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From Compliance to Risk-Based Control: Indonesia's Integrated MCS–PSMA Architecture for Deterring IUU Fishing

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Regional Workshop on Information Exchange on Monitoring Control and Surveillance for Combating IUU Fishing
in Southeast Asia, 24 – 26 February 2026 Bangkok, Thailand

FISHERIES OVERVIEW

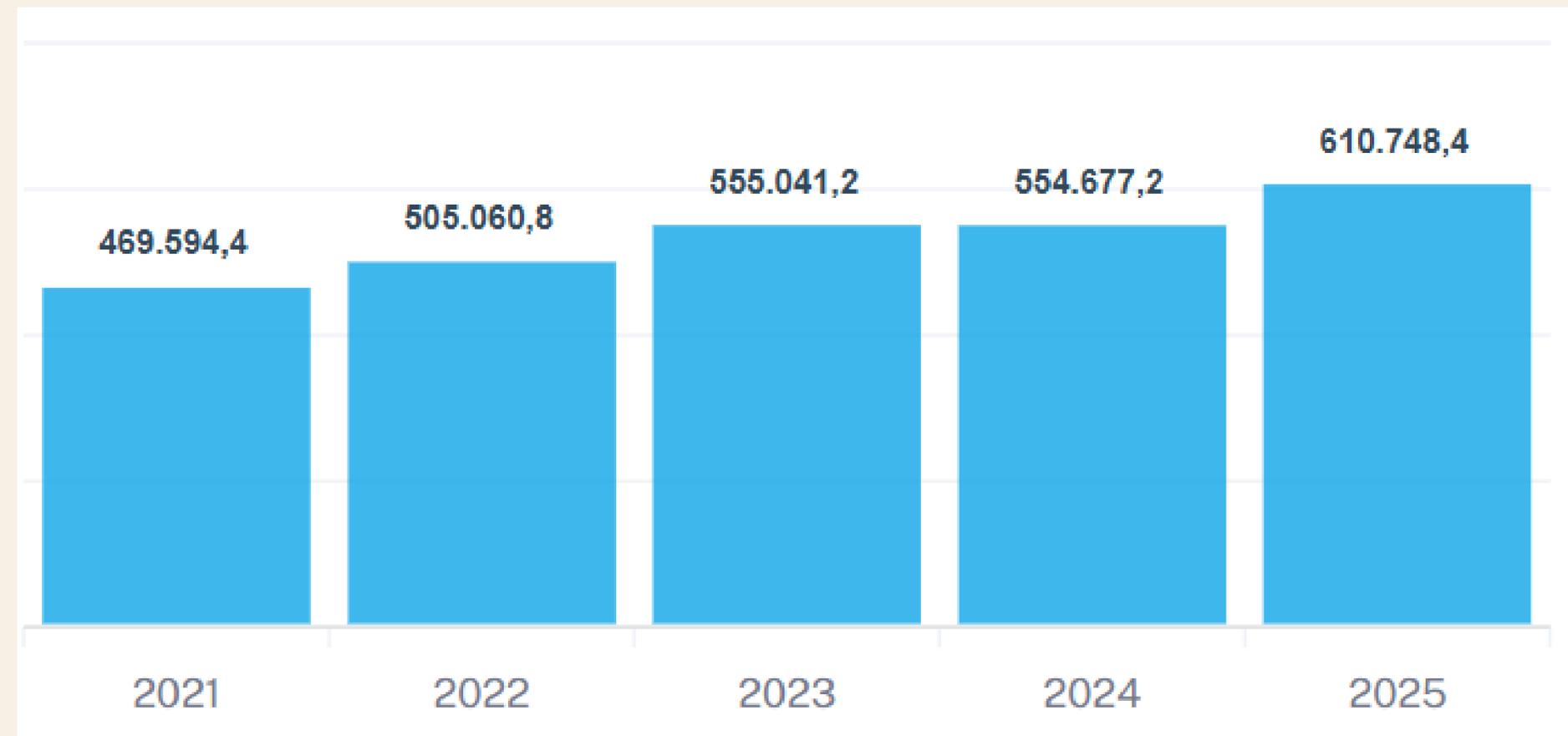
- 1) Indonesia is the largest archipelagic state, bordering 10 neighboring countries
- 2) Waters under the national jurisdiction:
 - ✓ Internal waters & archipelagic waters = 3,110,000 km²
 - ✓ Territorial waters = 290,000 km²
 - ✓ EEZ = 3,000,000 km²
- 3) Indonesia has > 17,000 islands with Coastal length = 108,000 km, coastline of 81,000 km. About 62% of Indonesia's territory is sea and waters
- 4) Comprises into 11 Fisheries Management Areas (WPPNRI)
- 5) Indonesia has a high cultural value towards fisheries
- 6) Many people in Indonesia earn their living as fishermen and work in the fisheries sector





