



## Three-Year Audit Template

### Introduction to the tool

The three-year audit template was developed by FishChoice and is based on the FisheryProgress FIP Review Guidelines and feedback from the FisheryProgress Technical Oversight Committee. The audit template is designed to present key information about the current performance of the fishery and to verify reported progress on [www.FisheryProgress.org](http://www.FisheryProgress.org). **FisheryProgress requires the use of three-year audit template and information must be in English.**

Text in italics provides additional guidance about information that should be included in each section. Text in red provide examples for possible responses.

### Basic FIP information

*Fill in the following table. The management authority is the regulatory authority with fishing management responsibilities; there may be multiple authorities where joint jurisdictional responsibilities occur.*

Target species scientific name and common name	Yellowfin Tuna (YFT)
Fishery location	Indian Ocean
Gear type(s)	Handline
Catch quantity (weight)	1,892 tons
Vessel type(s) and size(s)	Catching vessels; fiber/wood; 1 - 30 GT
Number of vessels	80
Management authority	MMAF

## Stakeholder consultation & meetings

Fill in the following table and include a high-level summary of the subjects that were discussed. Additional rows may need to be added or modified depending on number of participants and meetings completed.

Name	Affiliation	Date and Subjects Discussed
Alfian Mutopa, Ilham Alhaq	AP2HI	<p style="text-align: center;"><u>4 - 5 October 2021</u></p> <ul style="list-style-type: none"> <li>Update for data collection for Harvest Strategy Workshop for Tuna Fisheries in Indonesian Archipelagic Waters</li> <li>Identified the current conditions in which several regulations related to limitation on fishing efforts have been available</li> </ul>
Heri, Imam Syuhada	IPNLF	
Fayakun Satria, Anung Widodo, Wudianto, Lilis Sadiyah, Erna, Bayu	MMAF Research Center	
Shinta Yuniarta	YKAN	
Wildan, Timur, Saut Tampubolon	MDPI	
Putuh Suadela, Charlie Abd. Rauf	MMAF	
Janti Djuari, Ilham Alhaq, Prayoga Huda, Meysella Anugerah,	AP2HI	<p style="text-align: center;"><u>23 September 2021</u></p> <ul style="list-style-type: none"> <li>Scope of assessment &amp; timeline</li> </ul>
Jeremy Crawford, Heri, Imam Syuhada, Roy Bealey	IPNLF	
Andy Hough	Independent Consultant	
Janti Djuari, Ilham Alhaq, Heri, Jeremy Crawford, Imam Syuhada	AP2HI, IPNLF	<p style="text-align: center;"><u>28 - 29 August 2021</u></p> <ul style="list-style-type: none"> <li>data summary of tuna catch composition for each fishing gear</li> </ul>

## Summary of MSC performance indicator scores

Fill in the likely scoring category (<60, 60-79, ≥80) for each performance indicator (PI) and provide a rationale for the score by referring to the text used in v2.0 of the MSC Standard's scoring guideposts for the related Performance Indicator.

Principle	Component	Performance Indicator	Current Score	Rationale and Justification
1	Outcome	1.1.1 Stock status	Cond 60-79	There has been no change to the scoring for IO yellowfin tuna, and the scoring remains harmonised with other certified fisheries. YFT is estimated to be below BMSY. No limit reference point has been estimated for this stock; however, applying the MSC default value for the PRI of 50%BMSY shows the lower bound of the 95% confidence interval for SSB <sub>current</sub> /SSB <sub>0</sub> to be above this level (50%BMSY being the equivalent of 18%B <sub>0</sub> ). This suggest that the IO yellowfin stock is highly likely to be above the PRI (with at least 70% probability).
		1.1.2 Stock rebuilding	Cond 60-79	There has been adoption, at the 25th Session of the Commission in June 2021 (IOTC Circular 2021-31), of an interim plan for rebuilding the Indian Ocean yellowfin tuna stock in the IOTC area of competence. Relative to prior rebuilding strategies, Resolution 2021/01 specifies further reductions in catch limits for several key gears/fisheries and makes provisions, for the first time, on limits to yellowfin tuna catches in artisanal fisheries. Hence, the rebuilding strategy is considered to have been strengthened. There is also a new stock assessment for yellowfin tuna planned for this year.
	Management	1.2.1 Harvest Strategy	Cond 60-79	A harvest strategy for YFT has not yet been agreed nor adopted by IOTC. Proposals have been, and are being, developed and submitted at IOTC, but progress is delayed, in part due to the COVID pandemic, with the March 2020 meeting of the Technical Committee on Allocation Criteria (TCAC) postponed indefinitely (see <a href="https://www.iotc.org/meetings/6th-session-">https://www.iotc.org/meetings/6th-session-</a>

