-coding: green = stock on right side of reference point; yellow = stock on wrong side of reference point; white = stock has ~equal probability of above or below reference point. (Note: Don't confuse this colour-coding with MSC scoring.) Probability of conclusion in relation to confidence intervals given where possible. Note B refers to spawning biomass.

WCPFC stock	Limit ref. point	Target ref. point	Date of most recent assessment	Conclusion of assessment relative to ref. point:		
				LRP	TRP	B <sub>MSY</sub>
Skipjack	20%B <sub>F=0</sub>	50%B <sub>F=0</sub>	2014	p>0.95	p<0.95	p>0.95
Yellowfin	20%B <sub>F=0</sub>	F <sub>MSY</sub>	2014	p>0.95	p<0.95	p~0.95
Bigeye	20%B <sub>F=0</sub>	F <sub>MSY</sub>	2014	p~0.5	p>0.95	p<0.95

In CMM 2014-06 WCPFC have set a framework for developing a harvest strategy for each stock, which includes the elements required by MSC (i.e. suitable objectives or targets and limits, harvest control rules and management strategy evaluation). WCPFC has also agreed a work plan for CMM 2014-06 for each of the main target species. Note that this CMM and work plan post-date the pre-assessment of this fishery (MRAG 2014), but have been included here. The agreement of a target reference point for skipjack (CMM 2015-06) was included in the work plan for 2015 and an interim target was adopted as scheduled. WCPFC has also had various measures in place for limiting capacity since 2013 (CMMs 2013-01, 2014-01 and 2015-01).

For skipjack, there are three certified fisheries (PNA and Tri Marine purse seine free-school; Solomon Islands purse seine anchored FAD and unassociated, and pole and line free-school) and one fishery in assessment (Japan pole and line). At the recent MSC pilot harmonisation meeting for Principle 1 assessment of WCPFC stocks, it was agreed among the CABs that all retain conditions on 1.2.1 and 1.2.2, with PNA allowed to roll these conditions over into re-assessment following MSC guidance, and that the condition milestones would be aligned with the CMM 2014-06 work plan.

For yellowfin, there are four certified fisheries (PNA and Tri Marine purse seine free-school and Walker Seafoods Australia longline; Solomon Islands purse seine anchored FAD and unassociated, and pole and line free-school) and one in assessment (Cook Islands longline). The pilot harmonisation meeting came to the same conclusion for yellowfin as for skipjack, i.e. that certification should be subject to ongoing conditions on 1.2.1 and 1.2.2.



There are no MSC certifications with WCPFC bigeye as the target species. None of the certified fisheries have conditions on bigeye under Principle 2.

### **3.5 Summary outcome of pre-assessments for OPAGAC fisheries in each oceans**

The summary outcome of the pre-assessments for this fishery (MRAG 2014; Gascoigne 2015) are given below (Tables 6, 7 & 8). Note that the outcome for Principle 1 has been updated based on the assessment above of progress since the pre-assessment by the various RFMOs. Principle 2 and Principle 3 have not been updated (although Principle 2 is more recent). The FIP IPGs have been developed based on these outcomes. As noted above, where the scoring of PIs is subject to different interpretations, the WWF interpretation has been used here.



Performance Indicator		Scoring issue	ICCAT				IOTC			IATTC			WCPFC		
			SKJ - E	SKJ - W	YFT	BET	SKJ	YFT	BET	SKJ	YFT	BET	SKJ	YFT	BET
1.1.1	Stock status	a. Stock status relative to PRI													
		b. Stock status relative to MSY													
1.1.2	Stock rebuilding	a. Rebuilding timeframes	n/a	n/a			n/a		n/a	n/a			n/a	n/a	
		b. Rebuilding evaluation	n/a	n/a			n/a		n/a	n/a			n/a	n/a	
1.2.1	Harvest strategy	a. Harvest strategy design													
		b. Harvest strategy evaluation													
		c. Harvest strategy monitoring													
		d. Harvest strategy review													
1.2.2	Harvest control rules and tools	a. HCR design and application													
		b. HCR robustness to uncertainty													
		c. HCR evaluation													
1.2.3	Information / monitoring	a. Range of information													
		b. Monitoring													
		c. Comprehensiveness													
1.2.4	Assessment of stock status	a. Appropriate for stock													
		b. Assessment approach													
		c. Uncertainty													
		d. Evaluation													
		e. Peer review													
High priority															
Medium priority															
Low priority															
n/a – not applicable															

Table 7. Outcome of pre-assessment for Principle 2 (P2) for each ocean (MRAG 2014 as revised in Gascoigne 2015), with some explanatory comments – further details are given below.

Component	PI		Scoring issue	ICCAT	IOTC	IATTC	WCPFC
Primary species	2.1.1	Outcome	a. Main primary spp	Assuming P1 IPGs in place for all stocks			
			b. Minor primary spp				
	2.1.2	Management	a. Strategy in place	Assuming P1 IPGs in place for all stocks			
			b. Evaluation				
			c. Implementation				
			d. Shark finning				
			e. Alternative measures				
	2.1.3	Information	a. Info for main spp	Assuming P1 IPGs in place for all stocks			
			b. Info for minor spp				
			c. Info for management				
Secondary species	2.2.1	Outcome	a. Main primary spp	Issues with various species (see below)			
			b. Minor primary spp				
	2.2.2	Management	a. Strategy in place				
			b. Evaluation				
			c. Implementation	Issues with various species			
			d. Shark finning				
			e. Alternative measures	Evaluation of code of practice			
	2.2.3	Information	a. Info for main spp		Silky shark entanglement		
			b. Info for minor spp				
			c. Info for management				
ETP species	2.3.1	Outcome	a. National / International limits				
			b. Direct effects	Issues with various species			
			c. Indirect effects	FAD entanglement			
	2.3.2	Management	a/b. Strategy in place	FAD entanglement, cetaceans			
			c. Evaluation	FAD entanglement, code of practice evaluation			
			d. Implementation	Code of practice			



			e. Alternative measures	Evaluation of code of practice			
	2.3.3	Information	a. For assessing impacts	Evaluation of observer data, FAD entanglement			
			b. For management		Code evaluated at ICCAT only; evaluation at IOTC underway		
Habitats	2.4.1	Outcome	all	No habitat impacts			
	2.4.2	Management	all				
	2.4.3	Information	all				
Ecosystem	2.5.1	Outcome	a. Status	Ecosystem impact of FADs			
	2.5.2	Management	a. Strategy in place	FAD management plans / closures			
			b. Evaluation	Impact of FAD management unclear			
			c. Implementation	Implementation of FAD management unclear			
	2.5.3	Information	a. Information quality	Ecosystem impact of FADs			
			b. Fishery impacts				
			c. Component functions				
			d. Information relevance				
			e. Monitoring				
High priority							
Medium priority							
Low priority							

Table 8. Outcome of pre-assessment (MRAG 2014) for each RFMO for Principle 3 (P3), as updated following the above evaluation of progress since the pre-assessment by each RFMO. Key: \* = Pls with IPGs designated as low-priority rather than medium-priority (see Section 2.2 above).

