REPORT OF THE VIRTUAL REVIEW MEETING OF THE FISHERY IMPROVEMENT PROJECT (FIP) OF THE PERUVIAN Mahi Mahi FISHERY (*Coryphaena hippurus*)

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Summary

Every three years, the Comprehensive Fisheries Improvement Projects (FIP´s) must develop an independent audit to accredit the results of the actions contained in the Action Plan and simultaneously measure the performance of the project with respect to to MSC standard[1].

As part of this audit, a documentary review was carried out in order to be able to accredit the existence of progress in the tasks committed in the FIP and report the existence of changes in the qualifications of the performance indicators of the predetermined evaluation tree of the MSC Fisheries Certification Requirements v2.01. At the same time, sectoral meetings were held in order to complement the revised documentary information.

Finally, a virtual meeting was held with all interested parties where the actions and tasks of the FIP were reprogrammed and others were readjusted according to the current reality of the Peruvian Mahi Mahi fishery. With all the information collected, this document was prepared considering the guidelines and formats recommended by fisheryprogress.org for carrying out this type of report. The document is divided into 4 sections:

- **General FIP information**: information aimed at defining the area of action, the target species, the gear used, the size of the fishery and the management body in charge.
- **Consultations and meetings with interested parties:** this is a summary of the main topics discussed in each meeting.
- **Summary of MSC performance scores**: is a rating analysis of each of the indicators of the MSC standard, based on the information collected during the audit.
- **Work plan results:** is a breakdown of the key results that have been achieved during the last three years (or since the last audit) as a result of the FIP work plan.

[1] FisheryProgress Three-Year Audit Guidelines. In: https://fisheryprogress.org/sites/default/files/document_files/FisheryProgress%20Three-Year%20Audit%20Guidelines.pdf

FIP General Information

Information aimed at defining the area of action, the target species, the gear used, the size of the fishery and the management body in charge.

Scientific and common name of the target species	*Coryphaena hippurus* – Mahi Mahi
Fishing location	Peruvian EEZ
Fishing gear	Longline
Catch quantity (weight)	35,832 tons (year 2019)
Boat type (s) and size (s)	Vessels of up to 32.6 m3 of hold capacity and mainly manual fishing gear
Number of vessels	3,323
Management authority	PRODUCE

Consultations and meetings with interested parties

Summary of the meetings held, including the dates they were held, the name of the people who attended and the main topics discussed.

Name	Organization	*Date and topics covered*
Ana Alegre Norza Sior	IMARPE	June 2, 2021 • Reschedule tasks in progress or delayed in the FIP. • Adapt actions of the FIP. • Validation of the Work Plan.
Pablo Marí	IMARPE	
Raúl Flores	PRODUCE	
Omar Ríos Bravo de Rueda	PRODUCE	
Jesús Morales Tapia	PRODUCE	
Lincol polo	PRODUCE	
Julio Gallegos	PRODUCE	
Ever Arboleda Ludeña	PRODUCE	
Milagros Regina Huachua Quintana	PRODUCE	
David Epstein	SNI	
Alejandro Daly	SNI	
Alfonso Miranda	SNI	
Walter Olaya (FISHOLG)	PERU MAHI ALLIANCE	
Francisco Takahashi (CORINREFRI)	PERU MAHI ALLIANCE	
Erik Rojas Caselino (CORINREFRI)	PERU MAHI ALLIANCE	
Rafaella Parodi (OCEANO SEAFOOD)	PERU MAHI ALLIANCE	
Alessandra Roda (SERCOSTA)	PERU MAHI ALLIANCE	
Huey Miin Chu (MAI SHI GROUP)	PERU MAHI ALLIANCE	

Nicolas Palacios (DEXIM)	PERU MAHI ALLIANCE	
Francisco Vía (SEAFROST)	PERU MAHI ALLIANCE	
Zoraya Ñaringaño (SPRING VALLEY FRUIT)	PERU MAHI ALLIANCE	
César Morán (SPRING VALLEY FRUIT)	PERU MAHI ALLIANCE	
Jair Pinto Torres (SPRING VALLEY FRUIT)	PERU MAHI ALLIANCE	
Henry Juarez	PESCADORES	
Miguel Espíndola	ECOS	
Pedro Zavala	CFI / PNUD	
Ernesto Vilches	SEA DELIGHT	
Teddy Escarabay	SFP	
Renato Gozzer	SFP	
Matías Caillaux	TNC	
Fernando Ghersi	TNC	
Mauricio Zúñiga	Future of Fish	
Patricia Majluf	Oceana	
Diego solé	WWF – Perú	
Allyson Caballero	WWF – Perú	
Medoly Espejo	WWF – Perú	
Evelyn Luna Victoria	WWF – Perú	
Shaleyla Kelez	WWF – Perú	
Angel Mondragon	WWF - Perú	
José Alvarez	WWF - Perú	
Aaron Canepa	WWF - Perú	
Barbara Grados	WWF - Perú	
Wendy Goyert	WWF - US	
José Luzardo		
Víctor quillay	Spring Valley Fruit	
Pedro encinas		
Miguel romero	PRODUCE	
Gabriela borrero		
Gabriel puente		

Summary of MSC Performance Indicator Scores

Categoría de puntuación probable (<60, 60-79, ≥80) para cada indicador de desempeño (PI) y justificaciones para la puntuación haciendo referencia al texto utilizado en la versión 2.01 de las guías de puntuación del Estándar MSC para los aspectos relacionados a cada indicador.

