



In-Transition to MSC (ITM) Program - Pilot
Marine Stewardship Council

Lemuru Fisheries in the Bali Strait, East Java, Indonesia

FMA 573

Fishery Improvement Action Plan

1. Improvement Action Plan overview

Table 1a. Improvement Action Plan Overview

Fishery name (or Unit/s of Assessment):	Lemuru Fisheries Bali Strait	Fishery location:	Bali Strait
Fishing gear type(s):	Purse Seine GillNet	Fishery in ITM program? (Applicant/Yes/No):	No
Start date (expected):	End date (anticipated month/year of entering MSC Full Assessment (or in the case of a suspended MSC certificate, start the reinstatement process)):		
October 2024	September 2029		
Project leaders (organisation/individual responsible for Action Plan):	Action plan and improvements recommended by (stakeholder groups, organisations, or meetings that supported the development):		
East Java Marine and Fisheries Agency	East Java Marine and Fisheries Agency Ministry Marine Affairs and Fisheries Nusantara Fishing Port Pengembangan Muncar Coastal Fishing Port, East Java Fisheries agency Banyuwangi district Fisheries extention (MMAF) Muncar area Faculty of Marine and Fisheries Brawijaya University Indonesia Mobula Project PT. Sahabat Laut Lestari MSC Yayasan MDPI		



	Yayasan WWF Indonesia
FIP Coordinator/ ITM Project Manager (name, affiliation, and position if applicable):	Action Plan developed by (entity, consultant, or person):
	MSC Technical Consultant Group : Heri, Ledhyane Ikan Harlan, Andini Kusumasari, A. Riza Baroqi
Date when this Action Plan was created:	Date/s of updated versions of this Action Plan:
Version of 1-19 August 2024	Versi 4-28 March 2025
Summary of the Action Plan (Provide an overview of the action plan. If the action plan has been updated, highlight key changes here.) (Add/delete Principles as appropriate and include action IDs):	
<p>Principal 1 Provide good information on the status of lemuru stocks and support the development of harvest strategies and control rules and tools for lemuru fisheries.</p> <p>Principal 2 Provide information on the impacts of lemuru fishing activities on existing ecosystems and interactions with endangered protected species (ETPs) where applicable, and develop mitigation measures to ensure that serious or irreversible damage does not occur</p> <p>Principal 3 Develop a fisheries management plan specific to lemuru fisheries Improve fisheries compliance and strengthen</p>	
Stakeholder inputs into the Action Plan (Optional. If the action plan has been updated, include here stakeholder updates if relevant).	

References (<i>document/s on which the Action Plan was based</i>):
Pre-Assessment Report BMT East Java Lemuru Bali Strait Supply Chain Study

1b. Improvement Action Plan Overview by Performance Indicator

Table 1b. Improvement Action Plan Overview by Performance Indicator- – MSC Fisheries Standard v3.0

Performance Indicator (PI)	Action ID and Name	Timescale
1.1.1 Stock status	-	
1.1.2 Stock rebuilding	-	-
1.2.1 Harvest Strategy	Action 2. Create a Harvest strategy and Harvest control rules for lemuru species, which will reduce the level of exploitation when approaching the point of recruitment impairment .	46 months
1.2.2 Harvest control rules and tools	Action 2. Create a Harvest strategy and Harvest control rules for lemuru species, which will reduce the level of exploitation when approaching the point of recruitment impairment.	46 months
1.2.3 Information and Monitoring	Action 1. Conduct operational data collection of lemuru catches (fishery logbook) at the fisherman level that includes total catch and species composition	30 months
	Action 2. Create a Harvest strategy and Harvest control rules for lemuru species, which will reduce the level of exploitation when approaching the point of recruitment impairment .	46 months
1.2.4 Assessment of stock status	-	

Performance Indicator (PI)	Action ID and Name	Timescale
2.1.1 In-scope species outcome	Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed.	36 months
2.1.2 In-scope species management strategy	Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed.	36 months
2.1.3 In-scope species information	Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed.	36 months
2.2.1 ETP/OOS species outcome status	Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed.	36 months
2.2.2 ETP/OOS species management strategy	Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed.	36 months
2.2.3 ETP/OOS species information	Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed.	36 months
2.3.1 Habitats outcome status	-	
2.3.2 Habitats management strategy	Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed.	36 months
2.3.3 Habitats information	Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed Action 4: Collect spatial data on lemuru fisheries, mapping habitat types and ecosystems to determine the catchment area and extent of occupancy from fishing activities.	36 months
		15 months
2.4.1 Ecosystem outcome status	Action 1. Conduct operational data collection of lemuru catches (fishery logbook) at the fisherman level covering total catch and species composition	26 months
		36 months