Performance Indicator		Scoring issue	ICCAT	IOTC	IATTC	WCPFC
3.1.1	Legal framework	a. Laws for effective management				
		b. Dispute resolution				
		c. Respect for rights				
3.1.2	Consultation, roles and responsibilities	a. Roles and responsibilities				
		b. Consultation				
		c. Participation				
3.1.3	Long-term objectives	a. Objectives				
3.2.1	Fishery-specific objectives	a. Objectives			*	
3.2.2	Decision-making processes	a. Processes				
		b. Responsiveness	*	*	*	*
		c. Precautionary approach		*		
		d. Accountability and transparency				*
		e. Approach to disputes				
3.2.3	Compliance and enforcement	a. MCS implementation				
		b. Sanctions				*
		c. Compliance		*		*
		d. Systematic non-compliance				
3.2.4	Management evaluation	a. Evaluation coverage				
		b. Review				
High priority						
Medium priority						
Low priority						

## 4 FIP Year 1 work plans

### 4.1 Year 1 work plan for the Atlantic Ocean (ICCAT) – Principle 1 and Principle 3

#### *Issues to be addressed*

For ICCAT stocks, for Principle 1 there are four high priority IPGs (1.2.1 and 1.2.2 for all four stocks, 1.1.1 + 1.1.2 for yellowfin and bigeye) and two medium priority IPGs (1.2.3 for E. and W. skipjack) (see Table 6). For ICCAT stocks for Principle 3 there are four medium-priority IPGs (3.1.1, 3.1.2, 3.1.3 and 3.2.3) and one low-priority (3.2.2) (see Table 8).

The key issues for ICCAT stocks (Principles 1 and 3) are summarised in Table 9, based on Tables 6 and 8 above.

Table 9. Summary of key issues for ICCAT stocks for Principle 1 and Principle 3

PI	Bigeye	Yellowfin	Skipjack (E)	Skipjack (W)
1.1.1	B<B <sub>MSY</sub> , F>F <sub>MSY</sub> ; catch limit (Rec. 15-01) not likely to rebuild stock	B<B <sub>MSY</sub> ; catch limit (Rec. 15-01) should rebuild stock but timeframe unclear		
1.1.2				
1.2.1	Lack of well-defined harvest control rule which can act to adjust fishing mortality in response to changes in stock status; also lack of agreed limit reference points (Recs. 15-01 and 15-07 are a start)			
1.2.2				
1.2.3			Insufficient information to support the harvest strategy; no good proxy measure of biomass	
1.2.4				
3.1.1	ICCAT dispute resolution framework does not meet requirements of best practice (e.g. in applying arbitration or conciliation procedures) and can inhibit the full application of conservation measures			
3.1.2	Roles and responsibilities not clearly understood by some members – may lead to failures in the application of necessary controls or submission of data			
3.1.3	ICCAT long-term objectives are not explicitly consistent with the precautionary approach and an ecosystem approach to management			
3.2.1				
3.2.2	Responsiveness and precautionary approach in decision-making			
3.2.3	Sanctions may not be an effective deterrent to non-compliance, taking the example of the bluefin tuna fishery			
3.2.4				



*WORKPLAN 1: Year 1 work plan for the Atlantic Ocean (ICCAT) – Principle 1 and Principle 3*

Note: This work plan ends at the ICCAT plenary in November 2017; i.e. it overruns the end of Year 1 by a small amount.

Activity (more details given in individual IPGs, Appendix 2)		Working group	Ending date
<b>A. Harvest strategy and control rules, stock rebuilding MSC PIs: 1.2.1, 1.2.2 (all stocks); 1.1.1 and 1.1.2 (yellowfin and bigeye); IPGs 1-4; high priority</b>			
A1	Ensure as far as possible that the SCRS provides advice to the Commission as required by 15-07	OPAGAC to work on the SCRS with scientists from the EU and from countries where OPAGAC member-companies have operations/vessels under flag	SCRS meeting 3 Oct. 2016, or by 2017 (Year 1)
A2	Start building a coalition to support and lobby for an improved harvest strategy and harvest control rules for ICCAT stocks – form informal ‘ICCAT harvest strategy group’ to progress development.	OPAGAC to approach: coastal states with which it has a relationship; other fisheries in FIP or under MSC assessment (if any); EU; countries where OPAGAC member-companies have operations/vessels under flag; WWF	ICCAT 2016 plenary meeting 14 Nov. 2016 (but also ongoing) (Year 1 ongoing)
A3	Evaluate examples for the development of a harvest strategy and control rules for ICCAT tropical tuna stocks: e.g. existing ICCAT progress for North Atlantic albacore, IOTC skipjack process, WCPFC work plan for CMM 14-06.	Members of Advisory Group, ISSF or ‘ICCAT harvest strategy group’ may be approached for advice and support	End September 2016 (Year 1)
A4	Propose a draft work plan and timetable for the implementation of 15-07 for eastern skipjack to the Advisory Group and the ‘harvest strategy group’ for review. Note: The work plan should be consistent with the milestones set out in Appendix 2, if possible.	OPAGAC / Advisory Group members / ‘harvest strategy group’ / ISSF	October 2016 (Year 1)
A5	Propose a work plan and timetable to the 2016 ICCAT plenary for the implementation of 15-07 for eastern skipjack	OPAGAC / EU	ICCAT 2016 plenary meeting 14 Nov. 2016 (Year 1)
A6	If eastern skipjack work plan and timetable agreed in plenary, develop draft strategy for implementation; if not, start work on revised version based on comments received in plenary and by other stakeholders	ICCAT harvest strategy group with other likeminded stakeholders	Starting in early 2017 (Year 1); ongoing