Beginning	Component	Behavior indicator		Current score	Justification
1	Status	1.1.1	Stock status	<60	Given that the Mahi Mahi fishery corresponds to a trans-zonal population, to establish its status, an approach must be taken that encompasses the entire Unit of Assessment (UoA) and not only the Peruvian fishery, otherwise, factors external to Peru that condition the status could be disregarded. of the population. In the INTER-AMERICAN TROPICAL TUNA COMMISSION (IATTC) framework, the results of the last evaluation carried out do not allow conclusions to be drawn about the status of the stock, since reference points (RP) for dorado in the Eastern Pacific Ocean (EPO) have not yet been defined. Given this lack of information and update of the stock assessment, it has a precautionary rating. It is recommended to periodically carry out stock assessments based on RP´s or to use empirical indicators to establish the status of the population periodically as a systematic input for eventual Harvest Control Rules (HCR).
		1.1.2	Stock Rebuilding	<60	This indicator is evaluated given the lack of information in indicator 1.1.1. This indicator would not be scored in case it is established that the fishery is around the MSY.
	Gestión	1.2.1	Harvest strategy	<60	Although there has been progress in the establishment of a management strategy, it is not yet implemented and the same general strategy is maintained based on a closure and minimum landing size, therefore, the score and argumentation of the previous audit of 2018 is maintained However, it is expected that with the entry into force of the Fishery Management Regulation (ROP, for its Spanish acronym) this score will be improved.
		1.2.2	Harvest Control Rules and Tools	<60	To date, the fishery does not have HCR, which is why it maintains the original Pre-Assessment score.
		1.2.3	Information and follow-up	60-79	Regarding the information collected from the fishery, the FIP has taken a turn since at the beginning the monitoring was to be based on observers on board but currently it is in the process of implementing monitoring through cameras and intelligent analysis of images and on the other hand the official electronic logs through the SITRAPESCA system in charge of PRODUCE. There is also a collaborative project with vessels associated with the WFP to collect biological data and improve information provided by fishermen. In

					addition, there is an information gathering program through port observers that has been going on for about 10 years and there are projects based on both tagging and genetic methodologies that tend to reduce uncertainty regarding the structure of the stock. These fishery data collection procedures could substantially improve this indicator, however, these are in the process of development and pilot implementation, so the indicator score is maintained.
		1.2.4	Assessment of stock status	<60	In the previous audit it was established that this indicator would achieve an unconditional pass if: • The IATTC provides an appropriate assessment for the stock. • The evaluation carried out by the IATTC provides estimates of the parameters that could be used as reference points. • The assessment takes into account the main uncertainties. Given that to date the stock assessments for the UoA have not been updated and fundamentally because the fishery does not yet have RP´s, therefore, the assessment approach does not estimate the status of the stock in relation to these RP´s, this indicator does not reach the minimum score. However, it is expected that the stock assessment at the national level (M74) and at the level of Peru and Ecuador (M75) will include an assessment of the status of the population based on RP and, furthermore, that these will be a permanent input for the future HCR. This would allow for an unconditional passing of the indicator, and ideally the main uncertainties in the assessment should be considered and have a peer review.
2	Primary species	2.1.1	Results	≥ 80	Two species managed with reference points are used as bait in the fishery, mackerel (*Scomber japonicus*) [2] and giant squid (*Dosidicus gigas*) [3]. Of these species, there is no knowledge of the proportion used with respect to the total catch of mahi mahi, so it is not possible to recognize whether they correspond to major or minor primary species. However, it is highly probable that mackerel is close

[2] DECRETO SUPREMO N° 011-2007-PRODUCE
[3] DECRETO SUPREMO N° 014-2011-PRODUCE

					to the MSY[4], as is giant squid[5]. Because of this, the rating of this CI based on these two species would achieve an unconditional pass. On the other hand, the hammerhead shark (*Sphyrna zygaena*), a species identified as bycatch of the mahi mahi fishery[6], also corresponds to a species managed under Peruvian regulation. In this case, it is likely that, in a complete evaluation, this species is directly considered as the main primary, independent of its proportion in the total catch, considering that it has an inherently low resilience and that the total catch in the UoA is exceptionally large. In terms of status, the International Union for Conservation of Nature (IUCN) considers that the species is in a Vulnerable condition and declining globally[7], while for the Exclusive Economic Zone (EEZ) of Peru there is information provided by IMARPE, which indicates that the average biomass of this resource would be fluctuating around the Maximum Sustainable Yield (MSY) defined as K/2[8]. In summary, if it is possible to prove that the precautionary hammerhead shark Total Allowable Catches (TACs) implemented allow their recovery over time, an unconditional pass can be achieved for this indicator.
		2.1.2	Management strategy	≥ 80	For the three primary species, there is an independent management strategy within the UoA, and it is expected that these will be able to maintain the primary species at levels that are likely to be above the point of recruitment impairment (PRI). In addition, there is an objective basis of confidence that the strategy works, since it has been applied for a considerable series of years and manages to maintain the status indicators by triggering TACs that are defined based on the condition of the populations. As for hammerhead shark finning, there is a high degree of probability that finning is not performed. In first place, according to