Performance Indicator (PI)	Action ID and Name	Timescale
	<p>Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed.</p> <p>Action 4: Collect spatial data of lemuru fisheries, mapping habitat types and ecosystems to determine the catchment area and area of occupancy of fishing activities.</p>	15 months
2.4.2 Ecosystem management strategy	<p>Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed.</p>	36 months
2.4.3 Ecosystem information	<p>Action 1. Conduct operational data collection of lemuru catches (fishery logbook) at the fisherman level covering total catch and species composition</p> <p>Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch stocks and ETP.</p> <p>Action 4: Collect spatial data of lemuru fisheries, mapping habitat types and ecosystems to determine the catchment area and area of occupancy of fishing activities.</p>	<p>26 months</p> <p>36 months</p> <p>15 months</p>
3.1.1 Legal and/or customary framework	<p>Action 5. Review the existing Fisheries Management Plan (FMP) so that it can be implemented and continued in the preparation of Harvest strategies and Harvest control regulations</p>	42 months
3.1.2 Consultation, roles & responsibilities	<p>Action 2. Create a Harvest strategy and Harvest control rules for lemuru species, which will reduce the level of exploitation when approaching the point of recruitment impairment .</p>	42 months
3.1.3 Long-term objectives	<p>Action 5. Review the existing Fisheries Management Plan (FMP) so that it can be implemented and continued in the preparation of Harvest strategies and Harvest control regulations.</p> <p>Action 6: Improve fisheries monitoring and compliance in the assessment area to ensure prohibited and destructive fishing practices are not carried out in the area and thereby ensure that lemuru habitat remains sustainable</p>	<p>42 months</p> <p>24 months</p>

Performance Indicator (PI)	Action ID and Name	Timescale
	Action 7: Create a lemuru fisheries management forum in the Bali Strait involving the central government to increase opportunities for consultation and provide a stronger platform for cooperation, especially between the Provinces of East Java and Bali	26 months
3.2.1 Fishery-specific objectives	<p>Action 2. Create a Harvest strategy and Harvest control rules for lemuru species, which will reduce the level of exploitation when approaching the point of recruitment impairment .</p> <p>Action 5. Review the existing Fisheries Management Plan (RPP) so that it can be implemented and continued in the preparation of Harvest strategy and harvest control rules.</p>	<p>46 months</p> <p>42 months</p>
3.2.2 Decision-making processes	<p>Action 2. Create a Harvest strategy and Harvest control rules for lemuru species, which will reduce the level of exploitation when approaching the point of recruitment impairment .</p> <p>Action 5. Review the existing Fisheries Management Plan (RPP) so that it can be implemented and continued in the preparation of Harvest strategy and harvest control rules.</p>	<p>46 months</p> <p>42 months</p>
3.2.3 Compliance & enforcement	Action 6: Improve fisheries monitoring and compliance in the assessment area to ensure that prohibited and destructive fishing practices are not carried out in the area and thereby ensure that the lemuru habitat remains sustainable.	24 months
3.2.4 Monitoring and management performance evaluation	Action 7: Establish a lemuru fisheries management forum in the Bali Strait involving the central government to increase opportunities for consultation and provide a stronger platform for cooperation, especially between East Java Province and Bali Province.	26 months

2. Actions at Performance Indicator and/or Scoring Issue level

Table 2a. Performance Indicator Action Plan table for Action A.1

Action ID no	A. 1					
Action name	Action 1. Conduct operational data collection on lemuru catches (fisheries logbook) at the fisherman level, which includes total catch and species composition.					
Action summary	Operational data collection on lemuru fishing needs to be carried out comprehensively at the fishermen level in order to obtain information on the composition and total catch landed for both gears, purse seine and gillnet.					
Goal	To provide a robust data on fishing operational, catch composition and status of species target					
Performance Indicator(s) and/or Scoring Issue(s)	1.2.3 – Information and monitoring relevant					
Date of completion	March 2027 (Start October 2024)					
Task No.	Responsible – Action lead	Responsible – Action partners	Resources – Cost	Resources - Time	Date of completion	Evidence of completion
A.1.1 Approach to academics and researchers to conduct stock status assessment research of target species	DKP East Java Province and DKP Prov. Bali	Marine and Fisheries Brawijaya University, PT. Sahabat Laut Lestari, PPP Muncar, PPN Pengambangan, PPN Prigi, PPP Puger, Kolektif	Rp. 20.000,000, -	6 month (Begin October 2024)	April 2025	Meeting report Research List

<p>A.1.2 Support academics and researchers to conduct research on the stock status of target species</p>	<p>DKP East Java Province and DKP Prov. Bali</p>	<p>Marine and Fisheries Brawijaya University, PT. Sahabat Laut Lestari, PPP Muncar, PPN Pengambangan, PPN Prigi, PPP Puger, Kolektif</p>	<p>Rp. 200.000.000, -</p>	<p>24 months March 2025</p>	<p>February 2027</p>	<p>Research Report</p>
<p>A.1.3 Conduct workshops to determine the stock status of target species</p>	<p>DKP East Java Province and DKP Prov. Bali</p>	<p>Marine and Fisheries Brawijaya University, PT. Sahabat Laut Lestari, PPP Muncar, PPN Pengambangan, PPN Prigi, PPP Puger, Kolektif</p>	<p>Rp. 50.000,000, -</p>	<p>1 month</p>	<p>March 2027</p>	<p>Meeting report</p>