A7	Start discussions with ABNJ or other sources about budgetary support for implementation of proposed harvest strategy work plan for eastern skipjack and the other stocks	OPAGAC with support and advice from ABNJ participants (e.g. WWF, ISSF)	Year 1 and ongoing
A8	Start discussions with ABNJ about working with them on capacity building (regarding harvest strategy and control rules) in the inter-sessional period	OPAGAC with support from ABNJ participants (e.g. WWF, ISSF)	Year 1 and ongoing as required
A9	Request advice from SCRS on the limits required to rebuild yellowfin and bigeye within the MSC required timetable (see MSC FCRG version 2.0, PI 1.1.2) (depending on outcome of 2016 yellowfin stock assessment); or if not accepted request such advice from EU scientists (e.g. AZTI).	OPAGAC with EU, countries where OPAGAC member-companies have operations/vessels under flag, ISSF and other 'harvest strategy group' members	ICCAT 2016 plenary meeting 14 Nov. 2016 (Year 1)
A10	Inter-sessional meetings/discussions of the 'harvest strategy group' prior to 2017 plenary: i) develop lobbying strategy for implementation of eastern skipjack work plan if agreed in plenary; ii) develop work plans for the implementation of 14-06 for the other three stocks, plus revised eastern skipjack work plan if not approved in 2016; iii) develop lobbying strategy for next plenary to ensure approval of all the outstanding work plans. Note that work plans for bigeye and yellowfin should be based on advice from SCRS or elsewhere as to measures required for an appropriate rebuilding timeframe (see A9); also that the work plans need to take into account the timetable for data collection and stock assessment (e.g. in relation to the large-scale tagging programme which has just started).	OPAGAC / 'harvest strategy group' / WWF / ISSF	Ongoing from November 2016 (Year 1 ongoing)
A11	Work to enlarge 'harvest strategy group' prior to 2017 plenary, based on the outcome of capacity building with ABNJ, or other connections	OPAGAC / 'harvest strategy group' / ABNJ / ISSF	Year 1 ongoing
A12	Propose a draft work plan and timetable for the implementation of 15-07 for all outstanding stocks to 'harvest strategy group' for review. Note: The work plan should be consistent with the milestones set out in Appendix 2, if possible.	OPAGAC	end Year 1
A13	Propose a work plan and timetable to the 2016 ICCAT plenary for the implementation of 15-07 for eastern skipjack (if not previously accepted) and the other three stocks	OPAGAC / EU / 'harvest strategy group' / countries where OPAGAC	ICCAT 2017 plenary meeting (start Year 2)

		member-companies have operations/vessels under flag / ISSF	
A14	Lobby ICCAT plenary 2017 for implementation of eastern skipjack work plan, if agreed in 2016	OPAGAC / 'harvest strategy group' / ISSF	ICCAT 2017 plenary meeting (start Year 2)
A15	Present a paper on HCRs to SCRS and working groups as required	OPAGAC / 'harvest strategy group' / ISSF	Year 1
<b>B. Information MSC PI: 1.2.3; IPGs 5-6; skipjack E and W; medium priority</b>			
B1	Work with members of SCRS or the relevant Working Group to identify most significant data gaps for Eastern and Western Atlantic skipjack	OPAGAC / SCRS or Working Group	Year 1
B2	Evaluate data gaps which OPAGAC can help fill (e.g. by hosting scientific observers, taking samples, supporting a research project, logging data on board or other means). In particular, identify whether OPAGAC data can provide a suitable abundance indicator.	OPAGAC / SCRS or Working Group members	Year 1
B3	Prepare a work plan or research proposal based on the above analysis (data gaps and possible OPAGAC support)	OPAGAC / SCRS or Working Group members; Advisory Group members may provide advice	end Year 1 (late 2017)
<b>C. Management system MSC PIs: 3.1.1, 3.1.2, 3.1.3, 3.2.3; IPGs 7-11; all stocks; medium priority</b>			
C1	Request the EU and/or other relevant stakeholders to develop a strategy for improving the ICCAT management framework	EU / countries where OPAGAC member-companies have operations/vessels under flag / other relevant stakeholders	Year 1 and ongoing
C2	Request the EU and/or other relevant stakeholders to continue inter-sessional discussions on implementing the strategy between like-minded ICCAT members and organizations and formally at each ICCAT meeting: including dispute resolution, roles and responsibilities, long-term objectives and sanctions	EU / countries where OPAGAC member-companies have operations/vessels under flag / other relevant stakeholders	Year 1 and ongoing
C3	Request the EU and/or other relevant stakeholders to propose a paper to the ICCAT Secretariat giving options for best practice in dispute resolution, including examples from other RFMOs if relevant	EU / countries where OPAGAC member-companies have operations/vessels under flag / other stakeholders	Prior to ICCAT plenary 2017 (end Year 1)



## 4.2 Year 1 work plan for the Indian Ocean (IOTC) – Principle 1 and Principle 3

### *Issues to be addressed*

For IOTC stocks, for Principle 1 there are three high-priority IPGs (1.2.1 and 1.2.2 for all three stocks; 1.1.1 + 1.1.2 for yellowfin) and one low-priority IPG (1.2.3 all stocks) (see Table 6). For IOTC stocks for Principle 3 there are three medium-priority IPGs (3.1.2, 3.1.3 and 3.2.3) and one low-priority IPG (3.2.3).

The key issues for IOTC stocks (Principles 1 and 3) are summarised in Table 10, based on Tables 6 and 8 above.

Table 10. Summary of key issues for IOTC stocks for Principle 1 and Principle 3

PI	Bigeye	Yellowfin	Skipjack
1.1.1		B<TRPs, rebuilding plan (CMM 16-01) insufficient	
1.1.2			
1.2.1	Lack of well-defined harvest control rule which can act to adjust fishing mortality in response to changes in stock status (CMM 15-10 provides a framework)		HCR in place (CMM 16-02); implementation not yet clear
1.2.2			
1.2.3	Comprehensiveness of information for some CPCs		
1.2.4			
3.1.1			
3.1.2	Roles and responsibilities not clearly understood by some members – may lead to failures in the application of necessary controls or submission of data		
3.1.3	IOTC long-term objectives are not explicitly consistent with the precautionary approach and an ecosystem approach to management		
3.2.1			
3.2.2	Responsiveness and precautionary approach in decision-making		
3.2.3	Compliance with catch reporting requirements and use of sanctions		
3.2.4			

**WORKPLAN 2: Year 1 work plan for the Indian Ocean (IOTC) – Principle 1 and Principle 3**

Note: IOTC already has an internal timetable to put in place a harvest strategy for each of the key stocks, as follows: MSE underway by CSIRO and results are due in March 2017 for discussion by the Technical Committee on Management Procedures Evaluation, with the ultimate objective of putting in place a harvest strategy with HCRs for all the stocks by 2018 (if they are adopted by plenary). Hence the approach set out for ICCAT of proposing a work plan and timetable is not required here. Instead, the Advisory Group concluded that the most effective way that OPAGAC could act within IOTC to help push this process forward would be to build engagement by the EU in this process.