[4] Oficio Nª 789-2019-PRODUCE/DGPARPA de fecha 15.11.2019

[5] Csirke, J. et al. 2018. Biology, population structure and fishery of jumbo flying squid (*Dosidicus gigas*) in Peru. 6th Meeting of the Scientific Committee. Puerto Varas, Chile, 9 - 14 September 2018. SPRRFMO.

[6] Ayala, L & Sánchez-Scaglioni, R. 2014. Captura, esfuerzo y captura incidental de la pesca con espinel en el centro de Perú. Revista peruana de biología 21(3): 243 - 250 (2014).

[7] Rigby, C.L. et al. 2019. *Sphyrna zygaena*. The IUCN Red List of Threatened Species 2019: e.T39388A2921825. https://dx.doi.org/10.2305/IUCN.UK.2019-3.RLTS.T39388A2921825.en.

[8] IMARPE. 2020. La pesquería del tiburón martillo (*Sphyrna zygaena*) y proyecciones de pesca 2020.

					what was stated by fishermen in the 2018 FIP review, the shark is traded whole due to its high commercial value, which reduces the incentives for finning. On the other hand, Peru has developed a specific regulation for shark catches, where finning is prohibited and regulations are established for the maintenance of populations[9,10]. There is also a mandatory system to certify shark landings, which is applied in authorized landing points[11]. The shark regulation is in operation, there is information on this work and also within the control lines is the parakeet fleet.
		2.1.3	Information	< 60	The bait species that are managed have quantitative information and it is considered adequate to evaluate the impact of UoA with respect to its status. In the course of the FIP the primary species have increased, since the management of these has begun. This is why it is considered that there is no adequate qualitative information to estimate the impact of UoA in all the primary species that make up the bycatch, such as the hammerhead shark or other eventual primary species, which, due to lack of information, may not have been identified yet. This is due to the fact that the data on the composition and abundance of the accompanying fauna in the mahi mahi fishery in Peru are very scarce. Only one study has been identified, carried out during the 2009-2010 season, which reports the non-target catch of tuna (*Thunnus* sp.), which could be managed within the framework of the IATTC, however, the species of tuna caught are not identified. Both species have a wide migratory range and could have significant temporal and spatial variations. It is worth mentioning that the score has been lowered due to the lack of information regarding the composition of the bycatch, which prevents differentiating main and minor species, not being able to evaluate the impact on UoA.
	Secundary species	2.2.1	Results	60 - 79	Flying fish (*Exocoetus* sp) is an unmanaged species that is used as bait and most likely does not represent more than 5% of the total

[9] Decreto Supremo N° 21-2016 PRODUCE. Decreto Supremo que establece medidas de ordenamiento para la pesquería del recurso tiburón.
[10] Decreto Supremo Nº 10-2017 PRODUCE. Decreto Supremo que modifica el Decreto Supremo Nº 021-2016-PRODUCE, que establece medidas de ordenamiento para la pesquería del recurso tiburón.
[11] Resolución Directoral Nº 073-2016-PRODUCE/DGSF. Aprueba puntos de desembarque autorizados para embarcaciones pesqueras destinadas a la extracción de tiburón.

					catch of the fishery[12]. Therefore, it is defined as a minor species and in this case, it would reach> 80 by default. In the case of sharks, it is likely that, in a full assessment, they will be considered directly as main secondary species, considering that they have an inherently low resilience and that the total catch under UoA is exceptionally large. The unmanaged shark species that have been reported in the catches of the mahi mahi fishery by longline in Peru are the thresher fish (*Alopias vulpinus*) blue shark (*Prionace glauca*) and diamond shark (*Isurus oxyrinchus*)[6]. According to information from the IUCN, these species would be in a vulnerable, near threatened and endangered status respectively, and in terms of their population trend all would be in the process of decline[13,14,15]. Based on this background, shark species caught as non-target species in the mahi mahi fishery would be outside their biological limits for sustainability and, therefore, measures should be defined to ensure that UoA does not impede recovery and reconstruction. According to the only research available regarding the composition of bycatch[6], other species could also be integrating the bycatch but in smaller proportions, such as swordfish (*Xiphias gladius*), harpoon manta (*Mobula japanica*) and sunfish (*Mola mola*)[6]. In accordance with this, it is necessary to determine the composition and abundance of these species temporally and spatially since it is expected that they vary significantly between seasons and fishing areas, due to the migratory nature of most of the species that has been observed in the catches. From this information it could be ensured that there are no other main secondary species in the fishery.
		2.2.2	Management strategy	60 - 79	Based on the existing information from the parakeet bycatch, it is likely that the shark species are the only ones to be considered as major secondary species under UoA. In this sense, the estimated shark catches in the mahi mahi fishery is 0.99 sharks per 1,000