				technical-committee-allocation-criteria-tcac06-please-note-meeting-has-been). However, in 2021 these discussions will restart with a Special Session of the Commission (SS4) in March 2021 (see <a href="https://iotc.org/meetings/special-session-indian-ocean-tuna-commission-ss4">https://iotc.org/meetings/special-session-indian-ocean-tuna-commission-ss4</a> ).
		1.2.2	Harvest control rules and tools	Fail <60 CR V2.0 SA2.5.2(a) and 2.5.3 (b) allows the use of 'available' HCRs at SG60 if the stock has not been reduced below the Bmsy level. As HCRs are not in place, and the stock is estimated to be below Bmsy and to have been so for a significant time, this requirement is not met at SG60. There is not yet evidence that tools used or available to implement HCRs are appropriate and effective in controlling exploitation
		1.2.3	Information and monitoring	Pass (≥80) Stock productivity and fleet composition are well understood, and the assessment takes account of both. The information available is considered sufficient to support the HS. Stock abundance and total removals are monitored regularly and with sufficient coverage and accuracy to support the assessment estimates. While there are known problems with some of the artisanal fishery reporting, which may include the UoA (UoA removals are monitored through logbooks and inspection processes) the quality of information available is considered sufficiently good for stock assessment purposes.
		1.2.4	Assessment of stock status	Pass (≥80) The assessment takes into account the biology of the species: it uses a growth model as a basis for an age-structured model, and also uses tagging data; other biological information such as natural mortality and the Stock Recruitment relationship can be input externally or estimated within the model. It also considers the nature of the fishery, by dividing catch and effort data into fisheries with constant selectivity functions. The assessment evaluates two different

					options for stock structure. Other features of fisheries, such as purse seine effort creep, are also taken into account.
2	Primary species	2.1.1	Outcome	Pass (≥80)	<p>The only primary species is expected to be SKJ and bigeye tuna (BET). These may both be main in different UoAs.</p> <p>For SKJ, there is a &gt;95% probability that the biomass is above PRI. None of the models estimate SB2019 to be below the LRP of 20%SB0 The median estimate of the 2020 stock assessment grid estimates SB2016 at 45%SB0, which is above the TRP.</p> <p>For BET, SB2018 was estimated to be well above the interim limit reference point (0.5 BMSY), at 1.22 SBMSY. Although SSB has been on a downward trajectory over ca. the last 5 years in the stock assessment, the median estimate of SB has never dropped below the SBMSY. Overall, the stock is not considered to be overfished (although overfishing is occurring).</p> <p>Both species are therefore highly likely to be above their PRI.</p>
		2.1.2	Management strategy	Pass (≥80))	<p>Both SKJ and BET have management measures in place or under development at IOTC, including rebuilding plans for YFT.</p> <p>There is no specific strategy affecting primary species catch in P&amp;L vessels, but the highly selective operation of the fishery represents an effective partial strategy that avoids bycatches of other primary species.</p> <p>For P1, Primary and Secondary species, there would not be any unwanted catches – all catches would be utilised.</p>
		2.1.3	Information	Pass (≥80)	<p>Landing data are available for all UoAs from at-sea and portside observers and/or factories showing the percentages of tuna target and primary species (SKJ, YFT and BET) in the landings.</p>