Activity		Working group	Ending date
<b>A. Harvest strategy and control rules, stock rebuilding MSC Pls: 1.2.1, 1.2.2 (yellowfin and bigeye); 1.1.1 and 1.1.2 (yellowfin); IPGs 12-14; high priority</b>			
A1	Evaluate outcome of Management Procedures Dialogue meeting (MPD03; May 2016)	OPAGAC	Early Year 1
A2	Engage with EU scientists and delegation to ensure as far as possible that the Scientific Committee provides advice to the Commission as required by 15-10	OPAGAC / scientists from EU and from countries where OPAGAC member-companies have operations/vessels under flag	SC meeting 1-5 Dec. 2016
A3	Schedule regular meetings with relevant EU stakeholders (delegation members) (e.g. 3-4 times per year), with the following purpose: <ul style="list-style-type: none"> <li>continuing to emphasise the importance of the harvest strategy process and yellowfin stock rebuilding to OPAGAC and other EU fisheries in the Indian Ocean</li> <li>proposing practical ways that the EU could support the process; e.g. via liaison to support capacity-building with coastal states, or other activities</li> <li>reporting regularly to the EU so that the delegation is kept informed of current ideas and proposals at IOTC and within coastal states where OPAGAC has links</li> </ul>	OPAGAC with members of EU delegation to IOTC	Year 1 and ongoing
A4	Prior to IOTC plenary 2017 produce a formal briefing document regarding the status of the harvest strategy / stock rebuilding for each stock, the objective of IOTC, the position of key players and likely upcoming	OPAGAC with support from stakeholders in coastal states, countries where OPAGAC member-companies have	Prior to plenary May 2017 (Year 1)

	proposals, and the outcome preferred by the FIP, to brief the EU and other stakeholders	operations/vessels under flag Advisory Group members	
A5	Prepare a position paper to submit to plenary in support of making significant progress in developing a harvest strategy and control rules for yellowfin and bigeye, including rebuilding for the yellowfin stock, as well as tools for the implementation of the skipjack HCR already agreed. Work with the EU delegation to obtain their support for the paper, as well as that of other member states as far as possible.	OPAGAC with members of the EU delegation, countries where OPAGAC member-companies have operations/vessels under flag, and support from Advisory Group members and WWF as required	Prior to plenary May 2017 (Year 1)
A6	Promote through the EU a process of consultation to inform IOTC members about best practice for harvest strategy and stock rebuilding, in order to build consensus towards support of proposals of management measures prior to IOTC Sessions.	OPAGAC with support from WWF as required	Year 1 and ongoing
A7	Start discussions with ABNJ about working with them on capacity building (regarding harvest strategy and control rules) in the inter-sessional period, if this is considered to be required	OPAGAC with support from ABNJ participants (e.g. WWF)	Year 1 and ongoing as required
<b>B. Information and monitoring MSC Pl: 1.2.3; IPG 15; all stocks; low priority</b>			
B1	Engage with the SC and stock working groups to evaluate key data gaps.	OPAGAC / scientists from the EU and from countries where OPAGAC member-companies have operations/vessels under flag	Year 1 or Year 2
<b>C. Management system MSC Pls: 3.1.2, 3.1.3, 3.2.3; IPGs 16-18; all stocks; medium priority</b>			
C1	Request the EU and/or other relevant stakeholders to develop a strategy for improving the IOTC management framework	EU / countries where OPAGAC member-companies have operations/vessels under flag / other relevant stakeholders	2016 and ongoing (Year 1 and ongoing)
C2	Request the EU and/or other relevant stakeholders to propose a draft Recommendation or other suitable paper to the IOTC Secretariat which would incorporate the ecosystem approach to management explicitly in IOTC's long-term objectives	EU / countries where OPAGAC member-companies have operations/vessels under flag / other stakeholders	Before IOTC plenary 2017 (Year 1)



C3	Request the EU and/or other relevant stakeholders to present an information paper for IOTC members setting out clearly the roles and responsibilities of IOTC bodies (Secretariat, Standing Committees etc.) and members	EU / countries where OPAGAC member-companies have operations/vessels under flag / other stakeholders	2017 (Year 1)
C4	Request the EU and/or other relevant stakeholders to present an information paper to IOTC on the application of the precautionary approach in relation to IOTC decision-making	EU / countries where OPAGAC member-companies have operations/vessels under flag / other stakeholders	2017 (Year 1)
<b><i>D. Decision-making processes MSC PI: 3.2.2; IPG 19; all stocks; low priority</i></b>			
D1	Evaluate responsiveness of decision-making at IOTC and options for action		Year 1 or Year 2

### 4.3 Year 1 work plan for the Eastern Pacific Ocean (IATTC) – Principle 1 and Principle 3

#### *Issues to be addressed*

For IATTC stocks, for Principle 1 there are four high priority IPGs (1.2.1 and 1.2.2 for all three stocks; 1.1.1 + 1.1.2 for yellowfin and bigeye) (see Table 6). For IATTC stocks for Principle 3 there is one medium priority IPG (3.2.4) and two low-priority IPGs (3.2.1 and 3.2.2).

The key issues for IATTC stocks (Principles 1 and 3) are summarised in Table 11, based on Tables 6 and 8 above.

Table 11. Summary of key issues for IATTC stocks for Principle 1 and Principle 3

PI	Bigeye	Yellowfin	Skipjack
1.1.1	Unclear if 1.1.2 should be scored, but if so no clear rebuilding plan or timetable	B<B <sub>MSY</sub> , no clear rebuilding plan and timetable	
1.1.2			
1.2.1	Testing and implementation of harvest control rule which can act to adjust fishing mortality in response to changes in stock status (an informal framework is in place)		
1.2.2			
1.2.3			
1.2.4			
3.1.1			
3.1.2			
3.1.3			
3.2.1	Lack of fishery-specific objectives		
3.2.2	Are decision-making processes responsive?		
3.2.3			
3.2.4	IATTC has not had an external review of management performance		



**WORKPLAN 3: Year 1 work plan for the Eastern Pacific (IATTC) – Principle 1 and Principle 3**

Note: IATTC recently agreed interim reference points and harvest control rules for all stocks, and these are now under scientific evaluation. The Advisory Group concluded that the most effective action for Year 1 would be to ensure that this evaluation was prioritised. The first action to be taken by the FIP, however, will be to align scoring and activities with the Ecuador FIP, so this Year 1 work plan is subject to change according to the views and activities of the Ecuador FIP coordination team and participants.