[12] Hervás, A. 2015. First Review of the Action Plan for Peru Mahi Mahi Fishery Improvement Project (FIP).
[13] Rigby, C.L. *et al.* 2019. *Alopias vulpinus*. The IUCN Red List of Threatened Species 2019.
[14] Rigby, C.L. *et al.* 2019. *Prionace glauca*. The IUCN Red List of Threatened Species 2019.
[15] Rigby, C.L. *et al.* 2019. *Isurus oxyrinchus*. The IUCN Red List of Threatened Species 2019.

					hooks[16], which is significantly low considering the magnitude of the shark fishery that takes place in Peru. Despite the comparatively low catch of sharks by the parakeet fleet, strategies to manage the impact on the main secondary species are required to achieve unconditional approval. In this sense, Peru has developed specific regulations for shark catches, where finning is prohibited and regulations are established for the maintenance of populations[2,3], and it has also developed a mandatory system to certify shark landings that is applied in authorized landing points[11]. The shark regulation is in operation, there is information on this work and also within the control lines is the parakeet fleet. The foregoing, added to the new regulations provided for in the ROP for the target species, such as the provision of a Maximum Total Catch Limit (MTCL), or the determination of a maximum number of hooks per vessel, could ensure that the UoA would not be hindering the recovery of shark species. On the other hand, it is important to determine if there could be other main secondary species in the fishery in order to determine the need for management of these species.
		2.2.3	Information	60 - 79	There is some quantitative and adequate information available to assess the impact of UoA on shark species. Specifically, the reported antecedents of the IUCN[13,14,15] and also information on landings from the IMARPE data collection system, where landings by species and fishery from the artisanal fishing, in the main coves of the Peruvian coast, where the records of the different species of sharks, rays and related species that are distributed in Peru are included[17]. This could allow evaluating the effects that the MTCL measures could generate or limit of the number of hooks contemplated in the FMR to this group of species. In general, the existing information on the bycatch of the fishery suggests that there should not be other main secondary species in the fishery. However, the lack of up-to-date and representative

[16] Gilman, E. *et al.* 2008. Shark interactions in pelagic longline fisheries. Marine Policy 32 (2008) 1–18.
[17] Circular CPPS/SG/238/2020. Informe de la relatoría de la XIV Reunión Anual del comité técnico científico del Plan de acción regional para la Conservación y manejo de tiburones, rayas Y quimeras en la región del pacífico Sudeste (CTC PAR Tiburón). Comisión Permanente del Pacífico Sur.

					information makes it impossible to ensure the existence of other main secondary species that could occur in the UoA. Due to this, it is expected that in a complete evaluation this indicator reaches a conditional pass level.
	ETP species	2.3.1	Results	< 60	Several species that interact with the Peruvian longline fishery for mahi mahi are recognized as ETP species by national legislatio[18] n or binding international agreements (ACAP, IAC, CITES). Peruvian law prohibits the intentional capture, landing, and sale of small cetaceans, sea turtles, albatrosses, and petrels, but bycatch is not prohibited. <u>Turtles</u> In relation to the incidental catches of the parakeet longline fishery, the incidence on reptile species such as the leatherback turtle (*Dermochelys coriácea*), loggerhead turtle (*Caretta caretta*), green turtle (*Chelonia mydas*) and olive ridley turtle (*Lepidochelys olivácea*) has been described. Leatherback, loggerhead and olive sea turtles have been classified as vulnerable and with populations declining[19,20,21], while the green turtle has been classified as endangered with a decreasing population[22]. Reports of bycatch of turtles by the parakeet fishery vary between 0.27 - 1.01 turtles / 1,000 hooks, using different approximations for their estimation (surveys, observers on board and on port). In addition, fishermen from the boats interviewed in the ports of Salaverry, Chimbote, Matarani and Morro Sama reported incidental capture of turtles during the 2009 season, while in the port of Ilo 87% of those interviewed reported incidental capture of turtles. during 2009[23].

[18] Decreto Supremo N ° 004-2014-MINAGRI. Aprueba la actualización de la lista de clasificación y categorización de las especies amenazadas de fauna silvestre legalmente protegidas.
[19] Wallace, B.P. et al. 2013. Dermochelys coriacea. The IUCN Red List of Threatened Species 2013.
[20] Casale, P. & Tucker, A.D. 2017. Caretta caretta (amended version of 2015 assessment). The IUCN Red List of Threatened Species 2017
[21] Abreu-Grobois, A & Plotkin, P. (IUCN SSC Marine Turtle Specialist Group). 2008. Lepidochelys olivacea. The IUCN Red List of Threatened Species 200
[22] Seminoff, J.A. (Southwest Fisheries Science Center, U.S.). 2004. Chelonia mydas. The IUCN Red List of Threatened Species 2004
[23] L. Ayala, M. Ortiz and S. Gelcich. 2018. Assessing marine megafauna bycatch through fishers knowledge. Animal Conservation (2018). 2018 The Zoological Society of London. p. 1 -11