	Secondary species	2.2.1	Outcome	Pass (≥80)	<p>Catch Species. Improved data collection has identified blue marlin (at W Nusa Tenggara) as a potential main secondary species. Blue marlin has an assessment which indicates it to be above PRI. Also, catches would always be below the level (30% total catch) which could impair recovery.</p> <p>Bait Species. Again, improved data is now available. Main bait species identified is kawakawa (at Aceh). This species is assessed as not being overfished nor subject to overfishing. Additionally, RBF assessment of all species has been undertaken for similar fisheries in Indonesia and all are low risk.</p>
		2.2.2	Management strategy	Pass (≥80)	<p>HL vessels will catch bait before each fishing operation. The only species expected to be main in any UoA is kawakawa. No UoAs will comprise &gt;30% of total catches from a stock, and so could hinder recovery.</p> <p>Shark-finning is not expected on HL vessels (shark may occasionally be caught on large HL vessels in particular but if landed would generally be landed whole). There are some reports of suspected shark finning in SE Sulawesi. Any substantiated reports should be investigated prior to confirming final UOC.</p>
		2.2.3	Information	Pass (≥80)	<p>Significantly improved data-gathering has been employed in candidate UoAs. For secondary species this includes port-based sampling, use of on-board cameras, vessel tracking, recording bait and anchored FAD mapping. There is now quantitative information available that is adequate to assess the impact of the UoA on the main secondary species with respect to status, or to carry out RBF analyses.</p>
	ETP species	2.3.1	Outcome	Pass (≥80)	<p>Observer (and some Port sampling information on landings, mostly relating to potential catches of shark species) is available for the HL fisheries in each UoA. All show no interaction with ETP species.</p>

		2.3.2	Management strategy	Cond 60-79	Existing legislative protection of ETP species and the highly selective operation of HL fishing vessels will deliver a score of 80 or more for management strategies. On-board camera observation do indicate some interaction with bird, turtle and shark species. Apart from sharks, however, mortalities seem unusual. Nevertheless a biennial review of measures to minimise mortalities should be undertaken.
		2.3.3	Information	Pass (≥80)	Some quantitative information is now available on impacts of HL fisheries on ETP species. This includes on-board camera data and Port sampling. The information, combined with other such studies on P&L fisheries, is sufficient to determine the threat posed by the UoAs.
	Habitats	2.4.1	Outcome	Pass (≥80)	Two issues are to be considered: the effects of HL operations on seabed habitats (which will be zero) and the effects of deploying anchored FADs on habitat. For the current tranche of UoAs, FAD locations have now been mapped and this confirms that it is highly unlikely that the anchored FADs would reduce structure and function of commonly encountered habitats to the point where there would be serious or irreversible harm. There is no indication that anchored FADs interact with VMEs.
		2.4.2	Management strategy	Pass (≥80)	The operational characteristics of the HL fishery would mean that SG80 at least would be met. FADs are licensed, although controls on FAD numbers are understood to be variable (with legislative reviews currently underway) – this is not, however, expected to lead to serious habitat-related effects.
		2.4.3	Information	Pass (≥80)	The number and location of FADs associated with each UoA has been mapped in relation to bathymetric zones. Areas of protected habitat are known.
	Ecosystem	2.5.1	Outcome	Pass (≥80)	For current tranche of UoAs, no major impacts have been identified in relation to retained species,