Table 3. Performance Indicator Action Plan table for Action A.2

Action ID no	A. 2					
Action name	Action 2. Create a Harvest strategy and Harvest control rules for lemuru species, which will reduce the level of exploitation when approaching the point of recruitment impairment					
Action goal	To ensure sustainable exploitation of lemuru by reducing fishing pressure near recruitment limits to prevent overfishing, protect spawning potential, and enable rule-based management responses					
Action summary	A Harvest Strategy (HS) is a fisheries management framework agreed upon by managers and stakeholders to adjust catch limits and management actions based on scientific data and population assessments. It includes simulations to evaluate various scenarios for long-term stock sustainability, accounting for uncertainty. The strategy requires evaluation to assess the effectiveness of its components—such as data collection systems, analysis methods, Harvest Control Rules (HCRs), and supporting facilities—through computer-based simulations. Developing a harvest strategy and HCRs for the lemuru fishery is essential to ensure that fishing activities do not compromise the sustainability of the stock.					
Performance Indicator(s) and/or Scoring Issue(s)	<p>1.2.1 - Harvest strategies</p> <p>1.2.2 - Harvest control rules and tools</p> <p>1.2.3 - Information and monitoring</p> <p>3.2.1 - Fisheries specific objectives</p> <p>3.2.4 - Monitoring and evaluation of management performance</p>					
Date of completion	February 2025 – Jan 2028					
Task No.	Responsible – Action lead	Responsible – Action partners	Resources – Cost	Resources - Time	Date of completion	Evidence of completion
A.2.1 List approaches taken in other lemuru/small pelagic	PSDI-MMAF	DKP East Java, DKP Bali, Fisheries Agency Banyuwangi district, Fisheries	Rp. 10.000,000, -	6 months	February - August 2025	Matrix of other lemuru fisheries

fisheries in other areas or in other countries.		Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, PPN Pengambengan, Fisheries extention officer, PT. Sahabat Laut Lestari, Mobula Project, University of Brawijaya, Fishers Group, PT. Sumber Yala Samudra, PT. Sarana Tani Pratama, Kolektif, UPI				approaches or strategies
A.2.2 Reviewing possible approaches that could support lemuru management in the Bali Strait	PSDI-MMAF	DKP East Java, DKP Bali, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extention officer, PT. Sahabat Laut Lestari, Mobula Project, University of Brawijaya, Fishers Group PT. Sumber Yala Samudra, UPI	Rp. 5.000.000	2 months	Sept – Okt 2025	Review Report
A.2.3 Developing Harvest strategies and harvest control rules and tools	PSDI-MMAF	DKP East Java, DKP Bali, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek	Rp. 300.000.000	24 months	Nov 2025 – Oct 2027	Interim Document Harvest Strategy and Harvest Control Rules

		district, fisheries agency Jember district, PPP Muncar, Fisheries extention officer, PT. Sahabat Laut Lestari, Mobula Project, University of Brawijaya, Fishers Group PT. Sumber Yala Samudra, UPI				
A.2.4 Conduct performance evaluation of the harvest strategy in accordance with the schedule set out in the fisheries management plan.	PSDI-MMAF	DKP East Java, DKP Bali, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extention officer, PT. Sahabat Laut Lestari, Mobula Project, University of Brawijaya, Fishers Group PT. Sumber Yala Samudra, UPI	Rp. 200.000.000	12 months	Nov 2027 – October 2028	Evaluation report
A.2.5 Implement changes to management if indicated necessary in the evaluation of the Harvest strategy.	PSDI-MMAF	DKP East Java, DKP Bali, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extention officer,	Rp. 20.000.000	2 months	Nov – Dec 2028	Harvest Strategy Document Updated

		PT. Sahabat Laut Lestari, Mobula Project, University of Brawijaya, Fishers Group PT. Sumber Yala Samudra, UPI				
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Tabel 4. Performance Indicator Action Plan table for Action B.1

Action ID no	B.1
Action name	Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and take necessary mitigation measures.
Action goal	To improve understanding of the impacts of bycatch and interactions with ETP species by enhancing data collection and information, enabling informed mitigation measures for both gears, purse seine and gillnet.
Action summary	Although data collection related to ETP species has been conducted, there is currently no data collection or available information on bycatch species. Therefore, comprehensive data collection is needed to ensure the availability of organized operational data on fishing activities, fishing effort, bycatch species, and ETP species. Such data is also essential for assessing the stock status of both target and bycatch species. Furthermore, improved data on ETP interactions during lemuru fishing will support the development and implementation of effective mitigation measures to reduce potential impacts on ETP species.
Performance Indicator(s) and/or Scoring Issue(s)	<p>2.1.1 In-scope species results</p> <p>2.1.3 In-scope species information</p> <p>2.2.1 – ETP/OOS species results</p> <p>2.2.3 – ETP/OOS species information</p> <p>2.3.3 Habitat information</p>