					Birds The reports of bycatch of birds are less clear than those of turtles, although it is known that there is bycatch of birds by the parakeet fishery of around 0.6 birds/trip, however, when extracting the data from the port of Pucusana, the mean catch decreased significantly to 0.2 birds/trip. 83% of the boats in the Pucusana port catch birds incidentally, while in Paita and Ilo it is only 4% [23]. Among the species of birds captured are the Black-browed albatross (*Thalassarche melanophris*) and white-chinned petrel (*Procellaria aequinoctialis*) [24]. The Black-browed albatross has been classified as of less concern[25], while the white-chinned petrel has been classified as vulnerable and with a declining population[26]. Cetaceans Incidental capture of cetaceans has been reported in all ports except Paita. The highest percentage of vessels with cetacean bycatch was recorded in Salaverry (83%). Considering fishermen surveyed in various ports (excluding Salaverry), the levels of cetacean bycatch is estimated in the order of 0.1 cetacean/trip. However, when incorporating the information from Salaverry, the average catch per trip increases significantly to 7.2 cetaceans/trip[23]. The species of cetaceans that has been recorded as part of the parrot bycatch is the common dolphin (*Delphinus delphis*) which has been classified as a species of least concern[27]. In accordance with all of the above and considering the magnitude of the fishery, it is not possible to ensure at a “probable” level that the known effects of the fishery are within the limits established by national and international requirements for the protection of ETP species, there is also no assurance at a “likely” level that the known direct effects of UoA will not hamper the recovery of ETP species.

[24] Alfaro-Shigueto, J. et al. 2010. Where small can have a large impact: Structure and characterization of small-scale fisheries in Peru. Fisheries Research 106 (2010) 8 –17

[25] BirdLife International. 2018. Thalassarche melanophris. The IUCN Red List of Threatened Species 2018

[26] BirdLife International. 2018. Procellaria aequinoctialis. The IUCN Red List of Threatened Species 2018

[27] Braulik, G., Jefferson, T.A. & Bearzi, G. 2021. Delphinus delphis. The IUCN Red List of Threatened Species 2021

		2.3.2	Management strategy	< 60	An attempt has been made to promote the implementation of good practice procedures for the correct release of turtles for several years, through workshops and trainings, and turtle release kits have been provided to approximately 30 vessels[28]. In addition, the current ROP of Mahi mahi, establishes in its article 10 that all vessels must carry the utensils for the correct release of turtles, as well as trying to use hooks that prevent the capture of sea turtles. However, all these measures have been partially implemented in a minimum fraction of the fleet, there is also no knowledge that the release protocols are applied in the vessels that are equipped with the kits. In accordance with the above, it cannot be guaranteed that there are measures that minimize the mortality of ETP species related to UoA, which allows ensuring at a "very probable" level that they are capable of meeting national and international requirements for protection of the ETP species. It is not possible to ensure that measures have been implemented that are expected to ensure that UoA does not hinder the recovery of ETP species. And neither can it be assured that these work until it is known that the measures have been implemented by a significant part of the fleet. The existence of alternative measures to minimize the mortality of UoA-related ETP species is not recognized.

[28] Vinatea, R & A. Pásara. 2021. Informe Intermedio Consultoría para alcanzar el cumplimiento de metas de Perú Mahi Alliance

		2.3.3	Information	60 - 79	There are studies that have made possible to determine that the fishery can be a threat to the protection and recovery of ETP species, especially sea turtles, several studies have been carried out to generate indicators of turtles, birds and cetaceans bycatch, using different methodological approaches adapted to the complex reality of the fishery. However, most of the studies come from data of about a decade ago. Therefore, the information could be adequate to support some measures, but is not considered adequate to measure trends and to support a strategy to manage impacts on ETP species.
	Hábitats	2.4.1	Results	≥ 80	The operational characteristic of longlines implies that there is evidence that the fishery is highly unlikely to reduce habitat structure and function to a point where there could be serious or irreversible damage. Which also applies to Vulnerable Marine Ecosystems (VMEs). In this sense, unconditional approval is estimated.
		2.4.2	Management strategy	≥ 80	The strategy implemented to manage the impacts on the habitat is adequate, considering the pelagic nature of the gear. The pre-evaluation estimated an unconditional approval grade, no changes are anticipated regarding this condition. At present there are no changes regarding this initial rating.
		2.4.3	Information	60 - 79	During the pre-evaluation it was considered that not enough data is being collected on any risk that gears may have on habitats. Fishing effort has increased significantly and information on the risk that loss of gear could have in habitats is not collected on a regular basis. As a result, a conditional pass was deemed. To achieve an unconditional pass, it is necessary to generate geo-referenced information on the loss of fishing gear in order to identify actions aimed at improving management aspects if deemed necessary. At present there are no changes regarding this initial rating.
	Ecosystem	2.5.1	Resultado	≥ 80	The pre-evaluation concluded, using the RBF method, that the risk of impact on any of the subcomponents to be evaluated is low (that is, species composition, functional group composition, community distribution, and trophic structure/size). Therefore, an unconditional approval was estimated for the Result ID.