					<p>bycatch, ETP species and habitat. Key ecosystem effects could potentially result from:</p> <ul style="list-style-type: none"> <li>• the removals of skipjack and yellowfin tuna within AW</li> <li>• possible entrainment of tuna and other species in dense fields of anchored FADs</li> </ul> <p>Given the scale of impacts associated with each of the current tranche of UoAs, none of these are expected to give rise to serious or irreversible harm.</p>
		2.5.2	Management strategy	Pass (≥80)	<p>Management measures described in relation to each ecosystem component are sufficient to address potential impacts. This will be further strengthened with AW management of tuna stocks.</p>
		2.5.3	Information	Pass (≥80)	<p>The main impacts of the UoAs on key ecosystem elements (abiotic drivers such as oceanographic and climatic factors and biotic factors including impacts on food webs/predator-prey dynamics resulting from the removal of top predators (i.e. skipjack and yellowfin tuna) can be inferred from existing information. Additionally, some of the main impacts have been investigated in detail such as the structure and functioning of the pelagic ecosystems that support Pacific tuna fisheries and in some cases their responses to fishing and climate change</p>
3	Governance and Policy	3.1.1	Legal and customary framework	Cond 60-79	<p>For this PI, SG 60 will be met as there are international agreements in place (via IOTC) which provide a framework for cooperation to deliver sustainable management. Indonesia is a CMM and cooperates with the RFMO to produce scientific advice. However, SG 80 will not be met as this requires organized and effective cooperation with other parties to deliver management outcomes consistent with Principles 1 and 2. For Indonesia AWs this is particularly important as it is to be demonstrated that the harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving</p>



					<p>stock management objectives, and that harvest control tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.</p> <p>There is a sufficiently transparent dispute resolution mechanism which can be considered to be effective.</p> <p>There are formal arrangements that make explicit the requirement to consider legal rights for traditional fishers.</p>
		3.1.2	Consultation, roles and responsibilities	Pass (≥80)	<p>Organisations and individuals involved in the management process have been identified.</p> <p>Functions, roles and responsibilities are explicitly defined and well understood for all important areas of responsibility and interaction.</p> <p>There is a demonstrated consultation process which regularly seeks and accepts relevant information and demonstrates consideration of the information received.</p> <p>There is a national, of also often local, consultation process which shows opportunity and encouragement for all parties to be involved and facilitates effective engagement.</p>
		3.1.3	Long term objectives	Pass (≥80)	<p>At both regional and national level, there are clearly stated long-term objectives that guide decision-making, consistent with the MSC fisheries standard and application of the precautionary approach.</p>
	Fishery specific management system	3.2.1	Fishery specific objectives	Cond 60-79	<p>Short and long-term objectives consistent with outcomes of MSC's Principle 1 and 2 are implicit within the fishery-specific management system.</p> <p>There are also some elements of short- and long-term fisheries objectives explicit within the fishery-specific management system. However, there is not evidence of explicit objectives around stock status relative to the target reference point (TRP) within Indonesia AW Harvest Strategy.</p>
		3.2.2	Decision making processes	Cond 60-79	<p>At IOTC generally, the internal mechanisms of the IOTC support the conclusion that issues identified in</p>

					the fishery are taken into account in the decision-making process. However, there has not been a timely introduction of a total catch limit for skipjack derived from the HCR. However, recent high catches are considered an important rather than a serious issue and measures are not yet in place to effect appropriate limits.
		3.2.3	Compliance and enforcement	Pass (≥80)	Monitoring, control and surveillance systems have been implemented in the fishery relevant to UoAs and have demonstrated an ability to enforce relevant management measures or rules.
		3.2.4	Management performance evaluation	Pass (≥80)	At IOTC level, mechanisms to evaluate key parts of fishery management system are in place through its subsidiary bodies including Scientific Commission and Technical and Compliance Committee (TCC) following their established procedures. These committees meet regularly and provide reports on their findings to the Secretariat of the Commission and Commission members through well-established mechanisms. In Indonesia, various mechanisms are in place. Included within these, the newly revised NTMP for 2020-2025 is now in its final stage of adoption through a decree letter from the Minister of MMAF.

## Workplan results

Fill in the following table by reviewing the FIP's workplan and summarizing the key results that have been achieved over the last three years (or since the last audit took place) as a result of the FIP's workplan. Provide an explanation of steps that the FIP participants took in supporting and achieving each result.