	2.4.1 – Ecosystem results					
	2.4.3 – Ecosystem information					
Date of completion	December 2026					
Task No.	Responsible – Action lead	Responsible – Action partners	Resources – Cost	Resources - Time	Date of completion	Evidence of completion
B. 1.1 Review of ongoing data collection at the fisherman level, fishing logbooks, NGO data collection and other forms of data collection.	PSDI-MMAF	DKP East Java, DKP Bali, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extention officer, PT. Sahabat Laut Lestari, WWF ID, Mobula Project, University of Brawijaya, Kolektif, fishers group, UPI	Rp. 10.000.000	3 months	October – December 2024	Review report
B.1.2 Establish existing data sharing mechanisms agreed upon by the data owners/takers.	DKP Prov. East Java DKP Prov. Bali	PSDI-MMAF, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extention officer, PT. Sahabat Laut Lestari, WWF ID, Mobula Project, University of	Rp. 50.000.000	6 months	January – June 2026	Data sharing mechanism agreement document

		Brawijaya, fishers group, UPI				
B.1.3 Deployment of enumerators or other possible data collection (e.g. time lapse cameras) to verify impacts on bycatch species and/or ETPs.	Mobula project Indonesia, WWF Indonesia	PSDI-MMAF, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extension officer, PT. Sahabat Laut Lestari, WWF ID, Mobula Project, University of Brawijaya, fishers group, UPI	Rp. 200.000.000, -	24 months	Jan 2025 – Des 2026	Data Report
B.1.4 Develop mitigation strategies to reduce the impact of fisheries on bycatch and interactions with ETP animals.	Mobula project Indonesia, WWF Indonesia	PSDI-MMAF, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extension officer, PT. Sahabat Laut Lestari, WWF ID, Mobula Project, University of Brawijaya, fishers group, UPI	Rp. 100.000.000, -	12 months	Jan 25 – Des 25	Agreed bycatch mitigation strategy and ETP
B.1.5 Regular review of data collection, conducting training for fishermen and enumerators when necessary.	DKP Prov. East Java DKP Prov. Bali	PSDI-MMAF, Fisheries Agency Banyuwangi district, Fisheries Agency	Rp. 100.000.000, -	18 months	July 2025 – December 2026	Activity report and training report

		Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extension officer, PT. Sahabat Laut Lestari, WWF ID, Mobula Project, University of Brawijaya, fishers group, UPI				
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Table 2. Action Plan Table of Performance Indicators for Action B.2

Action ID no	B.2
Action name	Action 4: Collect spatial data on lemuru fisheries, mapping habitat types and ecosystems to determine the catchment area and area of occupancy of fishing activities.
Action Goal	To collect spatial data on lemuru fisheries, for both gears, purse seine and gillnet, including habitat and ecosystem mapping, to identify the catchment area and area of occupancy of fishing activities.
Action summary	Lemuru fishing activities are believed to have very low, or even negligible, impact on existing habitats and ecosystems. However, supporting data is not yet available, so the impact assessment is currently conducted using a risk-based framework approach. The provision of spatial data, along with habitat and ecosystem mapping, is necessary to accurately determine the extent of fishing impacts and to identify key components within potentially affected ecosystems.
Performance Indicator(s) and/or Scoring Issue(s)	2.4.1 – Ecosystem outcomes 2.4.2 – Ecosystem management strategies 2.4.3 – Ecosystem information

Date of completion	September 26					
Task No.	Responsible – Action lead	Responsible – Action partners	Resources – Cost	Resources - Time	Date of completion	Evidence of completion
B.2.1. Placement of tracking devices to obtain spatial data on fishing, or agreed tracking applications	DKP Prov. East Java DKP Prov. Bali	PSDI-MMAF, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extention officer, PT. Sahabat Laut Lestari, WWF ID, Mobula Project, University of Brawijaya, Kolektif, fishers group, UPI	Rp. 200.000,000,-	12 months	July 2025 – June 2026	Device installation report, Vessels list
B.2.1. Mapping of spatial data of fishing, together with habitat and ecosystem in fishing area.	DKP Prov. East Java DKP Prov. Bali	PSDI-MMAF, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extention officer, PT. Sahabat Laut Lestari, WWF ID, Mobula Project, University of Brawijaya, fishers group, UPI	Rp. 20.000.000	3 months	July – Sept 26	Map of fishing ground with habitat and ecosystem types

Table 2. Action Plan Table of Performance Indicators for Action C.1

Action ID no	C.1					
Action name	Action 5. Review the existing Fisheries Management Plan (FMP) so that it can be implemented and continued in the preparation of harvest strategies and harvest control rules.					
Action Goal	To ensure the Fisheries Management Plan is aligned with and supports the development and implementation of harvest strategies and harvest control rules.					
Action summary	The Lemuru Fisheries Management Plan (FMP) was established in 2023; however, a dedicated study is needed to define the scope of the management area, identify involved stakeholders, and develop several strategic management components. This is essential for preparing an effective Harvest Strategy (HS) and implementing applicable Harvest Control Rules (HCRs).					
Performance Indicator(s) and/or Scoring Issue(s)	3.1.1 – Legal framework and traditions 3.1.2 – Consultation, roles and responsibilities 3.1.3 – Long-term objectives 3.2.1 – Specific fisheries objectives 3.2.2 – Decision-making processes					
Date of completion	March 2028					
Task No.	Responsible – Action lead	Responsible – Action partners	Resources – Cost	Resources - Time	Date of completion	Evidence of completion
C.1.1 Socialization and public consultation regarding the Lemuru RPP, mapping out the roles and responsibilities of	PSDI-MMAF	DKP Prov. East Java, DKP Prov. Bali, Fisheries Agency Banyuwangi	Rp. 150.000.000	6 months	October 2024 – Mar 2025	Results of public consultation meetings and feedback list