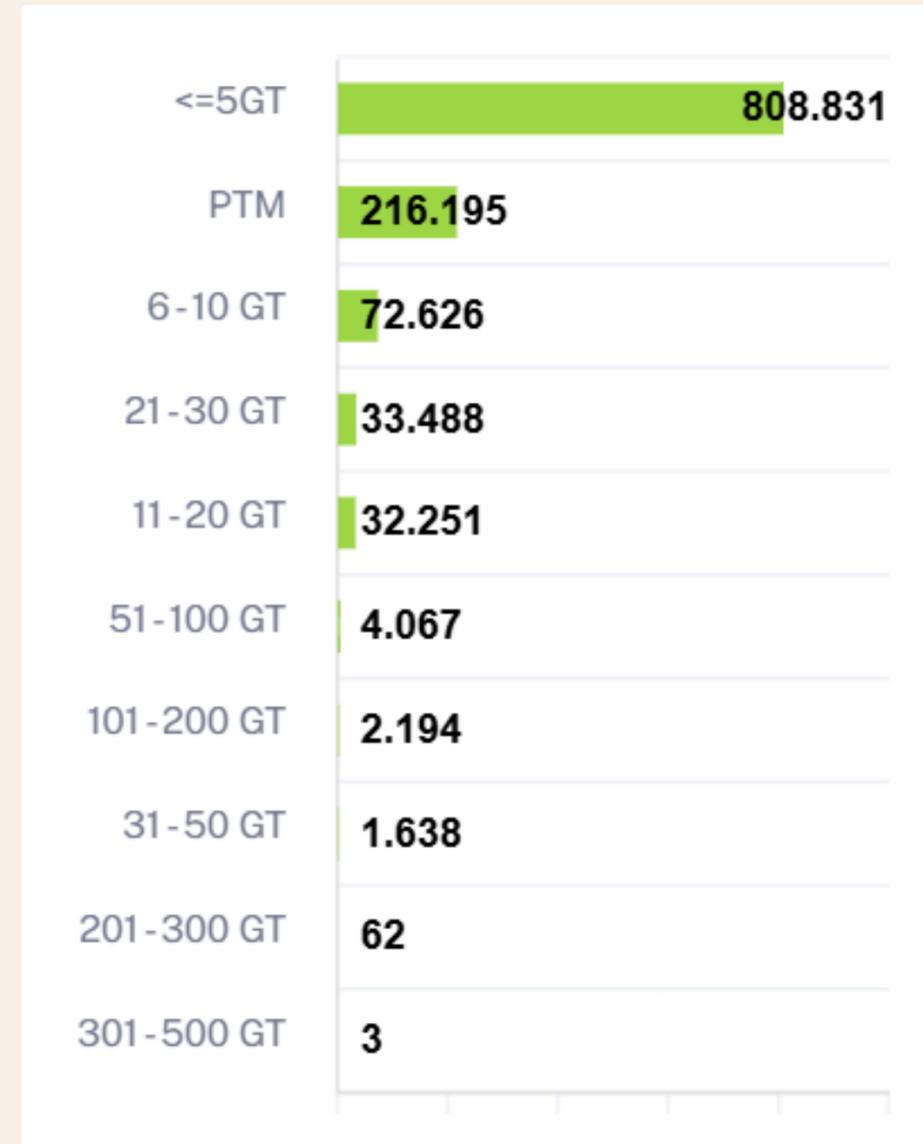
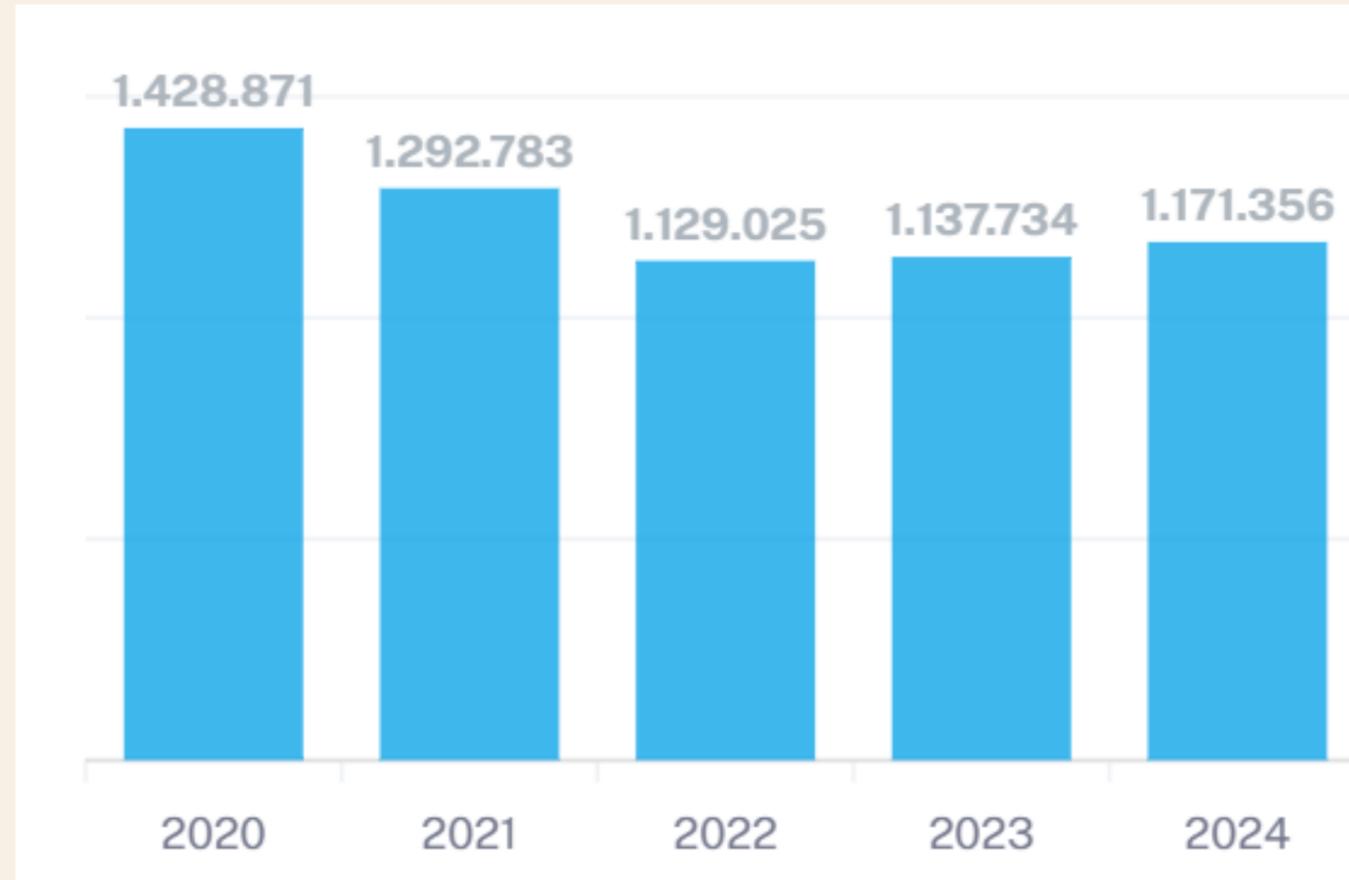
GDP (GROSS DOMESTIC PRODUCTS)

YEAR	GDP (Billion Rupiah)
2020	431.468,90
2021	469.594,40
2022	505.060,80
2023	555.041,20
2024	554.677,20
2025	610.748,4



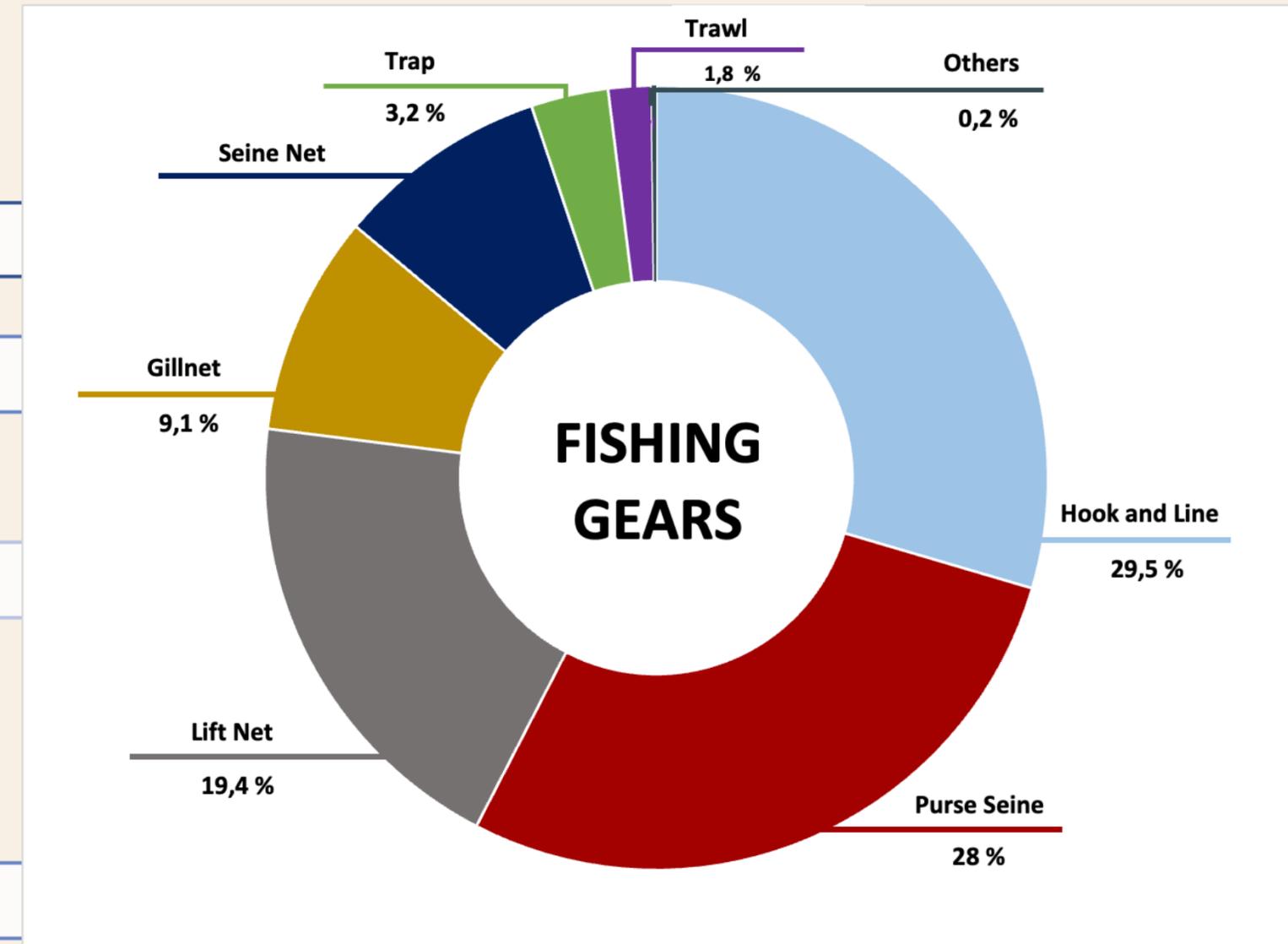
Source: Data Central Bureau of Statistics