Result	Related Action on FisheryProgress	Related MSC Performance Indicator	Explanation
<p>Support HS development within IOTC</p> <p>This is in progress</p>	<p>Support harvest strategies and control rules within IOTC for YFT</p>	<p>1.2.1, 1.1.1</p>	<p>Advocacy by Indonesia in support of tuna harvest strategy development is undertaken by MMAF. Outcomes should demonstrate that the harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80.</p> <p>Work is underway at IOTC to address this issue, supported by CMs including Indonesia.</p> <p>IPNLF hosted several focus group discussions to analyse annual catch estimates in preparation for IOTC yellowfin stock rebuilding plans, particularly for the 8th Technical Committee on Allocation Criterias.</p> <p>IPNLF has also been working with Indian Ocean coastal states through the G16 to come away with equitable HS and HCR for Indian Ocean yellowfin tuna.</p> <p>A harvest strategy for YFT has not yet been agreed nor adopted by IOTC. Proposals have been, and are being, developed and submitted at IOTC, but progress is delayed, in part due to the COVID pandemic, with the March 2020 meeting of the Technical Committee on Allocation Criteria (TCAC) postponed indefinitely (see <a href="https://www.iotc.org/meetings/6th-session-technical-committee-allocation-criteria-tcac06-please-note-meeting-has-been">https://www.iotc.org/meetings/6th-session-technical-committee-allocation-criteria-tcac06-please-note-meeting-has-been</a>). However, in 2021 these discussions will restart with a Special Session of the Commission (SS4) in March 2021 (see</p>

			<p><a href="https://iotc.org/meetings/special-session-indian-ocean-tuna-commission-ss4">https://iotc.org/meetings/special-session-indian-ocean-tuna-commission-ss4</a>).</p> <p>There has been adoption, at the 25th Session of the Commission in June 2021 of an interim plan for rebuilding the Indian Ocean yellowfin tuna stock in the IOTC area of competence. Relative to prior rebuilding strategies, Resolution 2021/01 specifies further reductions in catch limits for several key gears/fisheries and makes provisions, for the first time, on limits to yellowfin tuna catches in artisanal fisheries. Hence, the rebuilding strategy is considered to have been strengthened. While there remains an issue with a few IOTC countries objecting to this resolution, this may be overcome by further dialogue with those countries. There is also a new stock assessment for yellowfin tuna planned for this year.</p>
<p>Support HCR development within IOTC: This is expected to further rebuilding of YFT, but rebuilding is not expected until 2024 under current predictions.</p> <p>This is in progress</p>	<p>Support harvest strategies and control rules within IOTC for YFT</p>	1.2.2	<p>As for 1.2.1 above</p>
<p>Support stock rebuilding measures within IOTC. This would require application of the harvest strategy and HCR to rebuild the stock over the agreed timescale - ideally within one generation time.</p> <p>This is in progress</p>	<p>Support harvest strategies and control rules within IOTC for YFT</p>	1.1.2	<p>As for 1.2.1 above</p>

<p>Data collection in place for Handline Fisheries: all catches and bait composition</p> <p>This is completed</p>	<p>Data collection in place for Handline Fisheries</p> <p>Baitfish management</p>	<p>2.2.3, 2.5.3</p>	<p>AP2HI continues to conduct several data collection systems that are placed in handline fisheries in the Indian Ocean area and are still ongoing. Around April to August 2021, AP2HI had updated its activity in West Nusa Tenggara and Aceh UoA as follows:</p> <p>(1) Port Sampling including basic operational information, length and weight of fish, by-catch information, effort data, bait data and ETPs information by 115 trips  (2) Surveillance Cameras /TLC deployed in vessels to make sure no interaction with ETPs while at fishing ground by 5 trips,  (3) Vessel Tracking Device including coordinate, MPA line, FMA borderline and fishing track by 5 trips.</p> <p>MDPI Ifish data collection was conducted in NTB and NTT. Total sampling in FMA 573 under the Indian Ocean, by Jan-Sep 2021 59 data.</p> <p>MDPI has placed 2 Observers on board Handline vessels in the Indian Ocean (FMA 573) in Lombok and Kupang. Observers were deployed from March-Aug in Lombok and Kupang with a total of 53 observer days at sea and 4 vessels. No interactions with ETP species were recorded during the observation period.</p> <p>Significantly improved data-gathering has been employed in current tranche of UoAs. For secondary species this includes port-based sampling, use of on-board cameras, vessel tracking, and anchored FAD mapping. There is now quantitative information available that is adequate to assess the impact of the UoA on the main secondary species with respect to status, or to carry out RBF analyses where necessary (noting that similar analyses have all resulted in low-risk evaluations).</p>
<p>Deploy observers on first tranche UoAs: ETP interactions</p> <p>This is completed</p>	<p>Data collection in place for Handline Fisheries</p>	<p>2.3.3</p>	<p>AP2HI employed several data collection systems that are placed in handline fisheries in the Indian Ocean area and are still ongoing. Around April to August 2021, AP2HI had updated its activity in West Nusa Tenggara and Aceh UoA as follows:</p>