<p>related parties and feedback mechanisms regarding the FMP document.</p>		<p>district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extension officer, PT. Sahabat Laut Lestari, WWF ID, Mobula Project, University of Brawijaya, Kolektif, fishers group, UPI</p>				
<p>C. 1. 2. Following up on the results of feedback from the series of meetings, including producing additional technical regulations/technical guidelines and/or joint decrees if necessary, so that the Lemuru FMP can be implemented effectively and maintain the sustainability of lemuru stocks along with the existing habitat and ecosystem.</p>	<p>PSDI-MMAF</p>	<p>DKP Prov. East Java, DKP Prov. Bali, Fisheries Agency Banyuwangi district, Fisheries Agency Trenggalek district, fisheries agency Jember district, PPP Muncar, Fisheries extension officer, PT. Sahabat Laut Lestari, WWF ID, Mobula Project, University of Brawijaya, fishers group, UPI</p>	<p>Rp. 100.000.000</p>	<p>24 months</p>	<p>April 2025 – March 2027</p>	<p>Technical Implementation Guidelines for Lemuru FMP</p> <p>SKB for Lemuru Management in Bali Strait</p> <p>Results of Lemuru RPP Review</p>

Tabel 5. Tabel Rencana Aksi Indikator Kinerja untuk Aksi C.2

<p>Action ID no</p>	<p>C.2</p>
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Action name	Action 6: Improve fisheries monitoring and compliance in the assessment area to ensure that prohibited and destructive fishing practices are not carried out in the area and thereby ensure that the lemuru habitat remains sustainable.					
Action goal	Monitor the habitat-ecosystem condition to ensure no prohibited or destructive fishing practices, and provide management recommendations to maintain lemuru habitat sustainability.					
Action summary	The relevant parties in this fishery will strive to improve compliance and supervision by conducting a compliance study to determine the current level of compliance, and identify existing gaps. By identifying these issues, corrective measures can be determined to improve compliance and supervision and an evaluation will be carried out to see whether the corrective measures taken are appropriate or need to be adjusted again.					
Performance Indicator(s) and/or Scoring Issue(s)	3.2.3 – Compliance and enforcement					
Date of completion	February 2027					
Task No.	Responsible – Action lead	Responsible – Action partners	Resources – Cost	Resources - Time	Date of completion	Evidence of completion
C.2.1 Review national and provincial requirements and vessel compliance within the UoA	PSDI	DKP Jatim, DKP Bali,, Dinas Kabupaten Banyuwangi, Dinas Kabupaten Trenggalek, Dinas Kabupaten Jember, PPP Muncar, Penyuluh Perikanan, PT. Sahabat Laut Lestari, Yayasan WWF ID, Mobula Project, Universitas Brawijaya, Kolektif, Kelompok Nelayan, UPI	Rp. 10.000.000,-	6 months	Marrch – September 2025	Compliance review report

C.2.2 Action plan to address non-compliance issues to be resolved	PSDI KKP, PSDKP DKP Jatim DKP Bali	Dinas Kabupaten Banyuwangi, Dinas Kabupaten Trenggalek, Dinas Kabupaten Jember, PPP Muncar, Penyuluh Perikanan, PT. Sahabat Laut Lestari, Yayasan WWF ID, Mobula Project, Universitas Brawijaya, Kelompok Nelayan, UPI	Rp. 20.000.000,-	6 month	October 2025 – February 2026	Action Plan Document and Activity report
C.2.3 Evaluation of the implementation of the action plan	PSDI KKP, PSDKP DKP Jatim DKP Bali	Dinas Kabupaten Banyuwangi, Dinas Kabupaten Trenggalek, Dinas Kabupaten Jember, PPP Muncar, Penyuluh Perikanan, PT. Sahabat Laut Lestari, Yayasan WWF ID, Mobula Project, Universitas Brawijaya, Kelompok Nelayan, UPI	Rp. 20.000.000,-	12 months	March 2026 – February 2027	Review showing fisheries (compared to C.2.1)

Tabel 6. Tabel Rencana Aksi Indikator Kinerja untuk Aksi C.3

Action ID no	C.3
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Action name	Action 7: Establish a lemuru fisheries management forum in the Bali Strait involving the central government to increase consultation opportunities and provide a stronger platform for cooperation, especially between East Java Province and Bali Province.					
Action goal	The lemuru fisheries management forum in the Bali Strait is available, and there is a stronger platform for cooperation, especially between East Java Province and Bali Province.					
Action summary	Currently, there is no forum or mechanism to ensure that related parties in fisheries can play an active role in the process of solving fisheries problems or in decision-making, especially at East Java and Bali Provinces. With the platform in the form of a forum or commission, it is hoped that the parties can channel their aspirations and play an active role in the decision-making process in fisheries. This forum or commission can also be a place for the parties to discuss policies and other fisheries issues.					
Performance Indicator(s) and/or Scoring Issue(s)	3.2.4 – Pemantauan dan evaluasi kinerja pengelolaan					
Date of completion	December 2026					
Task No.	Responsible – Action lead	Responsible – Action partners	Resources – Cost	Resources - Time	Date of completion	Evidence of completion
C 3.1 Conduct regular multi-stakeholder meetings (based on Lemuru supply chain analysis report) to discuss lemuru fisheries issues	PSDI	DKP Jatim, DKP Bali,, Dinas Kabupaten Banyuwangi, Dinas Kabupaten Trenggalek, Dinas Kabupaten Jember, PPP Muncar, Penyuluh Perikanan, PT. Sahabat Laut Lestari, Yayasan WWF ID, Mobula Project, Universitas Brawijaya,	Rp. 200.000.000,-	48 month	November 2024 – January 2029	Meetings report