NUMBER OF FISHING VESSELS



Source: <https://portaldata.kkp.go.id/>

FISHING GEAR



Hook and Line Fishing Gear is The Most Widely Used in Indonesia

Used in Almost All Fishing Management Areas in Indonesia

The Second Most Widely Used Fishing Gear is The Purse Seine, Followed by The Lift Net, Gillnet, Seine Net, Trap, Trawl and Others

Similar to Trawl in Indonesia Called JHUB (Shrimp Trawl) and JHIB (Fish Trawl) But More Selective Fishing Gear
 JHUB : WPPNRI 718 (Arafura Sea)
 JHIB : WPPNRI 571 (Andaman Sea, Malacca Strait) and WPPNRI 711 (Natuna Sea)

Fisheries Management

Indonesia's waterways provide business prospects in several fields, including industry, tourism, logistics, and marine living and non-living resources. To rehabilitate and restore of marine and coastal ecosystems, to increase fishery and maritime contribution to Indonesia's GDP, and to create decent jobs Ministry of Marine Affairs and Fisheries implement **the blue economy approach** to promote sustainable fisheries resource management in Indonesia through 5 programs that are:



- Increasing the protection of important habitats for fish spawning, and
- Maintaining the ocean ability for absorbing CO2 and producing O2

- Maintaining the sustainability of fish resources,
- Increasing regional economic growth, and
- Increasing the fisherman welfare

- Reducing pressure on marine fish resource stocks,
- Supplying the protein needs of the society and commodity-based export markets

- Reducing negative impacts of human activities
- Preserving and maintaining the coastal ecosystems and small islands quality

- Through the fishermen's participation program to keep the ocean clean so that the marine ecosystem becomes healthy

POST-PRODUCTION FISHING LEVY



Implementation of Levy Collection of Fishery Resources in post-production for capital-license vessels

Starting to be implemented as of January 01, 2023 in accordance with the mandate of PP No. 85 of 2021 concerning Types & Tariffs on Types of Levy Applicable in MMAF

FROM

Pre-production billing:

- Levy is paid before going to sea, at the time of license processing (SIPI)
- Levy is paid for the next year
- Regardless of the volume of production obtained, the Levy paid remains the same

TO

Post-production billing:

- SIPI is not subject to Levy / free of charge
- Levy is charged on each volume of fish caught on each fishing trip after the vessel conducts fishing operations.

Formula:

*Tariff index x value of fish production
(production volume x reference price of fish)*

Objective:

1. A form of **government trust in businesses**
2. **Extraordinary incentives** for ease of doing business because Levy is only collected after production
3. **More accountable, fair and controlled governance**
4. **More complete and accurate data collection and more intensive surveillance**
5. **Improvement of overall fisheries governance** (improved management of fishing ports, etc.)

Formula:

Range Gross Tonnage Tarriff x vessel productivity x Fish Benchmark Price x Gross Tonnage of vessel



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LEGAL BASIS FOR FISHERIES SURVEILLANCE AND ENFORCEMENT



1. Law No. 31 of 2004 (as amended by Law No. 45 of 2009)

Foundational fisheries law establishing sector framework and rights.



2. Law No. 6 of 2023

Stipulates conversion of Government Regulation in Lieu of Law No. 2 of 2022 (Job Creation) into law.



3. Government Regulation No. 28 of 2025

Implements risk-based business licensing – shifts licensing toward risk profiles.



4. Government Regulation No. 27 of 2021

Regulates implementation of marine affairs and fisheries across agencies.



5. Government Regulation No. 11 of 2023

Defines measured fishing standards and related procedures.



6. Ministerial Regulation No. 47 of 2020

Details duties and procedures for fisheries supervision and enforcement.



7. Ministerial Regulation No. 8 of 2025

Establishes management rules for supervisory vessels used in enforcement.



8. Ministerial Regulation No. 23 of 2021

Sets operational standards and monitoring system requirements for fishing vessels.



9. Ministerial Regulation No. 31 of 2021 (amended by No. 26 of 2022)

Specifies administrative sanctions in the marine sector and subsequent amendment details.



10. Ministerial Regulation No. 33 of 2021

Covers log books for catching/transport vessels, vessel inspection, testing, marking, and crew management.



11. Ministerial Regulation No. 28 of 2023

Provides implementing rules for Government Regulation No. 11 of 2023 on measured fishing.

SURVEILLANCE BASES, PERSONNELS, ASSETS, AND INFRASTRUCTURES

34 SURVEILLANCE VESSELS

	Kelas I KP Orca 01 KP Orca 02 KP Orca 03	KP Orca 04 KP Orca 05 KP Orca 06	6
	Kelas II KP Hiu Macan Tutul 01 KP Paus 001 KP Barakuda 01 KP Barakuda 02		5
	Kelas III KP Hiu Macan 001 KP Hiu Macan 003 KP Hiu Macan 004 KP Hiu Macan 005 KP Hiu Macan 006 KP Hiu 11	KP Hiu 12 KP Hiu 13 KP Hiu 14 KP Hiu 15 KP Hiu 16 KP Hiu 17	12
	Kelas IV KP Hiu 001 KP Hiu 002 KP Hiu 003 KP Hiu 004 KP Hiu 005	KP Hiu 006 KP Hiu 007 KP Hiu 008 KP Hiu 009 KP Hiu 010	10
	Kelas V KP Akar Bahar 001		1



2 CHARTERED PATROL AIRCRAFT



91 SPEEDBOATS DAN QUICK RESPONSE UNITS



1 FISHERIES MONITORING CENTER

	538 Fisheries Inspectors		428 Patrol Vessel Crew
	204 Marine Inspectors		279 Fisheries Investigators

14 SURVEILLANCE BASES



IMPLEMENTATION OF MCS IN THE FISHERIES BUSINESS MODEL

BEFORE FISHING

- Vessel registry and record of fishing vessels
- Vessel Marking
- Vessel Licensing
- Departure Inspection and Issuance of Legal Operation Standard (SLO)



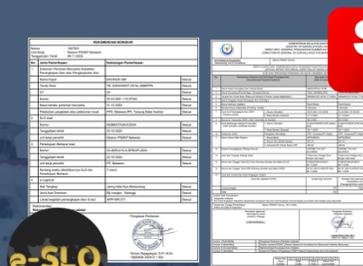
WHILE FISHING

- ✓ Electronic Fishing Log book
- ✓ Fisheries Observer Program
- ✓ Air Patrol
- ✓ VMS
- ✓ Sea Patrol



DURING LANDING

- Catch Data Record
- Arrival Inspection



POST LANDING

- ✓ Inspection of fish processing companies
- ✓ Surveillance on fishery products distribution