			<p>(1) Port Sampling including basic operational information, length and weight of fish, by-catch information, effort data, bait data and ETPs information by 115 trips</p> <p>(2) Surveillance Cameras /TLC deployed in vessels to make sure no interaction with ETPs while at fishing ground by 5 trips,</p> <p>(3) Vessel Tracking Device including coordinate, MPA line, FMA borderline and fishing track by 5 trips.</p> <p>MDPI Ifish data collection was conducted in NTB and NTT. Total sampling in FMA 573 under the Indian Ocean, by Jan-Sep 2021 59 data.</p> <p>MDPI has placed 2 Observers on board Handline vessels in the Indian Ocean (FMA 573) in Lombok and Kupang. Observer's achievements from March-Aug in Lombok and Kupang with a total of 53 observer days at sea and 4 vessels. No interactions with ETP species during the observation period.</p> <p>Data collections has been undertaken according to schedule for the current tranche of UoAs. Some quantitative information is now available on impacts of P&amp;L fisheries on ETP species. This includes at-sea observer data and Port sampling. The information, combined with other such studies on P&amp;L fisheries, is sufficient to determine the threat posed by the UoAs.</p>
<p>Carry out review of measures to minimise unwanted catch of ETP species</p>	<p>Minimize unwanted catch and ETP interactions for Indian Ocean units of assessment</p>	<p>2.3.2</p>	<p>Ongoing handline port sampling data collection include ETPs interaction form in AP2HI site in the Indian Ocean, AP2HI conduct 115 sampling from April to August 2021 and no ETP interaction landed or recorded. The same result was found on 5 surveillance camera deployment during April to August 2021.</p> <p>MDPI has placed 2 Observers on board Handline vessels in the Indian Ocean (FMA 573) in Lombok and Kupang. Observer's achievements from March-Aug in Lombok and Kupang with a total of 53 observer days at sea and 4 vessels. No interactions with ETP species during the observation period.</p> <p>AP2HI maintains a captain training on best handling practice for catch and ETPs, and has the captain signing the Captain's Code of</p>

			<p>Conduct. Around April to August 2021, AP2HI had 7 signatures of Captain's Code of Conduct in handline fisheries who operated in Indian Ocean.</p> <p>Data collection associated with PI 2.2.3 has identified limited potential interactions with ETP species in the current tranche of UoAs. A biennial review of measures to minimise mortality of affected ETP species should be undertaken. This should now focus on education of fishermen in affected species and safe/early release techniques.</p>
<p>Map FAD usage for first tranche UoAs and habitat (or depth as proxy) types and extent</p>	<p>Estimate effects of FAD fields on species distribution</p>	<p>2.5.3 (2.4.3 not included in submitted actions to fishery progress)</p>	<p>Mapping of anchored FADs has been undertaken according to schedule. The number and location of FADs associated with each UoA has been mapped in relation to bathymetric zones. Areas of protected habitat are known.</p> <p>In June 2021, AP2HI submitted its FAD and vessels data to support the FAD research to BRPL (MMAF Research Center). In June 2021, MMAF revised its FAD regulations by enacting Ministerial Regulation No. 18 year 2021 on Auxiliary Gear Deployment which is replacing previous Ministerial Regulation No. 26 year 2014 on Fish Aggregating Device. The socialization workshop on the new regulation was conducted on 27th of July 2021.</p> <p>MDPI with Pusrisikan have researched about the estimate of aFADs (Anchored FAD) number and position in FMA 713, 714 and 715 in implementation of tuna harvest strategy in IAW. The research was conducted from Feb-Sep 2021, the final report was done, and on progress to be submitted to fisheries Manager in MMAF. After being accepted by MMAF and having agreed to publish, we will update later here. The general result from this research: The estimated number of a-FAD in FMA 713, 714 and 715 is 1560 with the number of each FMAs being 661 units, 608 units and 291 units of a-FAD. This number is calculated with the assumption that a-FAD installed above 12 NM, satellite sentinel 1 data in July and August 2021 and the closest distance between objects (proximity) &lt; 250 meters. The data aFAD from ground</p>