Activity		Working group	Ending date
<b>A. Harvest strategy and control rules, stock rebuilding MSC Pls: 1.2.1, 1.2.2 (all stocks), 1.1.1 and 1.1.2 (yellowfin and bigeye); IPGs 20-23; high priority</b>			
A1	Evaluate outcome of Scientific Advisory Committee (SAC) meeting in relation to evaluation of ref. points and HCRs	OPAGAC / scientists from the EU and from countries where OPAGAC member-companies have operations/vessels under flag	SAC meeting 9 May 2016
A2	Evaluate outcome of IATTC plenary in relation to HCRs and ref. points	OPAGAC	IATTC 2016 20 June 2016
A3	Arrange a meeting with Ecuador FIP coordinator to align and coordinate Principle 1 scoring and (most importantly) activities with each other and to update them based on recent progress at IATTC and the outcome of the MSC assessment of the Mexican fishery. Review and update IPGs (Appendix 2) as required.	OPAGAC and Ecuador FIP coordinators, with support from WWF if required	by end 2016 (Year 1)
A4	Collaborate with the Ecuador FIP (and the Mexican fishery depending on the assessment outcome) to develop an informal 'IATTC harvest strategy group' to support and promote the continued development of a harvest strategy, harvest control rules and tools and stock rebuilding for yellowfin and bigeye (if required) within IATTC, by bring together scientists and IATTC delegates from as many members as possible	OPAGAC and Ecuador FIP, with support from Advisory Group members, ISSF and WWF as required	early 2017 (Year 1)
A5	Develop and agree informal 'terms of reference' for the 'harvest strategy group', based around ongoing contact (by letter, email, phone, personal meeting or other means) between group members and members of the Science Secretariat, IATTC Secretariat and other stakeholders (e.g. delegation members) to ensure that work on the evaluation of interim reference points and HCRs is prioritised.	OPAGAC and Ecuador FIPs, ISSF and 'harvest strategy group' members	2017, prior to SAC meeting in May (Year 1)

A6	Coordinate lobbying effort by 'harvest strategy group' members	OPAGAC and Ecuador FIP coordinators	Year 1 and ongoing
A7	Identify a suitable scientist(s) from an IATTC member country to attend the next SAC meeting, with a brief to support and encourage work on the harvest strategy; request an invitation for him/her/them	OPAGAC and Ecuador FIPs, ISSF and 'harvest strategy group' members	SAC meeting May 2017 (Year 1)
A8	Evaluate the outcome of the SAC meeting in terms of interim HCRs and reference point with the 'harvest strategy group', decide on next steps to incorporate into Year 2 work plan	OPAGAC and Ecuador FIPs, ISSF and 'harvest strategy group' members	end Year 1
A9	Start discussions with ABNJ and ISSF about working with them on capacity building (regarding harvest strategy and control rules) in the inter-sessional period	OPAGAC with support from Advisory Group members, ISSF and WWF as required	Year 1 and ongoing as required
<b>B. Management system – review MSC Pl: 3.2.4; IPG 24; all stocks; medium priority</b>			
B1	Request the EU and/or other relevant stakeholders to prepare a motion for IATTC plenary asking for an external review of their management performance; build a coalition to support the motion via the 'harvest strategy group', EU, Ecuador FIP or other stakeholders	'harvest strategy group' / EU / ISSF/ countries where OPAGAC member-companies have operations/vessels under flag	IATTC plenary 2017 (Year 1)
<b>C. Management system – other elements MSC Pls: 3.2.1, 3.2.2; IPGs 25-26; all stocks; low priority</b>			
C1	Evaluate fishery-specific objectives for IATTC with the Ecuador FIP; evaluate required activities based on outcome and progress with other P3 IPGs	OPAGAC and Ecuador FIP coordinators	Year 1-2

#### 4.4 Year 1 work plan for the Western and Central Pacific Ocean (WCPFC) – Principle 1 and Principle 3

##### *Issues to be addressed*

For WCPFC stocks, for Principle 1 there are three high-priority IPGs (1.2.1 and 1.2.2 for all three stocks; 1.1.1 + 1.1.2 for bigeye) (see Table 6) and one low-priority IPG (1.2.3 for yellowfin). For WCPFC stocks for Principle 3 there are two low-priority IPGs.

The key issues for WCPFC stocks (Principles 1 and 3) are summarised in Table 12, based on Tables 6 and 8 above.

Table 12. Summary of key issues for WCPFC stocks for Principle 1 and Principle 3

PI	Bigeye	Yellowfin	Skipjack
1.1.1	B<LRP, no clear rebuilding plan and timetable		
1.1.2			
1.2.1	Lack of well-defined harvest control rule which can act to adjust fishing mortality in response to changes in stock status (CMM 14-06 and associated work plan provide a framework and timetable for implementation); TRPs for yellowfin and bigeye are also interim / informal		
1.2.2			
1.2.3		Not all CPCs provide sufficient information	
1.2.4			
3.1.1			
3.1.2			
3.1.3			
3.2.1			
3.2.2	Responsiveness of decision-making processes; accountability and transparency		
3.2.3	Application of sanctions and compliance		
3.2.4			





**WORKPLAN 4: Year 1 work plan for the Western and Central Pacific (WCPFC) – Principle 1 and Principle 3**

Note: This work plan ends at the WCPFC plenary in December 2017; i.e. it overruns the end of Year 1 by a small amount.

Activity		Working group	Ending date
<b>A. Harvest strategy and control rules; stock rebuilding MSC Pls: 1.2.1, 1.2.2 (all stocks); 1.1.1, 1.1.2 (bigeye); IPGs 27-29; high priority</b>			
A1	Evaluate whether SC has provided the advice required in the 14-06 work plan for 2016 (skipjack: advice on a monitoring strategy and performance indicators; yellowfin: advice on acceptable levels of risk and management objectives; bigeye: determine a rebuilding timeframe)	OPAGAC	SC meeting 3 Aug. 2016 (Year 1)
A2	Approach other MSC-certified fisheries and fisheries in FIPs in the region (via the WCPFC MSC P1 alignment group or separately) to develop and/or support a lobbying strategy	OPAGAC	
A3	Hold discussions on harvest strategy with the EU delegation, like-minded WCPFC members and other stakeholders prior to WCPFC plenary to try and ensure that 14-06 work plan decisions are taken in 2016 (skipjack: record management objectives, agree acceptable levels of risk, agree monitoring strategy and performance indicators; yellowfin: record management objectives, agree acceptable levels of risk; bigeye: agree rebuilding timeframe to LRP, acceptable level of risk and management objectives)	OPAGAC / MSC-certified fisheries / other stakeholders	Starting at or before WCPFC plenary 2016; ongoing (Year 1)
A4	Evaluate outcome of 2016 plenary. If work plan targets not met, start work with the EU delegation and other stakeholders inter-sessionally to put forward proposal for the missing elements for Year 2.	OPAGAC / WCPFC MSC P1 group	WCPFC plenary 2017 (end Year 1)
A5	Start work with like-minded stakeholders on developing a draft work plan to continue from and complete the 14-06 work plan. Agree a plan for submitting the draft work plan to WCPFC.	OPAGAC / WCPFC MSC P1 group	WCPFC plenary 2017 (end Year 1)
A6	Work with scientists and the EU delegation to press for formal MSE to be part of the harvest strategy development; and specifically to request that members are able to ask the Scientific Committee to evaluate specific management options.	OPAGAC / EU delegation / scientists from the EU and from countries where OPAGAC member-companies have operations/vessels under flag	WCPFC plenary 2017 (end Year 1)