Non-compliance with rules and regulations will result in the sanction imposition

FISHERIES SURVEILLANCE TOOLS

Before Fishing

While Fishing

During Landing

Post Landing

Departure
Inspection
Report

Legal
Operation
Standard
(SLO)

At-sea
Inspection
Report

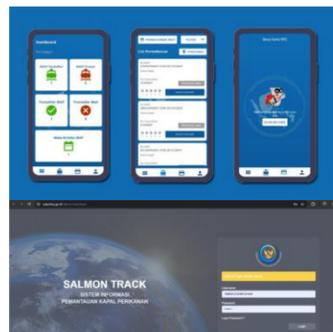
Catch Unloading
Recommendation

Arrival
Inspection
Report

Inspection
Report

Technical
Compliance
Assessment
Report

e-SLO Application



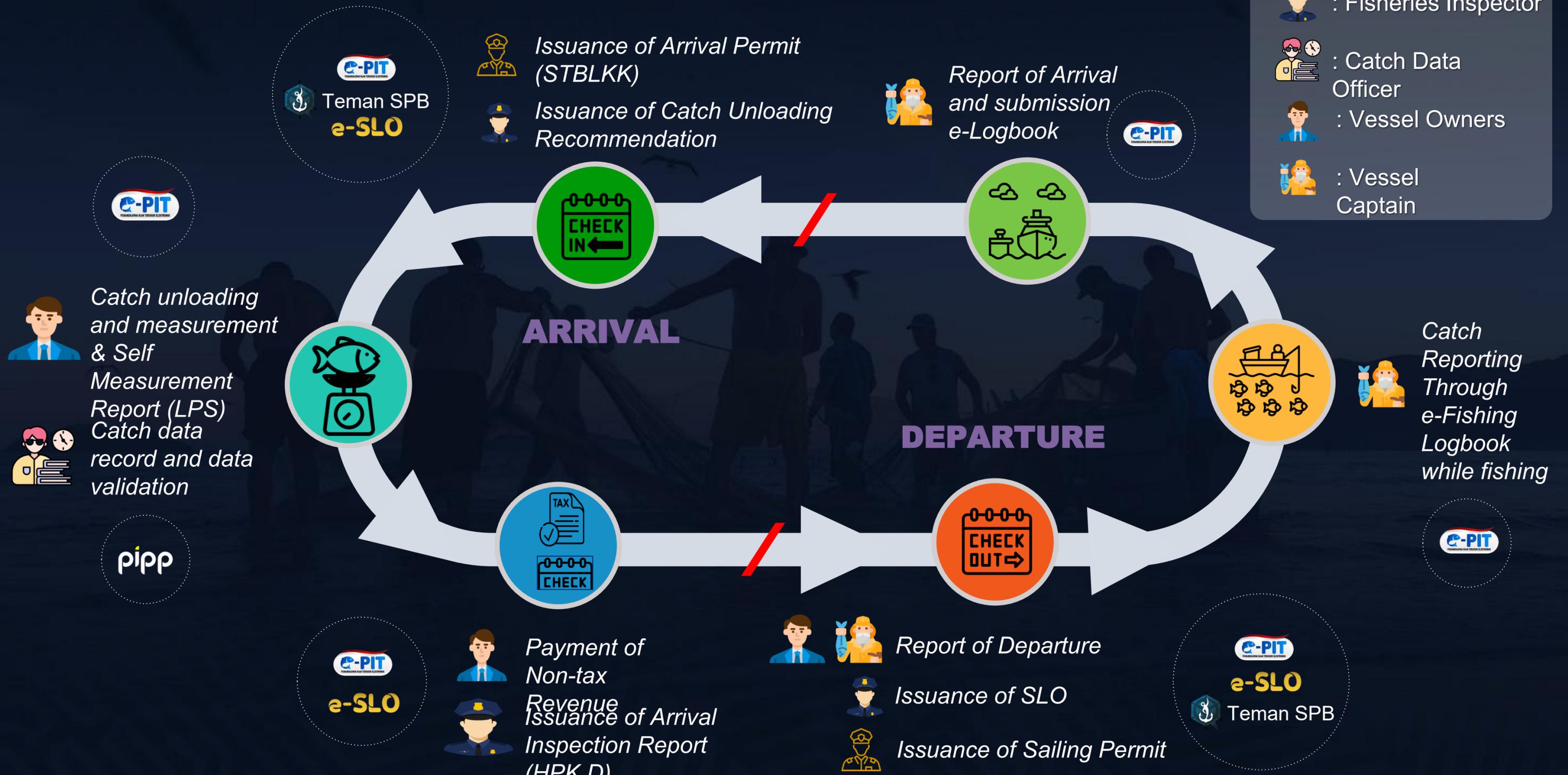
SALMON VMS Application

e-SLO Application

To be used as one of the requirements to obtain SLO

THE BUSINESS PROCESSES OF FISHING VESSEL DEPARTURE AND ARRIVAL AT BASE PORT

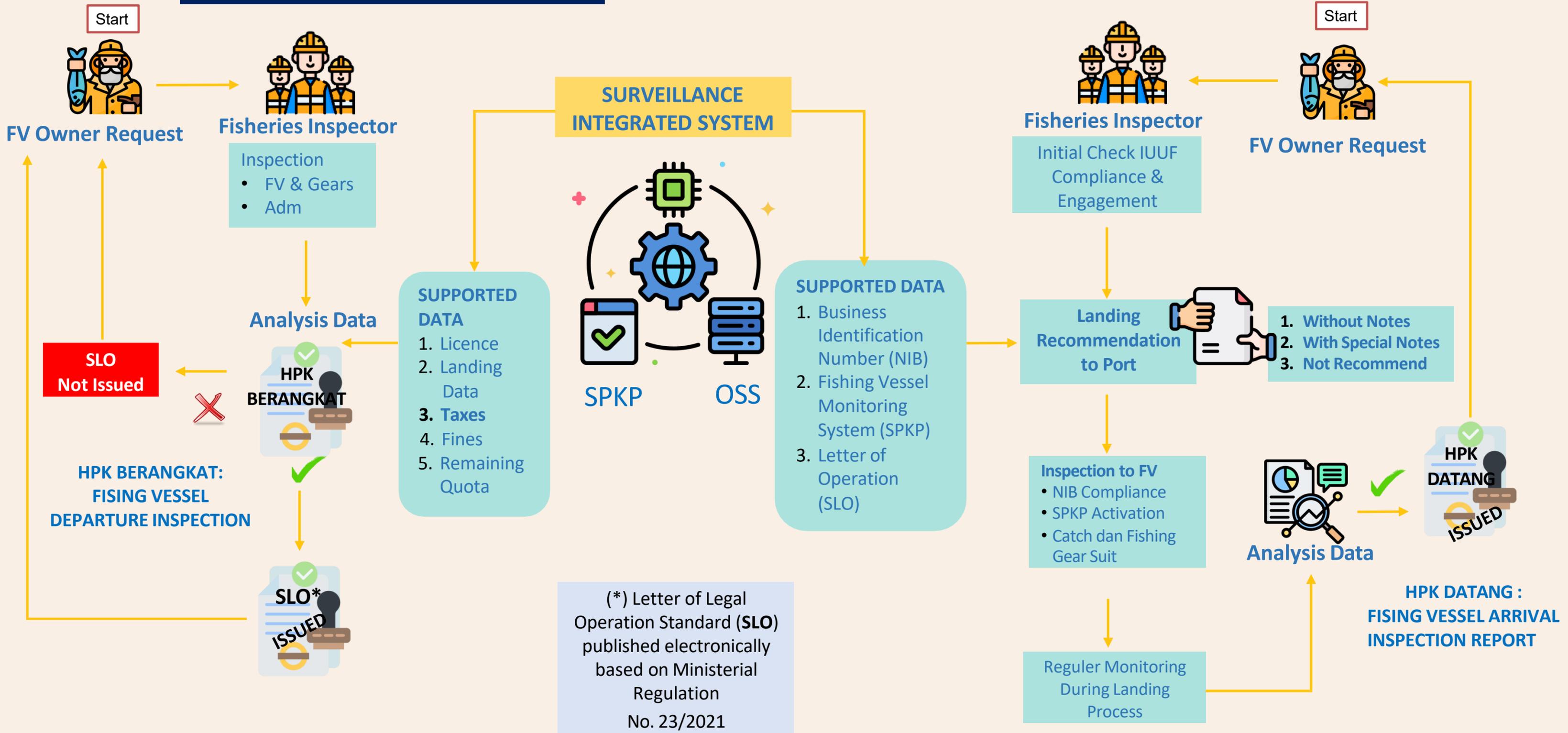
-  : Harbor Master
-  : Fisheries Inspector
-  : Catch Data Officer
-  : Vessel Owners
-  : Vessel Captain