					At present there are no changes regarding this initial rating.
		2.5.2	Management strategy	60 - 79	In the pre-evaluation it was concluded that the risk of impact on the ecosystem is probably determined as low (ID 2.5.1). In addition, there are currently management measures designed to protect a part of the target population against capture and their reproductive potential (ie Minimum Landing Size and temporary closure, MTCL). These conservation measures would probably justify a minimum acceptable level to be achieved regarding the potential impact of the fishery on key components of the ecosystem and are considered to work on a plausible argument. However, if these control measures are not applied efficiently, it would prevent this ID from achieving an unconditional approval pass. At present there are no changes regarding this initial rating.
		2.5.3	information	60 - 79	In the pre-evaluation it was considered that there is knowledge of all the species that interact with the mahi mahi fishery and that there is sufficient information on the impacts of fishing on these species to infer some of the main consequences for the ecosystem. However, the impact of the fishery on the ecosystem was qualitatively assessed and the information available on the ecosystem and the fishery could only be used to assess risk. Furthermore, the pre-assessment determined that, as described for the target species and the principle 2 species, insufficient data was collected in order to inform management and detect any increase in the level of outcome risk. Therefore, the pre-assessment concluded that the lack of information gathered related to the impact of the fishery on the ecosystem would prevent the fishery from achieving an unconditional pass under this ID. At present there are no changes regarding this initial rating.
3	Governance and politics	3.1.1	Legal and customary framework	>80	There is an effective national legal system and there is permanent cooperation with other parties at the level of regional organizations, at the IATTC since 2014, and at the bilateral level with Ecuador. In this last aspect, the audit team was informed that in 2018, the

					Peruvian Sea Institute (IMARPE) and its Ecuadorian counterpart, the Public Aquaculture and Fisheries Research Institute of Ecuador (IPIAP), renewed the framework cooperation agreement between Both institutions, within this context, IMARPE has been working in coordination with IPIAP, in research aimed towards the mahi mahi fishery. In the previous review of the action plan it was established that, since it is possible that there are sufficient conflict resolution processes for the requirements of the standard, it was necessary to carry out a review of the mechanisms for conflict resolution and respect for rights, since that although both elements are considered in the legal framework, doubts persist as to whether the conflict resolution mechanisms are applied in a transparent and appropriate way to the context of the UoA and, on the other hand, whether there are mechanisms to recognize rights established by the use of people in order to be able to respect them (M72). However, in the meeting with the interested parties it was clarified that there are tools for conflict resolution and that these fall on the Presidency of the Council of Ministers which is established by Supreme Decree 022-2017 PCM appropriate to DS 042 2018 PCM, in which is stipulated that it is the Secretariat for Social Management and Dialogue, the line body with regulatory technical authority at the national level, responsible for matters of prevention, management and solution of controversies, differences and social conflicts and among its functions are: • Coordinate participation in the processes of dialogue, mediation, negotiation for the resolution of controversies, differences and identified social conflicts. • Coordinate and implement with the various Sectors and levels of Government, the mechanisms for early warning and prevention of controversies, differences and social conflicts. • Coordinate with all entities of the Executive Power and regional governments and local governments, due attention to the processes of dialogue, mediation, negotiation, among other mechanisms, for the solution of controversies and social conflicts. • Coordinate and articulate communication strategies with the various government sectors in coordination with the entity's competent body, aimed at preventing social conflicts.

					• Collect information and coordinate with public entities the delivery of information on social conflicts, as well as systematize and analyze the information obtained. • Contribute to the generation of capacities for the prevention and management of controversies, differences and social conflicts. • Manage the registry of cases of social conflict. Finally, the Artisanal Fisheries Formalization System, Legislative Decree 1392, establishes the procedure for granting fishing permits, by which it is understood that the management system has a mechanism to respect legal rights, expressly created or established by the uses of people. With all this, the probable score is an unconditional pass, and in the face of a complete evaluation, records should be shown to confirm that the conflict resolution mechanisms are applied and working.
		3.1.2	Consultation, roles and responsibilities	>80	The institutions that participate in the management process are clearly identified. The functions, roles and responsibilities of the key areas of responsibility and interaction are expressly defined and appear to be well understood. This is expressly defined in the Regulation of Organization and functions of the Ministry of Production, DS 002-2017-PRODUCE. On the other hand, the pre-evaluation concluded that the consultation processes are not formally established and do not occur frequently or regularly, and in most cases, stakeholder participation in the consultation process is not representative. However, in the meeting with the interested parties it was revealed that it was not appropriate to Peruvian regulations to have a permanent public-private group. Along with this, PRODUCE officials stipulated that user consultations are made on a regular basis when the fishery requires it. Which can be considered in this way since consultation processes have indeed been carried out both for the preparation of the mahi mahi National Action Plan (NAP) and the ROP. In addition, DS-001-2009 of the Ministry of Justice establishes that for the Dissemination of the draft legal norms of a general nature, there must be at least 30 days for any interested person to comment on the proposed measures. In addition to this, recently the Presidency of the Council of Ministers (PCM) published Supreme