A7	Work with like-minded stakeholders to develop a rebuilding plan for bigeye, based on the most recent stock assessment and outcome of the 2016 and 2017 Scientific Committee meetings.	OPAGAC / WCPFC MSC P1 group / EU delegation / scientists from the EU and from countries where OPAGAC member-companies have operations/vessels under flag	WCPFC plenary 2017 (end Year 1)
<b>B. Information MSC PI: 1.2.3; IPG 30; all stocks; low priority</b>			
B1	Evaluate robustness of the information available for yellowfin stock assessment; evaluate required activities based on outcome and progress with other P1 IPGs		Years 1-2
<b>C. Management system MSC PIs: 3.2.2, 3.2.3; IPGs 31-32; all stocks; low priority</b>			
C1	Request the EU and/or other relevant stakeholders to evaluate responsiveness of decision-making at WCPFC over the last 5 years; evaluate required activities based on outcome and progress with other P3 IPGs		Years 1-2
C2	Request the EU and/or other relevant stakeholders to evaluate compliance and application of sanctions at WCPFC over the last 5 years; evaluate required activities based on outcome and progress with other P3 IPGs		Years 1-2

#### 4.5 Work plan for Principle 2

Note: Since Principle 2 issues are less complex and more in the power of OPAGAC to deliver, a detailed work plan has been developed for Principle 2 covering the whole duration of the FIP, rather than just Year 1 as for Principles 1 and 3 above. This work plan is still subject to annual review and revision by the Advisory Group and via external audit.

##### *Issues to be addressed*

The variability between the different oceans in relation to the outcome of the Principle 2 pre-assessment (Gascoigne 2015) arises mainly because different species are protected by each RFMO, resulting in different definitions of 'ETP species'; the species not protected were generally included in the pre-assessment under 'main secondary species', so the issues raised by the pre-assessment tend to be similar but result in low scores for different PIs. This makes it somewhat difficult to infer the key issues directly from

Table 7, as has been done for Principle 1 and Principle 3. The IPGs have been slightly re-arranged to group species together where the same actions are required, regardless whether the species has been classified as secondary or ETP in a given ocean.

Nevertheless, it is clear from

Table 7 that there is only one high priority IPG for Principle 2 – PI 2.3.1 for the Indian Ocean – which relates to possible (although unlikely) impacts on the Arabian Sea population of humpback whales and Indian Ocean pygmy blue whales, which are highly endangered.

The total number of medium priority IPGs is 12, applying to all oceans, as follows (Table 7 and Gascoigne 2015):

- 2.2.1 or 2.3.1: silky shark outcome – entangling FADs
- 2.2.2 or 2.3.2: silky shark management – entangling FADs
- 2.2.3 or 2.3.3: silky shark information – entangling FADs
- 2.2.1 or 2.3.1: whale shark outcome
- 2.2.2 or 2.3.2: whale shark management
- 2.2.3 or 2.3.3: whale shark information
- 2.3.1: turtle outcome
- 2.3.1: cetacean outcome
- 2.3.2: verification / improvement of code of good practice (cetaceans, entangling FADs)
- 2.5.1: ecosystem impacts of FADs outcome
- 2.5.2: ecosystem impact of FADs management
- 2.5.3: ecosystem impact of FADs information

In this section, these individual IPGs are grouped where they address the same issue. This has been done using the pre-assessment report to understand the logic behind individual scores for a given PI/species/ocean (full details are not given here – refer to Gascoigne 2015). This analysis results in 4 key issues (including both high and medium priority IPGs) as follows:

- The risk of negative interactions with pygmy blue whales and Arabian Sea humpback whales needs to be evaluated and if necessary minimised. (Note: these interactions are considered quite unlikely; the scoring is precautionary because data were lacking.)

- Better data are needed on interactions with sharks, turtles and cetaceans in all oceans; the results of the data need to be integrated into management where required, via the code of good practice (see also below).
- The code of good practice needs verification in oceans other than the Atlantic. The process in the Indian Ocean has been started; in the WCPFC area it is hampered by a lack of data (difficulty adding elements to the existing observer programme and difficulty in obtaining observer data; although WCPFC has reportedly committed to improving access). It needs to be improved as required to ensure that that impacts on a bycatch population are kept at acceptable levels. Specifically, the code requires two additions: best practice for dealing with entangling FADs, when encountered, and interactions with cetaceans needs to be included.
- The ecosystem impact of FADs needs to be evaluated and, if necessary, mitigated.

Note: There are some differences in scoring of P2 between different pre-assessments and FIPs (Seychelles, Ecuador). P2 scoring (as P1 and P3) will be reviewed and revised annually on the basis of new information (from this and the other FIPs) as well as progress against milestones.



*WORKPLAN 5: Work plan for Principle 2 (all oceans)*

Note: OPAGAC in collaboration with AZTI have ongoing and future planned work relating to Principle 2 issues: this work plan incorporates this planned work and its agreed timetable, as noted.

Activity		Working group	Ending date
<b>A. Arabian Sea humpback whales; pygmy blue whales MSC PI: 2.3.1; IPG25; IOTC; high priority</b>			
A1	Evaluate spatial overlap between fishery and cetacean populations	OPAGAC and AZTI	Year 1
A2	Support observer and skipper training (including cetacean species identification)	OPAGAC and AZTI with relevant authorities	ongoing programme 2016-2021 (Year 1 ongoing)
A3	Compile available data on interactions with cetaceans in the Indian Ocean (observers)	OPAGAC and AZTI / IOTC observers	2017-2018 (Years 1-2)
A4	Evaluate impacts on Arabian Sea humpback whale and pygmy blue whale populations	AZTI	2018 (Year 2)
A5	Put in place measures to mitigate impacts, if required	OPAGAC	2019 (Year 3)
<b>B. Improved data on bycatch / discards / interactions with improved mitigation as required MSC PIs: 2.2.1, 2.2.2, 2.2.3, 2.3.1, 2.3.2, 2.3.3.; IPG26, IPG27, IPG28, IPG29, IPG30, IPG31, IPG32, IPG33; all RFMOs; medium priority</b>			
B1	Support for data gathering programmes in all oceans: observer training, observer support, electronic observation on board	OPAGAC, ISSF and AZTI	ongoing programme 2016-2021 (Year 1 ongoing)
B2	Observer data consolidation and quality control	AZTI	2016 (Year 1)
B3	Observer data analysis (all oceans; sharks, turtles and cetaceans) and dissemination of results to RFMOs as necessary.	AZTI	2017-8 (Year 3)
B4	Other research as required to evaluate and mitigate impacts as required (e.g. identification of bycatch hotspots, tagging of whale sharks to assess post-capture survival)	AZTI	Year 1 ongoing
B5	Review and improvement of code of good practice to ensure mitigation of any issues raised (see Activities in C)	OPAGAC	Year 2 ongoing
B6	Implementation of improved code of good practice (see Activities in C)	OPAGAC	Year 3 ongoing