FISHING VESSEL SURVEILLANCE MECHANISM USING E-SLO

BEFORE FISHING

AFTER FISHING





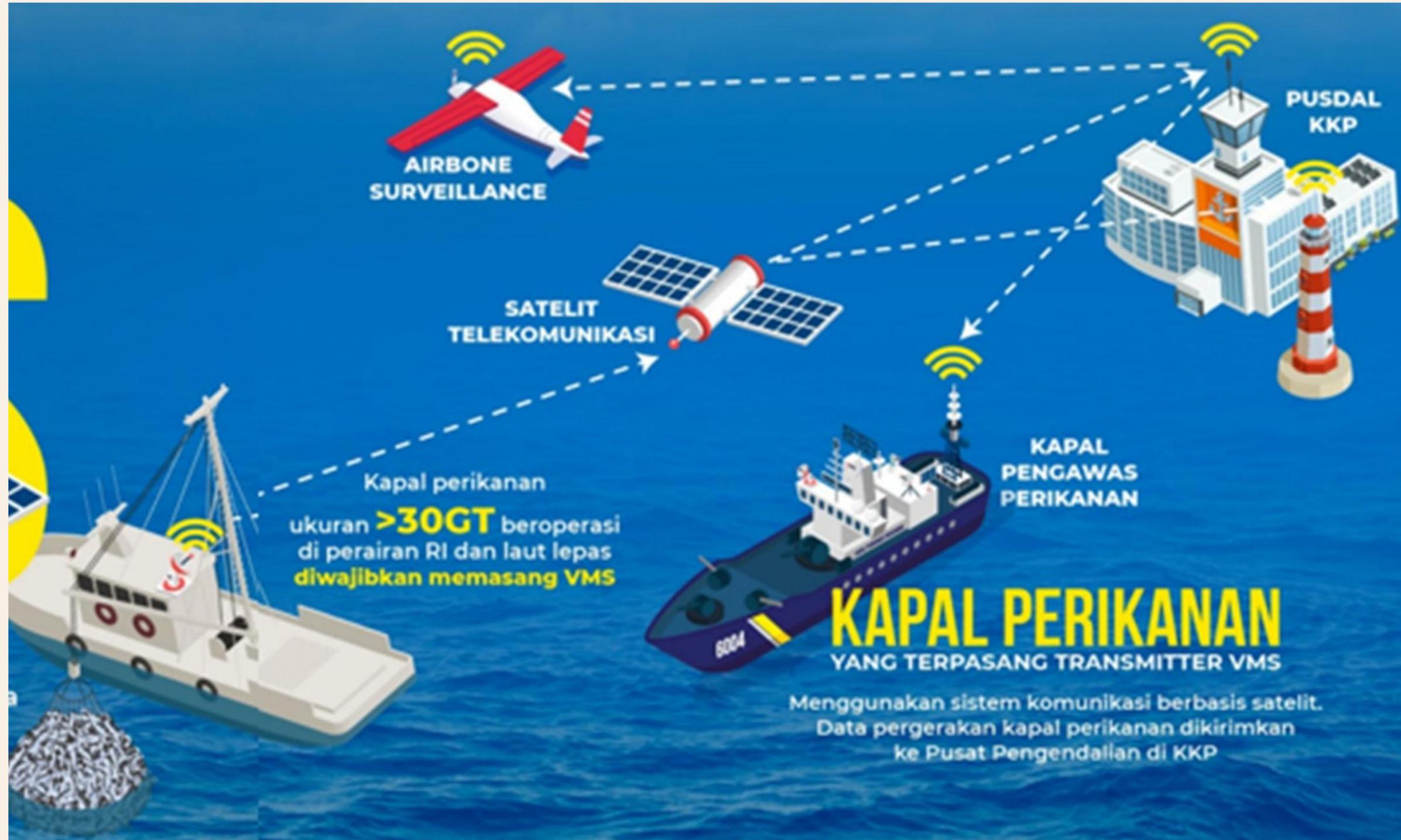
Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH



Integrated Surveillance System (ISS)