					Decree 063-2021-PCM on April 3, 2021, which approves the regulation that develops the institutional framework that governs the Regulatory Improvement process and establishes the guidelines general rules for the application of the Regulatory Impact Analysis (RIA) which stipulates that public entities must “Guarantee that the regulatory production process is open and transparent, for which, said process contains mechanisms for public consultation, coordination and permanent cooperation that allow the early participation of the interested parties and public entities involved in the implementation of the provisions that are the subject of regulation ”. In addition, it expressly stipulates that, in order to achieve transparency, predictability, openness and active participation in the normative production process, the public entity programs and organizes public consultation, in its two forms, "early public consultation" and "consultation regulatory project public”. Because of all that was mentioned, it is considered that the consultation procedure offers the opportunity for all interested parties and affected parties to participate. Furthermore, in the elapsed time of the FIP it is possible to affirm that a generic consultation procedure is established and, in fact, the fishery demonstrates that it has consultation processes and these are regular, consulting key organizations of the fishery.
		3.1.3	Long-term goals	>80	The legal framework for fishing in Peru is framed in the General Fisheries Law (Decree Law 25977), which explicitly includes sustainable development and responsible use of the fishery resources in fisheries management. In addition, both the mahi mahi NAP and ROP contain clear long-term objectives that guide decision-making, in a manner consistent with the Standard. The ROP stipulates that it must be in accordance with the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO), therefore it is understood that it explicitly considers the approach as part of the management system. At the regional level, CIAT's management criteria include long-term management as one of its objectives. In the international context, Peru is a signatory to binding agreements for the conservation of

					endangered, threatened or protected species, for which long-term objectives are explicitly defined. For these reasons and as it was established since the first review of the FIP, the probable score of this indicator is with unconditional pass.
	Fisheries specific management system	3.2.1	Specific objectives of fishing	60 - 79	It is considered that the ROP establishes general objectives of the fishery that will be operationalized through the Transitory Complementary Provisions established in the Monitoring and Evaluation of the ROP, which is executed by means of a Directorial Resolution of the General Directorate of Policies and Regulatory Analysis in Fisheries and Aquaculture of the Office Vice Minister of Fisheries and Aquaculture. In this resolution, the indicators that allow quantifying the goal of the general objectives established in the ROP are approved. Therefore, it is expected to contain Biological Reference Points (BRP) that minimally consider MSY as an operational objective to maintain in the mahi mahi population. It is expected that, with the promulgation of the mentioned resolution, well-defined and quantifiable objectives will be explicitly established for Principles 1 and 2 of the MSC within the fishery management system, reaching, at least, an unconditional pass. As long as this does not happen, a conditional pass evaluation is maintained since it is considered that the specific objectives of the fishery are still implicit in the management system.
		3.2.2	Decision-making processes	60 - 79	There are decision-making processes that are underway and it is expected that with the monitoring and evaluation of the ROP, executed by means of a Directorial Resolution of the General Directorate of Policies and Regulatory Analysis in Fisheries and Aquaculture, they will be duly established to generate measures and strategies to address important fishery issues such as maintaining mahi mahi population status around MSY and avoiding unacceptable impact on ETP species. Currently the precautionary approach is not considered, however, once the management strategy is implemented, it is expected that the decision-making will contain a precautionary approach on ETP species and for the target species, ideally, this reflected in the BRP used (greater than the BMSY) or risk aversion to reach the MSY.

					On the other hand, the Law of Transparency and Access to Public Information, Law No. 27806, establishes that the State must adopt basic measures that guarantee and promote transparency in the actions of Public Administration entities and has the obligation to deliver the information that people demand.
		3.2.3	Compliance and enforcement	<60	There is a Monitoring, Control and Surveillance (MCV) system whose responsibility is of the DGSF-PRODUCE. The MCV system has different tools for control, such as port inspectors whose coverage is in the order of 50-60% of total landings, Closed Circuit TV (CCTV) systems in the main authorized landing points that allows the support of inspectors and avoids acts of bribery and a strategy to identify critical points of non-compliance with regulations, such as ports and plants with high incidence of infractions, information that is used to make decisions to redirect inspection efforts[29]. In accordance with the above, it is possible to indicate that a monitoring, control and surveillance system has been applied in the fishery and has demonstrated its ability to apply the relevant management measures, strategies or standards, which in this case is the legal minimum size and ban. This situation should be reassessed when the ROP is implemented, specifically those measures aimed at controlling catches/effort and the application of protocols to reduce the impacts on ETP species. On the other hand, the RISPAC (Regulation of Fisheries and Aquaculture Inspections and Sanctions) has updated the sanction mechanisms and it clearly details the causes of infringement of the extractive activity of hydrobiological resources, in turn, it details the associated sanction levels and the institutions that must collaborate in the inspection process, indicating the role of each of these[30]. Because of this, it is possible to indicate that there are sanctions to deal with non-compliance witch are applied consistently and are considered to have an effective deterrent effect. In general terms, it is thought that fishermen who are regularized comply with the fishery management system, however, the process

[29] Comunicación personal del representante de la DGSF-PRODUCE realizada durante la reunión con las partes interesadas.