<b>C. Verification and improvement of the code of good practice MSC Pls: 2.2.1, 2.2.2, 2.2.3, 2.3.1, 2.3.2, 2.3.3; IPG34, also IPG26, IPG27, IPG33; all RFMOs; medium priority</b>			
C1	Verification of the implementation and outcome of the code of good practice	AZTI	Year 1 ongoing (already completed in Atlantic and Indian)
C2	Implementation of code, including consideration of tracking/compliance – 100% non-entangling FADs	OPAGAC and AZTI	Year 3
C3	Crew and skipper training in the code of good practice	OPAGAC, ISSF and AZTI	Year 1 ongoing
C4	Inclusion of cetaceans in the code of good practice: identification of best practice for avoiding / handling	OPAGAC and AZTI	Year 2
C5	Inclusion of practice for the removal / alteration of entangling FADs where encountered into the code of good practice: establish what methods are effective and practical	OPAGAC working with skippers and external stakeholders such as ISSF	Year 2
C6	Evaluation of the code in the light of the outcome of C4 and C5 and Activities A, B and D; improvement as necessary	OPAGAC and AZTI	Year 3
C7	Implementation and verification of improved code	OPAGAC and AZTI	Year 3
C8	Establish a process for periodic review of data and best practice, updating of the code and implementation and verification of the updated code	OPAGAC	Year 4
<b>D. Ecosystem impact of FADs MSC Pls: 2.5.1, 2.5.2, 2.5.3; IPG35, IPG36, IPG37; all RFMOs; medium priority</b>			
D1	Commission an independent evaluation (via a scientific body or consultant or other suitable independent expert) of minimum and best practice requirements for data on FADs (deployment, retrieval, tracking, loss, types, catches and other relevant issues)		
D2	Commission an independent evaluation (via a scientific body or consultant or other suitable independent expert) of the ecological impact of relevant types of FADs, including an analysis of the robustness of the data available, and research gaps, as well as best practice in the mitigation of these impacts		
D3	Start work with relevant stakeholders in each ocean (other purse seine companies; FAD working groups) to start a process towards more	OPAGAC, FAD working groups at each RFMO, other purse seine fisheries	Year 1 ongoing

	transparency around FADs at each RFMO based on the evaluation from D1; and adoption of management measures based on the evaluation from D2.		
D4	Make a formal commitment to promote increased transparency by RFMO members on FADs, FAD management and FAD fate, based on the evaluation of data requirements from D1, as part of a FAD management plan or otherwise	OPAGAC	By end Year 1
D5	Establish a framework by which data on FAD movement and the total number of FADs can be analysed by an independent scientific body without prejudice to OPAGAC's commercial interests	OPAGAC, AZTI or another suitable body	By end Year 1
D6	Research into different designs of FADs including non-entangling and biodegradable, based on the evaluation in D2	OPAGAC, ISSF and AZTI	Year 1 ongoing
D7	Research into eco-sounder & sonar discrimination of schools below FADs – for reduction in catch of juvenile yellowfin and bigeye	OPAGAC, ISSF and AZTI	Year 1 onwards
D8	Research on the impact of FADs on sensitive marine habitats	OPAGAC and other stakeholders	Year 1 ongoing
D9	Research and retrieval of 'ghost nets' from islands	OPAGAC and AZTI	Year 1 ongoing
D10	Evaluation of results, identification and implementation of additional mitigation measures if required	OPAGAC and AZTI with other stakeholders	Year 3 ongoing
D11	Publish and/or present at RFMO meetings the results of the actions specified above, including recommendations on minimum standards for data gathering and compilation, and measures put in place to mitigation impacts.	OPAGAC, AZTI and 'FAD groups'	Year 3 ongoing

*WORKPLAN 6: Preliminary work plan for Years 2-5, Principles 1 and 3, all oceans*

Activity		Working group	Ending date
<b>A. Harvest strategy and control rules, stock rebuilding ALL RFMOs</b> <b>ICCAT: MSC Pls: 1.2.1, 1.2.2 (all stocks); 1.1.1 and 1.1.2 (ICCAT yellowfin and bigeye); IPGs 1-4</b> <b>IOTC: MSC Pls: 1.2.1, 1.2.2 (yellowfin and bigeye); 1.1.1 and 1.1.2 (yellowfin); IPGs 12-14</b> <b>IATTC: MSC Pls: 1.2.1, 1.2.2 (all stocks), 1.1.1 and 1.1.2 (yellowfin and bigeye); IPGs 20-23</b> <b>WCPFC: MSC Pls: 1.2.1, 1.2.2 (all stocks); 1.1.1, 1.1.2 (bigeye); IPGs 27-29</b>			
A1	Evaluate progress in Year 1 against Year 1 milestones for each RFMO (Appendix 2)	OPAGAC, Advisory Group	End Year 1
A2	Based on evaluation in A1, assess whether the Year 1 strategy is likely to be able to achieve the Year 2 milestones	OPAGAC, Advisory Group	End Year 1
A3	If yes for a given RFMO, continue with activities from Year 1, reinforcing as required areas where progress is behind milestones	OPAGAC with other stakeholders as set out in the Year 1 work plans	Year 2
A4	If no for a given RFMO, re-evaluate strategy with Advisory Group, develop and implement new strategy for achieving FIP milestones	OPAGAC, Advisory Group	Beginning Year 2
A5	Ensure that new strategy and work plan is integrated with the work of other stakeholders, e.g. other FIPs	OPAGAC, FIP liaison group, with support from WWF	Beginning Year 2
A6	Repeat A1-A5 at the end of each year of FIP implementation	OPAGAC, Advisory Group	End Year 2 and on
A7	Regardless of the outcome of annual evaluations, continue to build coalitions at each RFMO to support and encourage the development, approval and implementation of harvest strategies and control rules and tools for each stock, and rebuilding plans for depleted stocks	OPAGAC, WWF, other fisheries in FIPs, EU, countries where OPAGAC member-companies have operations/vessels under flag and other RFMO members and other likeminded stakeholders	Year 2 and on
<b>B. Management system (P3) ALL RFMOs</b> <b>ICCAT: MSC Pls: 3.1.1, 3.1.2, 3.1.3, 3.2.3; IPGs 7-11; all stocks</b> <b>IOTC: MSC Pls: 3.1.2, 3.1.3, 3.2.2, 3.2.3; IPGs 16-18; all stocks</b> <b>IATTC: MSC Pls: 3.2.1, 3.2.2, 3.2.4; IPGs 24-26; all stocks</b> <b>WCPFC: MSC Pls: 3.2.2, 3.2.3; IPGs 31-32; all stocks</b>			
B1	Evaluate progress in Year 1 against Year 1 milestones for each RFMO (Appendix 2), as well as against MSC scoring guideposts	OPAGAC, Advisory Group	End Year 1
B2	Based on evaluation in B1, assess whether the Year 1 strategy has led to	OPAGAC, Advisory Group	End Year 1