VESSEL MONITORING SYSTEM



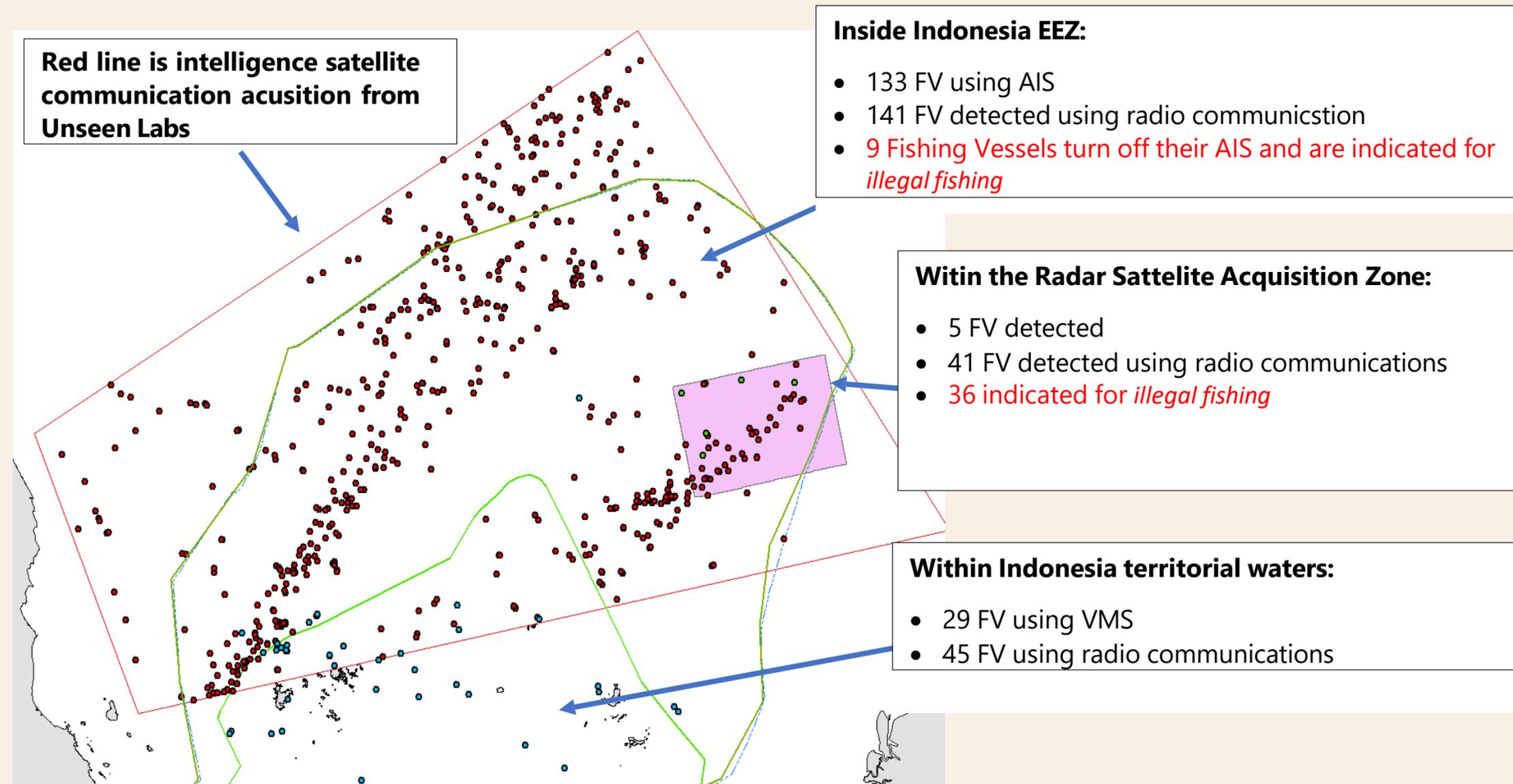
Fishing Ground Violation



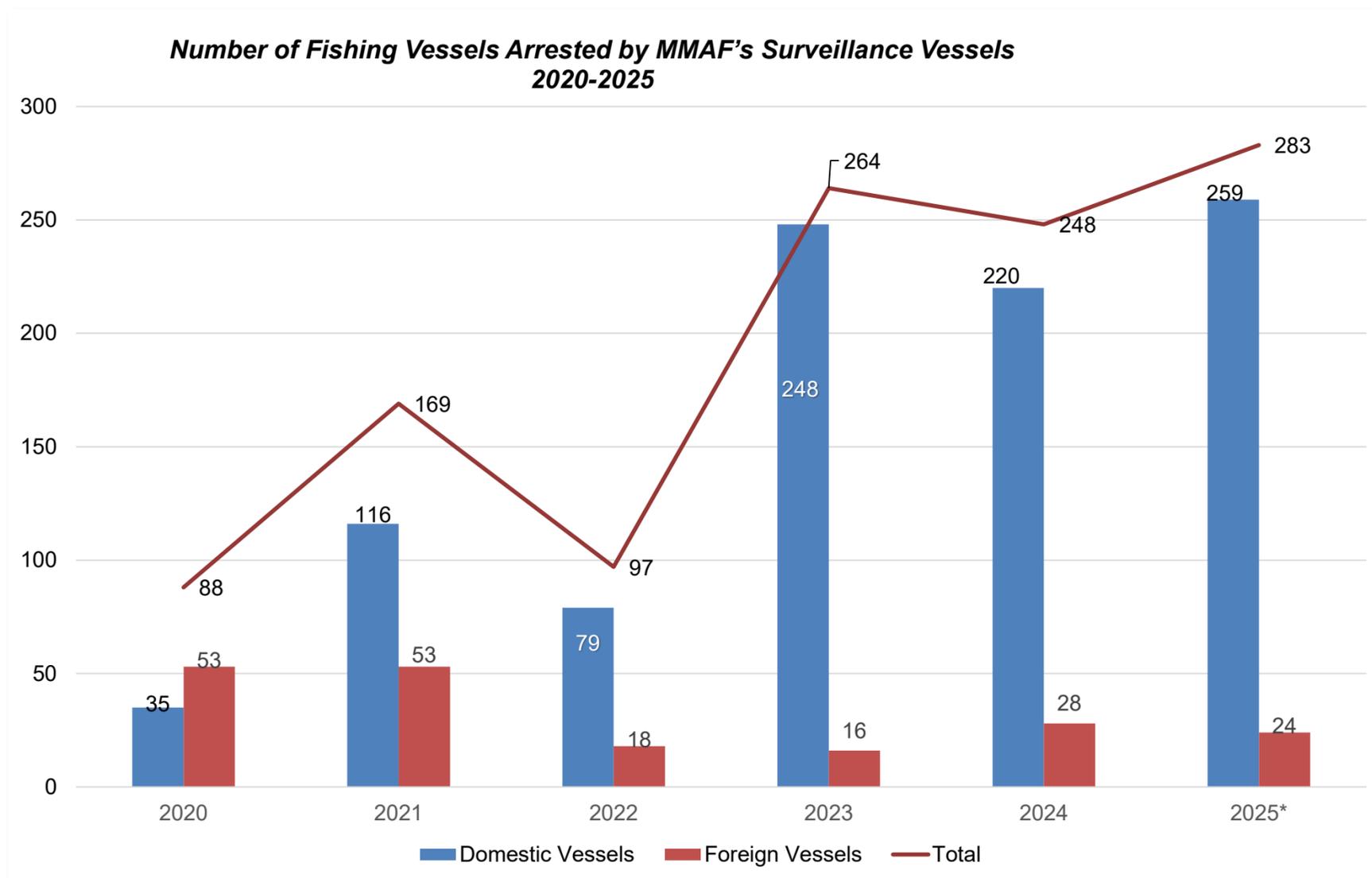
- Fishing Ground Permit in **FMA 712**
- Detected carrying out fishing activities in **FMA 713**

Integrated Surveillance Intelligence System

1. In general, all illegal Fishing Vessels turn off their transponders both VMS and AIS. Radio communication stays on.
2. Intelligence Communication using **Radio Frequency Detection Finder** (RDF) based on signal spectrum processing technology can be used to monitor illegal fishing activities, especially in EEZ.
3. The most ideal way is to use integrated surveillance systems namely AIS detection, VMS, satellite radar and RDF.



FISHERIES ENFORCEMENT OF IUU FISHING



(*) *Untill Nov 2025*



1,149 Vessels Prosecuted in 2020–2025⁷

957 Indonesian-flagged and 192 foreign-flagged vessels prosecuted for IUU violations



Modi Operandi

Foreign Vessels

- Fishing without authorization (poaching).
- Blast Fishing.

Domestic Vessels

- ✓ Fishing without license, expired fishing license, incomplete documents;
- ✓ Fishing in unauthorized fishing zones;
- ✓ Fishing in conservation areas/MPAs;
- ✓ Fishing using restricted fishing gears;
- ✓ Destructive fishing (blast fishing and electric fishing);
- ✓ Unauthorized transshipment;
- ✓ Unloading catches at unauthorized port;
- ✓ Detaching / Switching off VMS device.



Implemented by



Issue and Challenges

- Indonesia's vast maritime territory
6.4+ million km² makes comprehensive surveillance logistically complex and resource-intensive.
- Fleet & Personnel Gaps
Limited fleet and personnel compared to the number of vessels operating and the vast area to be monitored
- FV authorized by the regional government (<30 GT) not required to use VMS**
 - Millions of vessels effectively “invisible”
- Complex Criminal Modes
IUU operations increasingly link to money laundering, human trafficking, and cross-border networks—requiring multi-domain responses.

Recommendations — Modernize, Integrate, Empower.



1. Smart Community-Based Surveillance

Train and equip coastal communities (Smart-POKMASWAS) with geo-tagged reporting apps and incentives for timely alerts and evidence collection. Legal protection and financial rewards for local fishing groups (**POKWASMAS**) who report IUU Fishing



2. Fleet & Technology Upgrade

Expand and modernize patrol fleets; deploy drones, AI analytics, and Big Data for predictive surveillance and faster interdiction.



3. Budget Reform

Advocate for a "Patrol Fund" sourced directly from fishing levies (PNBP). This ensures that surveillance isn't paralyzed by fuel budget cuts.