[30] Resolución Ministerial N°163-2017. Reglamento de Inspecciones y Sanciones Pesqueras y Acuícolas

					of formalizing authorized vessels[31] has not yet completed and it is possible that many of the vessels currently operating do so illegally, which determines the level of compliance with the regulations. Due to this problem, it cannot be guaranteed that there is no systematic breach of the regulations.
		3.2.4	Management performance evaluation	<60	Under the regulation on the organization and functions of PRODUCE (DS 009-PRODUCE-2017), the General Directorate of Policies and Regulatory Analysis in Fisheries and Aquaculture, specifically the Directorate of Monitoring and Evaluation has the functions of evaluating the implementation of regulations in fishing. It is expected that once the ROP is approved, the monitoring and evaluation of the regulations will be carried out since it establishes that by means of a Directorial Resolution of the General Directorate of Policies and Regulatory Analysis in Fisheries and Aquaculture the indicators will be established that allow quantifying the goal of the general objectives established, as well as the plan for monitoring compliance with the provisions contained in the Operating Regulations, which will form part of the permanent evaluation. Until this happens, this indicator has no improvement.

Results of the Work Plan

Summary of key results that have been achieved over the past three years (or since the last conducted audit) as a result of the FIP work plan. An explanation of the steps the FIP participants took to support and achieve each outcome is provided.

Results	Related action	Performance indicator (MSC)	Explanation
Fishing Regulation Regulation	1.2.1 Development and implementation of conservation measures for the target species	1.2.1 1.2.2 2.3.1 2.3.2	Recently, the “Supreme Decree that approves the Regulation of Fisheries Management of the mahi mahi Resource” - mahi mahi fishery management regulation (ROP, for its Spanish acronym) was published.

[31] Decreto Legislativo DL N° 1392. Promueve la formalización de la actividad pesquera artesanal SIFORPA II.

	1.2.2 Development and implementation of harvest control rules 2.1.4 Development of a management strategy to ensure that the fishery does not have an unacceptable impact on ETP species 3.2.1 Specific objectives of the fishery	2.5.2 3.2.1 3.2.2	For the development of the mahi mahi ROP, WWF collaborated with PRODUCE in the organization and development of workshops with different fishery stakeholders to socialize the draft ROP and collect suggestions, contributions and questions from the participants. Along these lines, five workshops were held virtually: three workshops with artisanal fishermen, 1 workshop with representatives of the industrial sector and 1 workshop with researchers and academics. Later, the results were systematized in different reports and delivered to the Ministry of Production for review. The ROP is a legal instrument that transversally contributes to various indicators of the MSC standard. Regarding P1, the ROP recognizes the existing measures, but adds the possibility of strengthening the management strategy through the generation of HCR. Since it allows the limitation of catches or the limitation of the number of hooks based on the scientific recommendation of IMARPE, based on the status of the fishery. Although the mechanism for the application of the HCR is not explicit in the ROP, it is expected that this will be made explicit through the enactment of the Directorial Resolution that will allow the monitoring and evaluation of the ROP. Regarding P2, the ROP establishes certain measures aimed at the mandatory implementation of bycatch release practices, especially turtles. In addition, it establishes the use of hooks that prevent these captures from occurring. Finally, the ROP is a first step for the generation of specific objectives for the fishery coinciding with P1 and P2. Although, the objectives of the ROP are still considered implicit, this should advance with the promulgation of the Directorial Resolution that will allow the monitoring and evaluation of the ROP.
Dissemination of draft legal norms	3.1.2		Prior to this audit, it had been established that the consultation processes were not formally established and that they did not occur frequently or on a regular basis, and in most cases, stakeholder participation in the consultation process was not representative.

			However, in the meeting with the interested parties, the existence of legal frameworks for consultation and participation was discussed, specifically DS-001-2009 of the Ministry of Justice, which establishes that for the dissemination of draft legal norms, at least 30 days must be allowed for any interested person to comment on the proposed measures. In addition to this, recently the Presidency of the Council of Ministers (PCM) published Supreme Decree 063-2021-PCM on April 3, 2021, which approves the regulation that develops the institutional framework that governs the Regulatory Improvement process and establishes the general guidelines for the application of Regulatory Impact Analysis (RIA). In addition, it is understood that in fact this framework of consultation and participation is used, proof of this is that consultation processes have indeed been carried out both for the preparation of the Mahi Mahi National Action Plan (PAN- Perico) and the mahi mahi ROP as noted above. Apart from the collaboration between WWF and PRODUCE for the development of workshops with different stakeholders in the fishery, WWF carried out a dissemination campaign on the importance of having the Fisheries Management Regulation (ROP) for mahi mahi, which included the creation of a video that was disseminated along with infographics through social networks.