		Kelompok Nelayan, UPI				
C.3.2 Formalization of forum/committee institutions	PSDI	DKP Jatim, DKP Bali,, Dinas Kabupaten Banyuwangi, Dinas Kabupaten Trenggalek, Dinas Kabupaten Jember, PPP Muncar, Penyuluh Perikanan, PT. Sahabat Laut Lestari, Yayasan WWF ID, Mobula Project, Universitas Brawijaya, Kelompok Nelayan, UPI	Rp. 20.000.000,-	18 months	July 2025 – December 2026	Institution Decree

3. Action Timescales Summary

Table 7. Action Timescales Summary

Action ID and Name	Date of completion expected	Revised date of completion <i>(only to be completed if a revised IAP is produced and action completion dates change)</i>	Justification for revised date of completion <i>(only to be completed if date of completion has been revised. If exceptional circumstances apply, please note these here)</i>
Action 1. Conduct operational data collection of lemuru catches (fishery logbook) at the fisherman level that includes total catch and species composition	March 2027		
Action 2. Create a Harvest strategy and Harvest control rules for lemuru species, which will reduce the level of exploitation when approaching the point of recruitment impairment.	January 2028		
Action 3. Improve data collection and information related to bycatch species and ETP species interactions to improve understanding of the impacts of bycatch and ETP stocks and the mitigation needed.	December 2026		
Action 4: Collect spatial data on lemuru fisheries, mapping habitat types and ecosystems to determine the catchment area and extent of occupancy from fishing activities.	September 2026		
Action 5. Review the existing Fisheries Management Plan (FMP) so that it can be implemented and continued in the preparation of Harvest strategies and Harvest control regulations	March 2028		
Action 6: Improve fisheries monitoring and compliance in the assessment area to ensure prohibited and destructive fishing practices are not	February 2027		

Action ID and Name	Date of completion expected	Revised date of completion <i>(only to be completed if a revised IAP is produced and action completion dates change)</i>	Justification for revised date of completion <i>(only to be completed if date of completion has been revised. If exceptional circumstances apply, please note these here)</i>
carried out in the area and thereby ensure that lemuru habitat remains sustainable			
Action 7: Create a lemuru fisheries management forum in the Bali Strait involving the central government to increase opportunities for consultation and provide a stronger platform for cooperation, especially between the Provinces of East Java and Bali	December 2026		

4. Progress Verification Schedule

This table should be completed to summarise the anticipated verification schedule. An ITM fishery must undergo regular progress verification. Verification dates should be based on the date of completion of actions and should occur regularly such that the duration between consecutive Progress Verification reports being uploaded to the MSC database by the CAB is no longer than 2 years.

For each progress verification, please provide a list of the Actions which are planned to be completed by that date and a list of the Performance Indicators which are projected to have improved Scoring Ranges as a result of the completed Actions. Some progress verifications may not involve any change in score and in these cases this column should be left blank.

It is recommended that for fisheries with an IAP longer than 2 years, at least one onsite verification should be conducted around the midway mark of the full ITM period. This table should propose whether an onsite or offsite progress verification is needed and the CAB will make the final decision on which type of verification is most appropriate.

Table 8. Progress Verification Schedule

Progress verification	Expected year and quarter (e.g. YYYY, Q1)	Onsite or offsite?	Completed Actions to be verified (List action IDs)	Performance Indicators with improved Scoring Range
1				
2				
3				
4				
5				



5. Performance Indicator Score Changes (Benchmarking and Tracking Tool)

Please provide a reference or hyperlink to the completed Benchmarking and Tracking Tool (BMT) for the fishery.

Alternatively, you can copy the tables from the BMT into here.

6. Stakeholder Action Plans

This section is **Optional**. The Improvement Action Plan report could include an individual action plan for each stakeholder that is responsible for delivery of actions. The report may also include signed agreements from the stakeholders that have been assigned a responsibility for a particular action.

Complete a separate stakeholder responsibilities table for each stakeholder group.

Table 9. Stakeholder responsibilities

Stakeholder	[Insert stakeholder name and contact information here]
Actions for which responsible	[Insert the Action IDs for which the stakeholder is responsible]
Tasks	[Insert tasks for which the stakeholder is responsible]
Date of completion	[Insert date that the tasks should be completed by]

Appendix. Stakeholder Agreement or Commitment to Undertake Improvement Actions

Include any supporting documents such as signed agreements, Memoranda of Understanding (MoUs) in support of commitments made

7. Traceability Improvement Actions

The use of the Traceability Improvements Action section is **optional**.