4. IUU Fishing Eradication Task Force.

Cross-agency coordination is unified in a single integrated digital platform (Integrated Surveillance and Law Enforcement System) that enables real-time collaboration between law enforcement agencies



5. Small-Scale Tracking Mandate:

New regulations requiring vessels under 30 GT to install low-cost tracking devices (AIS/VMS Lite). Roll out a national standard for low-cost VMS/AIS for small-scale fishers, supported by government subsidies to ensure 100% fleet visibility



6. Cross-Border Collaboration.

joint patrol agreements. shared radar data and "Grey List" of vessels suspected of illegal activity with neighboring countries / Southeast Asian Country



PORT STATE MEASURES AGREEMENT

This Agreement blocks vessels involved in IUU fishing from using ports or landing catch, reducing incentives for illegal activity and keeping IUU products out of domestic and international markets.

It also supports long-term conservation and sustainable use of marine resources and ecosystems.

Currently, 84 countries are party to this Agreement.

Entry into force on June 5, 2016

PSM: OPERATIONAL PURPOSE

- PSMA applies Port State Measures to prevent IUU fishing
- Deny port entry/use and related services to vessels involved in IUU
- Strengthen inspection, verification, and follow-up actions
- Enable cooperation and information exchange with Flag States / FAO / relevant bodies
- Outcome focus: protect fisheries resources and market integrity

Law Number 17 of 1985

- Ratification of the 1982 United Nations Convention on the Law of the Sea;

Law Number 45 of 2009/Law Number 11 of 2020

- Law No. 11 of 2020 concerning Job Creation jo. No. 2 of 2022 jo. No. 6 of 2023 concerning the Determination of Government Regulations in Lieu of Law No. 2 of 2022 concerning Job Creation becoming Law

Law Number 21 of 2009

- *Confirmation Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.;*

Presidential Regulation Number 43 of 2016

- *Confirmation Agreement On Port State Measures To Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing (Persetujuan Tentang Ketentuan Negara Pelabuhan untuk Mencegah, Menghalangi, dan Memberantas Penangkapan Ikan yang Ilegal, Tidak Dilaporkan, dan Tidak Diatur];*

Regulation of the Minister of Maritime Affairs and Fisheries Number: 39/PERMEN-KP/2019

- Implementation of Port State Provisions to Prevent, Deter and Eradicate Illegal, Unreported and Unregulated Fishing;

Decree of the Minister of Maritime Affairs and Fisheries Number: 40 of 2025

- Ports where Port State Measures are implemented.



9 DESIGNATED PORTS FOR PSM

Food and Agriculture Organization of the United Nations **Global Information Exchange System** Agreement On Port State Measures English

Designated Ports My ports Indonesia X Search by port name + Create

Port name	City or location of port	Country name	Status
Bitung Fishing Port	Bitung	Indonesia	Enabled
Bungus Fishing Port	Padang	Indonesia	Enabled
Nizam Zachman Fishing Port	Jakarta	Indonesia	Enabled
Port of Belawan	Belawan	Indonesia	Enabled
Port of Benoa	Benoa - Bali	Indonesia	Enabled
Port of Makassar	Makassar	Indonesia	Enabled
Port of Marunda	Jakarta Utara	Indonesia	Enabled
Port of Panjang	Lampung	Indonesia	Enabled
Port of Tanjung Perak	Surabaya	Indonesia	Enabled

Showing 9 results of 9 Page 1 of 1

GIES Webpage

Logout

Public section

Dashboard

Designated Ports

Search

New

National Contact ...

Reporting

Advance request

Port Denials

Port Inspections

State Actions

Support functions

Live chat (3)

Vessel Profile

Supplementary forms

Transshipment D...

JOINT PORT INSPECTIONS (FOREIGN-FLAGGED VESSELS)

in coordination with relevant agencies. Each agency follows its own SOP:

MMAF: Verifies vessels entering ports have not engaged in IUU fishing or related activities

Customs: Supervises cargo flows; inspects goods and documents for customs compliance

Immigration: Checks crew/passenger travel documents and visas; ensures immigration compliance

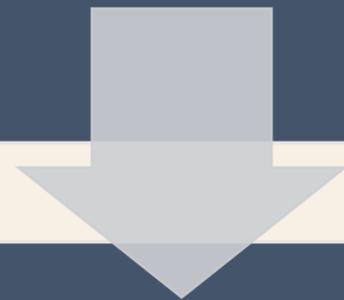
Quarantine: Prevents entry of quarantine pests/diseases and other epidemic risks; protects environmental health

Port Health: Issues health clearance (yellow flag), confirming no disease on board

PSMA WORKFLOW

ADVANCED REQUEST PORT ENTRY

Every foreign-flagged ship that wishes to enter the port must submit a written application to enter the port to the PSM Authority Secretariat.



Applications for entry into the Port must be submitted no later than 7 x 24 hours before the Foreign Vessel enters the Port.

indonesia.psm@kcp.go.id
indonesia.psm@gmail.com

Mechanisms foreign vessels entering the port

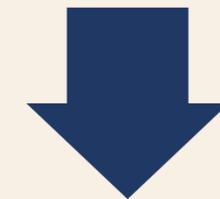
The Secretariat will analyze the entry application including requesting additional information from the flag state, coastal state, other port states, RFMOs and other international organizations.



The results of the analysis are:
- Approval of entry or
- Rejection



Approval of entry or refusal will be communicated to the PSM Coordinator, Master, Shipping Agent, flag state, coastal state, RFMO and relevant international organizations.