			<p>check to validate the research, it comes from Pusriskan, BRPL, MDPI and AP2HI.</p> <p>Total aFAD from ground check was reported to PUSRISKAN are MDPI about 392 aFADs, and AP2HI about 398 aFAD.</p> <p>MDPI continues to inventory the numbers of aFADs and support small scale fishers to process aFADs permit based on the new regulation of FADs.</p>
Management of local (WPP) populations within sustainable levels (see 5.1) (not really related to the actions submitted in fishery progress)	<p>Baitfish management</p> <p>Estimate effects of FAD fields on species distribution</p>	2.5.3	<p>Total aFAD from ground check was reported to PUSRISKAN are MDPI about 392 aFADs, and AP2HI about 398 aFAD.</p> <p>Current stock status assessments for YFT, SKJ and BET (the target and main primary species affected) all indicate populations well above PRI and fluctuating around MSY. Further management work within WPP is being undertaken as described for PI 3.2.1</p>
<p>Estimation of effects of FAD fields on species distributions</p> <p>This action is completed</p>	<p>Estimate effects of FAD fields on species distribution</p>	2.5.3	<p>Mapping of FAD fields has been undertaken as described for PI 2.4.3. As set out in the updated pre-assessment, there is no indication of any risk of this to local ecosystem structure or function.</p> <p>In June 2021, AP2HI submitted it's FAD and vessels data to support the FAD research to BRPL (MMAF Research Center). In June 2021, MMAF revised it's FAD regulations by enacting Ministerial Regulation No. 18 year 2021 on Auxiliary Gear Deployment which is replacing previous Ministerial Regulation No. 26 year 2014 on Fish Aggregating Device. The socialization workshop on the new regulation was conducted on 27th of July 2021.</p> <p>MDPI with Pusriskan have researched about the estimate of aFADs (Anchored FAD) number and position in FMA 713, 714 and 715 in implementation of tuna harvest strategy in IAW. The research was conducted from Feb-Sep 2021, the final report was done, and on progress to be submitted to fisheries Manager in MMAF. After being accepted by MMAF and having agreed to publish, we will update later here. The general result from this</p>