Use Table 6 to describe the fishery traceability system and UoA product movement. Use Table 7 to detail traceability risk factors and the risk mitigation and management. Both sections can be taken from the Pre-Assessment report or Full Assessment/Surveillance report and updated here as necessary.

During full assessment of a fishery, it is required to consider the tracking, tracing, and segregation systems within the fishery and how these systems will allow any products sold as MSC certified to be traced back to the individual Unit of Certification (UoC) once the fishery is certified. This includes a description of the factors that may lead to risks of non-certified seafood being mixed with certified seafood prior to entering Chain of Custody as set out in the MSC Fisheries Process (FCP 2.3 7.5.9, FCP 3.0 7.5.10).

Although there is no UoC defined during a Fisheries Improvement Project (FIP), it might still be useful to consider the presence of potential traceability risks within the Unit of Assessment (UoA) with other catches handled by the UoA, and what implications it might have for those fishers that are interested in becoming certified.

For each risk factor, it should be determined whether / to what degree the risk factor is relevant for the fishery and, if so, provide a description of the relevant actions that could be taken to mitigate the risks identified. Some risk factors may link to actions identified against specific parts of the Fisheries Standard (e.g., P3 – Effective Management).

Table 10. Traceability within the fishery

Description on the ability of the fishery to track and trace to each Unit of Assessment
Lemuru caught using purse seine is not directly landed at the collector. Based on the results of interviews with fishermen, when a small boat (awitan) has successfully pulled the purse seine and got the results, the slerek boat will come to buy the fish. The slerek boat will sell the fish they have bought from the awitan boat on land. So in lemuru fisheries, suppliers cannot know which fishermen the lemuru catch comes from.
Describe the movement of fish and fish product between harvest and landing <i>An illustration of movement of product between harvest and landing. Include when any of the following happen: Harvesting, At-Sea processing, Translocation, Transshipment, Offloading, Landing.</i>
Fishing vessel → Landing Fishing vessel → at sea transshipment → Landing
Movement of fish and fish products between landing and the first sale/ change of product legal ownership if relevant.

<p><i>An illustration of movement of product between landing and first sale. Include when any of the following is happening: Transport, Storage, Sorting/ Grading, Processing, Packing, Auction.</i></p>
<p>Fishing vessel → slerek vessel (transporter)</p> <p>Small vessels (awitan) sell fish caught at sea to buyers using slerek vessels. The catch will be transported to the slerek vessel. Slerek vessels can buy from other awitan vessels and accommodate the catch from several awitan vessels. Slerek vessels transport the catch to be landed at the landing port to then be sold to processing companies, secondary buyers, or local markets.</p>
<p>For the critical tracking events (i.e. where in the product flow product traceability data needs to be transferred) of all fish and fish product handling and sale, describe:</p> <ul style="list-style-type: none"> • Process of segregating to each Unit of Assessment • Key data elements (i.e. the data or documents to identify the UoA such as species, catch area, gear)
<p>Traceability risk occurs when slerek vessels buy from several small vessels (awitan). Currently there is no proper separation and recording. Recording and separation need to be done to ensure traceability of fishery products.</p>
<p>Other relevant information on the systems to track and trace to each UoA</p>
<p>Recording and separation need to be carried out to ensure traceability of fishery products to each UoA.</p>
<p>Improvement action to mitigate traceability gap <i>Based on the above review, please describe what actions can be implemented to mitigate or address any identified traceability gaps. Please detail the responsible parties, resource requirements, and improvement action timelines.</i></p>

Table 11. Traceability risks and improvements within the fishery

Factor	Description of the traceability risk factors and details of the risk mitigation and management <i>Include in each description:</i> <ul style="list-style-type: none"> • Whether each factor occurs • When it occurs and how frequently (e.g. regularly, seasonally, rarely) • How any potential traceability risks are mitigated and any risk management • If covered by information provided elsewhere in the pre-assessment report, cross reference as needed. 	Improvement actions to mitigate the risk <i>Please describe what actions can be implemented to mitigate or address this potential traceability risk, including responsible parties, resource requirements, and timelines.</i> <i>If this is covered by relevant regulatory frameworks, you may link to the relevant Principle, Component or Performance Indicator in MSC Fisheries Standard.</i>
Will the fishery use gears that are not part of the UoA? If Yes, include in the description: <ul style="list-style-type: none"> • If this may occur on the same trip, on the same vessels, or during the same season; • How any risks are mitigated. 	No	
Will vessels in the UoA also fish outside the UoA geographic area? If Yes, include in the description: <ul style="list-style-type: none"> • If this may occur on the same trip; • How any risks are mitigated. 	No	
Does the fishery (client group members) ever handle ITM (non-	No	