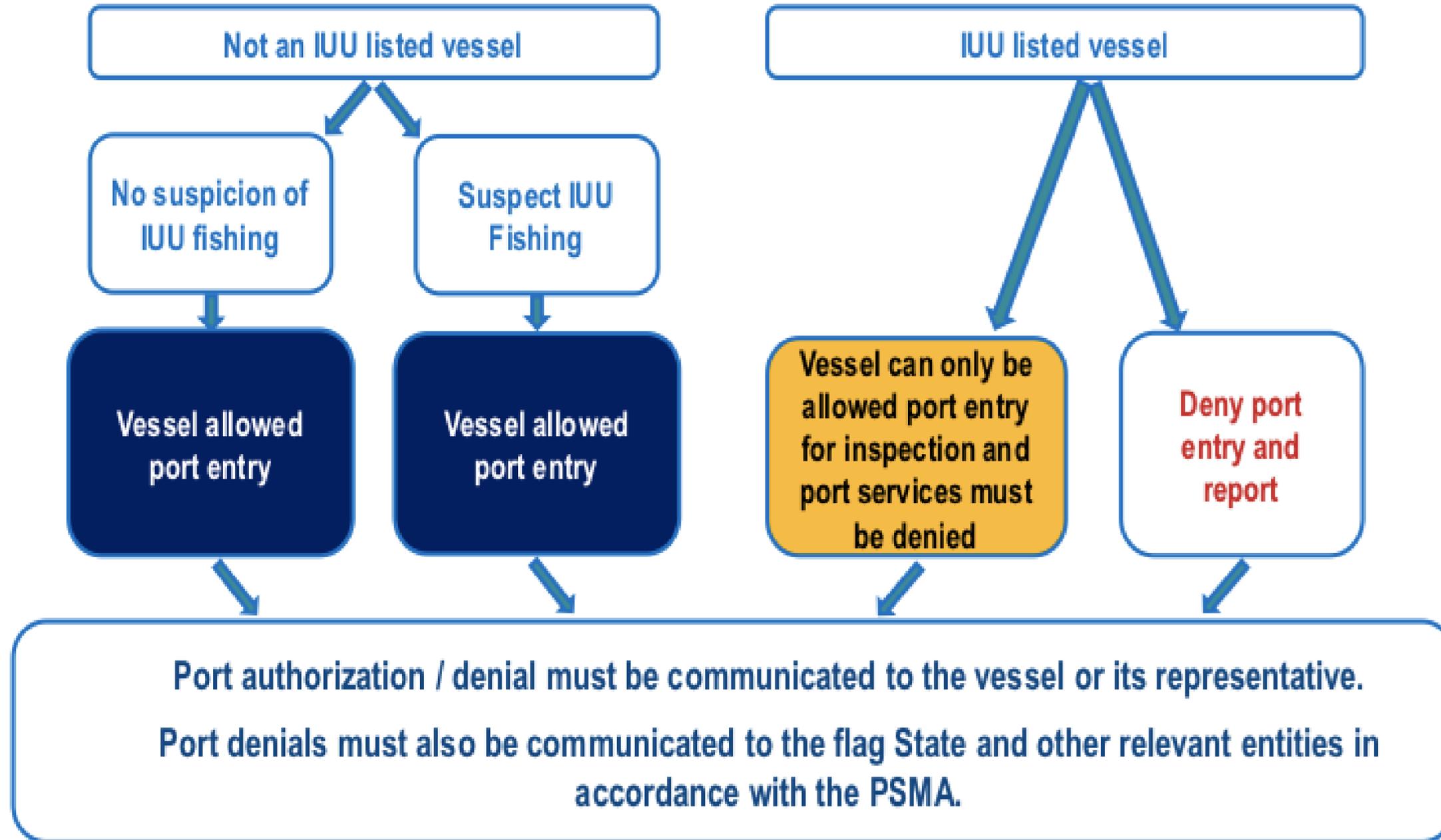


The results of the inspection will be reported to the PSM Authority Secretariat which will then be submitted to the Master, Flag State, Coastal State, RFMO and relevant international organizations.

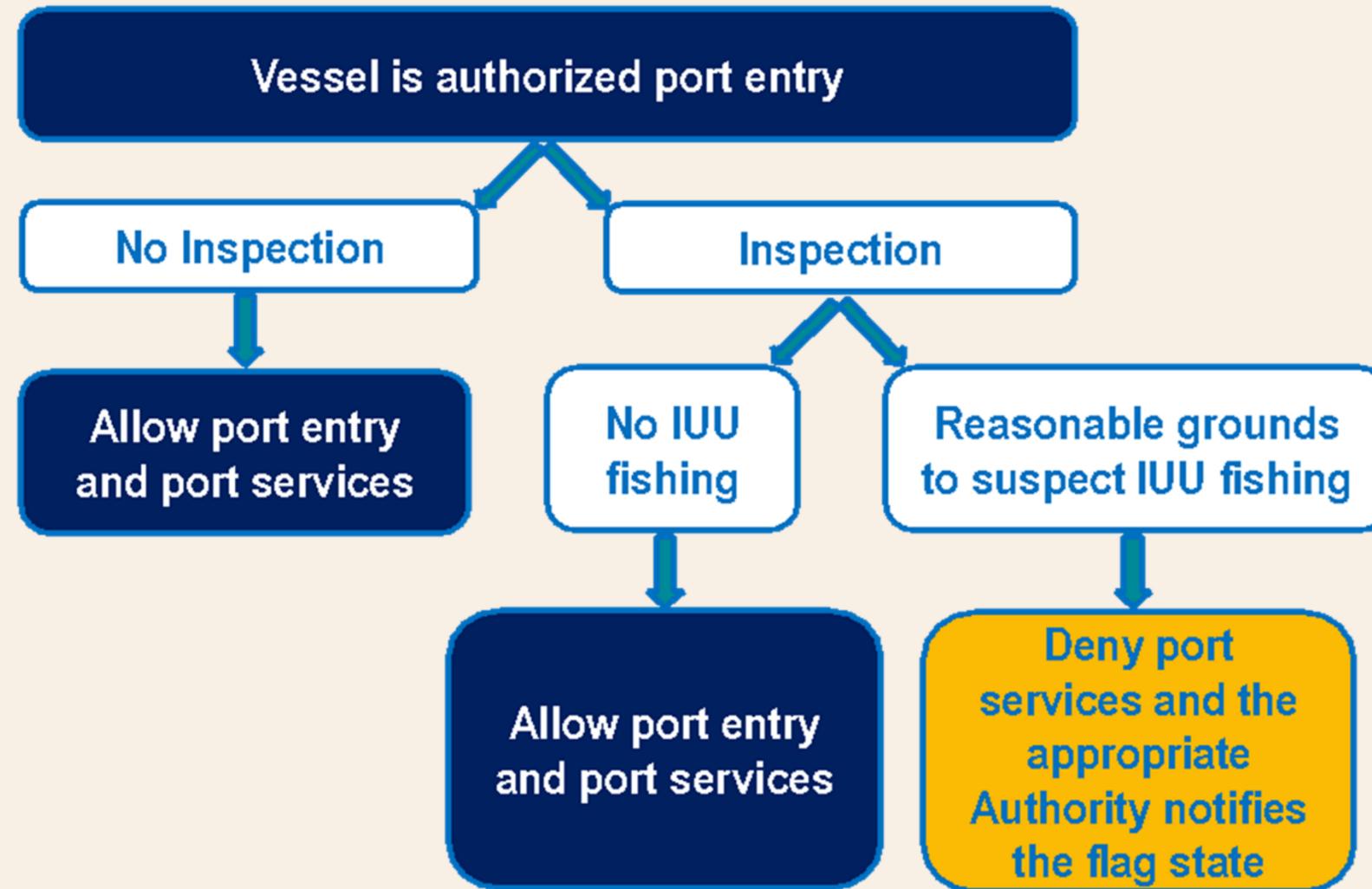


Ships that are permitted to enter will be inspected by the PSM Inspection Team at the designated port.

Initial Stage of Secretariat Inspection



Vessels Eligible to for Port Entry



Port services are defined as:

- Landing, transshipping, packaging & processing of fish not previously landed
- Other port services – refueling, resupplying, maintenance and dry-docking



Decision & Follow-up Actions

If the results of the inspection by the PSM Officer show sufficient evidence that the Foreign Vessel is carrying out and/or is involved in IUU Fishing activities, the Foreign Vessel will be subject to:

Notification to the flag state, coastal state, RFMO and relevant international organizations, and the master's state;
refusal of port services; or
legal proceedings in accordance with statutory provisions.

Key Issues and Challenges in PSMA Implementation

1. Multi-agency coordination at ports and consistent SOP application
2. Data completeness and timeliness for risk assessment and decision-making
3. Budget limitations affecting inspection operations, training, and facilities
4. Capacity constraints: insufficient PSM personnel/inspectors, limited time, facilities, and peak port operations
5. PSM implementation at public ports is not yet optimal (coverage and consistency vary by port)
6. Follow-up across jurisdictions: evidence readiness and cooperation timelines
7. Ensuring interoperability with broader MCS information exchange

Recommendations and Support Needed

National Level

1. Strengthen port SOP harmonization and joint inspection coordination
2. Improve risk profiling through better pre-arrival data verification
3. Build inspector capacity: training, tools, documentation templates
4. Strengthen follow-up procedures and evidence management for escalated cases

Regional Level

1. Agree on minimum information fields for PSMA/MCS exchange (vessel ID, authorization, inspection outcomes)
2. Improve speed of information sharing for high-risk cases
3. Joint training/exercises on PSMA inspections and follow-up coordination
4. Strengthen practical interoperability and consistent use of reporting channels (incl. GIES where applicable)



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THANK YOU

Terima Kasih.