	SG80 being met, and if not, whether is likely to be able to achieve the Year 2 milestones		
B3	If SG80 is met for a given PI / RFMO, stop here		
B4	If SG80 is not met, but Year 1 strategy appears the right approach for a given RFMO, continue with activities from Year 1, reinforcing as required areas where progress is behind milestones	OPAGAC with other stakeholders as set out in the Year 1 work plans	Year 2
B5	If Year 1 strategy is inadequate for a given RFMO, re-evaluate strategy with Advisory Group, develop and implement new strategy for achieving FIP milestones	OPAGAC, Advisory Group	Beginning Year 2
B6	Repeat at the end of each year of FIP implementation	OPAGAC, Advisory Group	End Year 2 and on
<b>C. Information and monitoring</b> <b>ICCAT: MSC PI: 1.2.3; skipjack (E and W); IPGs 5-6</b>			
C1	Continue development of research proposal or work plan started in Year 1	OPAGAC / SCRS or Working Group members	Year 2
C2	Start implementation of research or data-gathering work plan to address data gaps for these two stocks	OPAGAC with AZTI or other suitable scientific institute	Year 3
C3	Continue implementation of research or data-gathering work plan; start to analyse data	OPAGAC with AZTI or other suitable scientific institute	Year 4
C4	Submit data to SCRS to support stock assessments	OPAGAC with AZTI or other suitable scientific institute	end Year 4
C5	Data incorporated into improved assessments for these stocks	SCRS and Working Group members	Year 5
<b>D. Information and monitoring</b> <b>IOTC: MSC PI: 1.2.3; IPG 15; all stocks</b> <b>WCPFC: MSC PI: 1.2.3; IPG 30; all stocks</b>			
D1	Engage with the Scientific Committee and stock working groups to evaluate key data gaps for each stock	OPAGAC / scientists from the EU and from countries where OPAGAC member-companies have operations/vessels under flag	Year 1 or Year 2
D2	Evaluate which data gaps need to be filled to improve stock assessments, and which of these could be filled with support from OPAGAC	OPAGAC / scientists from the EU and from countries where OPAGAC member-companies have operations/vessels under flag	Year 3
D3	Implement or support capacity building or other relevant activities to improve data submission to IOTC and WCPFC as per the evaluation in D2	OPAGAC with other suitable stakeholders	Years 4 and 5



## References

- Aires-da-Silva A., Minte-Vera C.V. and Maunder M.N. 2016. Status of bigeye tuna in the Eastern Pacific Ocean in 2015 and outlook for the future. SAC-07-05a.
- Davies N., Harley S., Hampton J. and McKechnie S. 2014. Stock assessment of yellowfin tuna in the Western and Central Pacific Ocean. WCPFC-SC10-2014/SA-WP-04/Rev1 25 July.
- Gascoigne J. 2015. OPAGAC tuna purse seine MSC pre-assessment: update and expansion of Principle 2. Final – 23 September 2015.
- Gascoigne J. 2016. WWF and OPAGAC Fishery Improvement Project – Review of Scoping Document (version 21 January 2016)
- Harley S., Davies N., Hampton J. and McKechnie S. 2014. Stock assessment of bigeye tuna in the Western and Central Pacific Ocean. WCPFC-SC10-2014/SA-WP-01/Rev1 25 July.
- ICCAT 2015. Report of the Standing Committee on Research and Statistics (SCRC); Madrid, Spain, 28 September to 2 October 2015. PLE 104/2015.
- Maunder M.N. 2016. Status of skipjack tuna in the Eastern Pacific Ocean in 2015. SAC-07-05c.
- Maunder M.N and Deriso R.B. 2016. Application of harvest control rules for tropical tunas in the Eastern Pacific Ocean. IATTC Scientific Advisory Committee, Seventh meeting, La Jolla, California (USA), 9-13 May 2016, Document SAC 07-07g
- Minte-Vera C.V., Aires-da-Silva A. and Maunder M.N. 2016. Status of yellowfin tuna in the Eastern Pacific Ocean in 2015 and outlook for the future. SAC-07-05b.
- MRAG 2014. Scoping study of the OPAGAC/AGAC tropical tuna purse seine fishery against the MSC Fisheries Assessment Standard to develop a Fishery Improvement Project. Pre-assessment Final Report.
- Rice J., Harley S., Davies N. and Hampton J. 2014. Stock assessment of skipjack tuna in the Western and Central Pacific Ocean. WCPFC-SC10-2014/SA-WP-05/Rev1 25 July.
- SCS 2016. The northeastern tropical Pacific purse seine yellowfin and skipjack tuna fishery. Public Comment Draft: MSC full-assessment report.
- WWF 2013. FIP Handbook: Guidelines for developing a fisheries improvement project. WWF-US Fisheries Program, December 2013.
- WWF 2016. WWF and OPAGAC Fishery Improvement Project Scoping Document for OPAGAC's bigeye, yellowfin and skipjack tuna fishery. Final – 24 April 2016.



## Appendix 1 – Advisory Group meeting participants

Note: Membership of the Advisory Group or participation in an Advisory Group meeting does not imply agreement with the FIP work plan, milestones, activities or any other aspect of the FIP.

Attendee	Organization
Antonio Lizcano	S.G. Fisheries (Spain)
Miguel Herrera	OPAGAC
Francisco Abascal	IEO
Martin Hall	IATTC
Tim Costelloe	Cook Islands MMR
Amanda Nickson	The Pew Charitable Trusts
Julio Moron	OPAGAC
Philippe Michaud	Seychelles Fishery Authority (SFA)
Susan Jackson	ISSF
Alejandro Anganuzzi	FAO
Julien Million	FAO
Gerald Scott	ISSF
Guillermo Moron	Ecuador FIP Coordinator, IATTC
Jose Luis Garcia Varas	WWF-Spain
Raul Garcia Rodriguez	WWF-Spain
Daniel Suddaby	WWF
Nicole Beetle	WWF-US
Jo Gascoigne	FIP Consultant

## Appendix 2 – IPGs

See separate document