Factor	Description of the traceability risk factors and details of the risk mitigation and management <i>Include in each description:</i> <ul style="list-style-type: none"> • Whether each factor occurs • When it occurs and how frequently (e.g. regularly, seasonally, rarely) • How any potential traceability risks are mitigated and any risk management • If covered by information provided elsewhere in the pre-assessment report, cross reference as needed. 	Improvement actions to mitigate the risk <i>Please describe what actions can be implemented to mitigate or address this potential traceability risk, including responsible parties, resource requirements, and timelines.</i> <i>If this is covered by relevant regulatory frameworks, you may link to the relevant Principle, Component or Performance Indicator in MSC Fisheries Standard.</i>
<p>certified) with certified and/ or other non-certified products during any of the activities covered by the UoA?</p> <p>This refers to both at-sea activities and on-land activities and should reflect those listed in product movement in the Pre-Assessment/Assessment. It includes:</p> <ul style="list-style-type: none"> • Translocation • Transshipment • Transport • Storage • Processing • Sorting/ grading • Packing • Landing • Auction <p>If yes please describe how any risks are mitigated.</p>		

Factor	Description of the traceability risk factors and details of the risk mitigation and management <i>Include in each description:</i> <ul style="list-style-type: none"> • Whether each factor occurs • When it occurs and how frequently (e.g. regularly, seasonally, rarely) • How any potential traceability risks are mitigated and any risk management • If covered by information provided elsewhere in the pre-assessment report, cross reference as needed. 	Improvement actions to mitigate the risk <i>Please describe what actions can be implemented to mitigate or address this potential traceability risk, including responsible parties, resource requirements, and timelines.</i> <i>If this is covered by relevant regulatory frameworks, you may link to the relevant Principle, Component or Performance Indicator in MSC Fisheries Standard.</i>
<p>Does transshipment occur within the fishery?</p> <p>If Yes, please describe:</p> <ul style="list-style-type: none"> • If transshipment takes place at-sea, in port, or both; • If the transshipment vessel may handle product from outside the UoA; <p>How any risks are mitigated.</p>	<p>Transshipment occurs within the waters of the Indonesian archipelago</p> <p>Small vessels (awitan) sell fish caught at sea to buyers using slerek vessels. The catch will be transported to the slerek vessel. The slerek vessel can buy from other awitan vessels and accommodate the catch from several awitan vessels.</p> <p>Slerek vessels transport the catch to be landed at the landing port to then be sold to processing companies, secondary buyers, or local markets.</p> <p>Transshipment vessels do not handle products from outside the UoA because the operational area is limited by the fishing license (SIPI)</p>	
<p>Are there any other risks of mixing or substitution between the UoA and other certified and/or non-certified product?</p> <p>If yes, please describe how any risks are mitigated.</p>	<p>No</p>	

Factor	Description of the traceability risk factors and details of the risk mitigation and management <i>Include in each description:</i> <ul style="list-style-type: none"> • <i>Whether each factor occurs</i> • <i>When it occurs and how frequently (e.g. regularly, seasonally, rarely)</i> • <i>How any potential traceability risks are mitigated and any risk management</i> • <i>If covered by information provided elsewhere in the pre-assessment report, cross reference as needed.</i> 	Improvement actions to mitigate the risk <i>Please describe what actions can be implemented to mitigate or address this potential traceability risk, including responsible parties, resource requirements, and timelines.</i> <i>If this is covered by relevant regulatory frameworks, you may link to the relevant Principle, Component or Performance Indicator in MSC Fisheries Standard.</i>
Are there any other risks of mixing between different UoAs? Please describe how any risks are mitigated.	No	

8. Template information and copyright

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Please delete the table below.

Table 12. Template Version Control

Version	Date of publication	Document name	Description of amendment
1.0	07/10/2009	msc-fishery-improvement-action-plan-template.xlsx	– N/A – new document
1.0	2013	msc-fishery-improvement-action-plan-overview-template.docx	– N/A – new document
1.0	22/11/2013	Fisheries Improvement Action Plan Template.docx	– N/A – new document
2.0	30/09/2019	ITM Fisheries Improvement Action Plan Template.docx	– Combination of v1.0 overview and reporting templates in single document, specifically for ITM
2.1	23/07/2020	MSC Fisheries Improvement Action Plan Template.docx	<ul style="list-style-type: none"> – Template updated to be applicable to all FIPs not just ITM. – Contact email changed from standards@msc.org to fisheries@msc.org – BMT hyperlink updated. – Introduction and Overview updated – Version tracker added. – Added additional scheme document table.

Version	Date of publication	Document name	Description of amendment
2.2	25/02/2021	m-sc-fishery-improvement-action-plan-template-v2.2-2021.docx	<ul style="list-style-type: none"> – Some edits to Introduction and modified guidance below. – Added fields for Date of Action Plan creation and updates. – Moved version tracker and scheme document table to end of document. – Edit to note in Table 2 relating to PI 1.1.1(a) – Added example draft scoring ranges with coloured fill to tables 4a, b, c. – Other minor edits to stakeholder action plan section – Added Traceability action plan section.
3.0	01/05/23	MSC Fishery Improvement Action Plan Reporting Template v3.0.docx	<ul style="list-style-type: none"> – Updated to align with MSC ITM Program Requirements and Guidance – Pilot v2.0 and Fisheries Certification Process 2.3/3.0. Performance indicators for MSC Fisheries Standard v3.0 added.