			<p>research: The estimated number of a-FAD in FMA 713, 714 and 715 is 1560 with the number of each FMAs being 661 units, 608 units and 291 units of a-FAD. This number is calculated with the assumption that a-FAD installed above 12 NM, satellite sentinel 1 data in July and August 2021 and the closest distance between objects (proximity) &lt; 250 meters. The data aFAD from ground check to validate the research, it comes from Pusriskan, BRPL, MDPI and AP2HI.</p> <p>Total aFAD from ground check was reported to PUSRISKAN are MDPI about 392 aFADs, and AP2HI about 398 aFAD.</p> <p>MDPI continues to inventory the numbers of aFADs and support small scale fishers to process aFADs permit based on the new regulation of FADs.</p>
<p>Confirm local compliance levels within each of first tranche UoA</p> <p>This action is completed</p>	<p>Compliance report</p> <p>Review national and provincial regulation requirements and the status of Indian Ocean UoAs</p>	3.2.3, 3.2.2	<p>During April to August 2021 there are 5 deployments of Surveillance Cameras /TLC and Vessel tracking to verify the HL vessels compliance operated in IO area which resulted in no ETP being caught and no entrance to MPA being recorded. Those vessels also operated in the area that are allowed based on their fishing permit.</p> <p>1st July, a Forum Co-Management Committee (FCMC) Tuna in West Nusa Tenggara and July 23th 2021 in East Nusa Tenggara was held to discuss fisheries management issues, including data collection, fisher and industry compliance.</p> <p>Compliance report of the fishery was completed which details the status of fishery at the regional and local level</p>
<p>Develop Harvest Strategy for Indonesian AW including defined objectives. This would require development of measures compatible</p>	<p>Support harvest strategies and control rules within IOTC for YFT</p>	3.2.1	<p>MMAF confirm that well defined short- and long-term objectives, consistent with Principles 1 and 2 and explicit in the management system, will be included in the National Tuna Fisheries Management Plan. The update of this Plan was due to be completed in 2020. Revision has progressed through development and consultation stages. Addressing gaps between national management actions and RFMO requirements is among the priorities of the updated Plan. The updated Plan is currently</p>

with WCPFC, but enacted By MMAF within Indonesian AW

being revised to meet regulatory formatting requirements, prior to final Ministerial sign-off. The 2015 Plan remains in place until the new revision is promulgated

AP2HI, IPNLF and MDPI also submitted data and participated in the Indonesian Tuna Fisheries Annual Catch Estimation (ITFACE) workshops, hosted by MMAF and SPC.

MMAF considers three main issues to determine the level of catch commensurate with stock status: fisheries potential, total allowable catch and a licensing system based on allocation. Ministerial Decree 50/2017 includes an estimate of fisheries potential, total allowable catch, and utilization. Utilization is evaluated as moderate (fishing effort can be increased), full exploited (fishing effort should be maintained) and overexploited (fishing effort should be reduced).

At a stakeholder workshop in 2017, five priority selected management measures were selected as part of the Indonesian AW harvest strategy:

- a. Limit on use of fish aggregating devices
- b. Spatial and temporal closures
- c. Number of fishing days
- d. Number of vessels – limited entry
- e. Total allowable catch limits per fishery management area.

These five priority measures were further discussed at the second harvest strategy implementation workshop held from 30-31 October 2019, and again at the sixth technical and third stakeholders' meetings on the implementation of a harvest strategy for tuna fisheries in AW, held in February and March 2021 respectively. In 2019, stakeholders agreed to implement these management measures pending the full development of the harvest strategy for tropical tuna in AW, and this agreement is reiterated in the 2021 stakeholder meeting record. Licenses were a tool identified under (d), to limit vessel entry to the fishery. Additional work on the harvest strategy for Indonesian

			<p>Archipelagic waters is planned with a workshop scheduled for November 2021.</p> <p>Further work in other UoAs specific to WCPFC has been undertaken.</p>
<p>Develop Harvest CR and Tools within Indonesian AW. This would require development of HCR consistent with IOTC measures but with rules and tools developed for Indonesian AW and applied by MMAF.</p>	<p>Support harvest strategies and control rules within IOTC for YFT</p>	3.1.1	<p>This is a component of actions undertaken as outlined in 3.2.1 above</p>
<p>NEW WORKPLAN REQUIREMENT: IOTC level, decision-making processes respond to skipjack catches in excess of HCR annual catch limits.</p>	<p>N/A Will add new action: Support decision making processes respond to skipjack catches in excess of HCR annual catch limits.</p>	3.2.2	<p>Advocacy by Indonesia in support of tuna harvest strategy development is undertaken by MMAF. Outcomes should demonstrate that within IOTC implementation of the harvest strategy set out in Resolution 16/02 (and in workplan requirement for PI 1.2.1), or by some other means as appropriate, has been undertaken.</p>