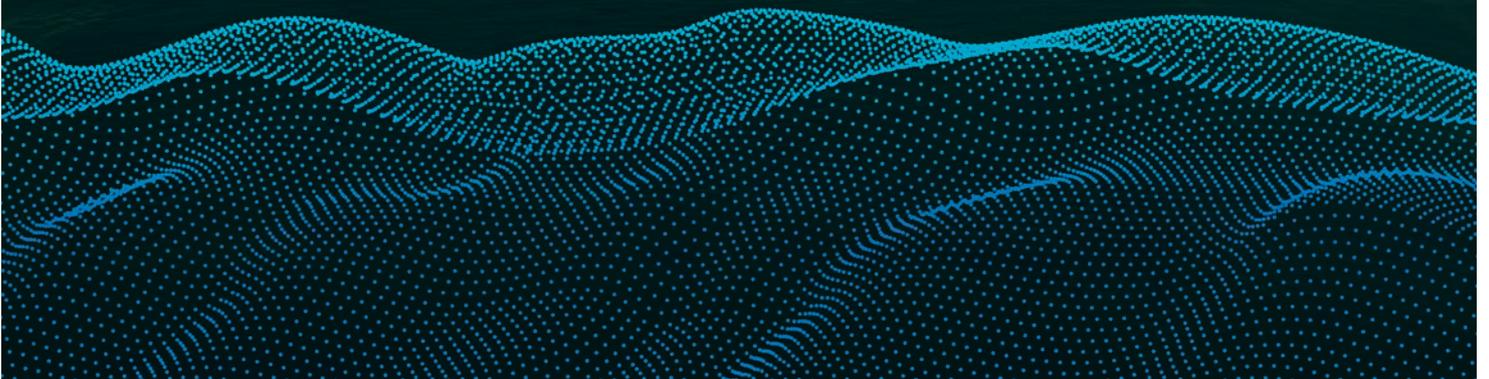




**MOVING FROM SITUATIONAL AWARENESS
TO SITUATIONAL UNDERSTANDING AND ACTION**

**ADDRESSING
ILLEGAL,
UNREPORTED,
UNREGULATED
FISHING**



SUMMARY

Monitoring, Control, Surveillance (MCS) and Enforcement (E) operations are invariably an interagency matter as no single authority has the knowledge, sensors and/ or means to independently address Illegal, Unreported and Unregulated (IUU) fishing alone, but the lead should clearly be national fisheries authorities. The situation becomes more complex when regional aspects are considered as political, commercial, and cultural differences dampen fisheries cooperation further.

Fortunately, CRIMARIO, given its cross-sectoral mandate, can expedite collaboration amongst fisheries authorities and other supporting agencies, at the national and regional level, to implement key multilateral instruments such as the FAO-International Plan of Action against IUU, UN Fish Stocks Agreement, and the 2009 FAO Port State Measures Agreement (PMSA), and soon perhaps the United Nations agreement on biodiversity beyond national jurisdiction (BBNJ). This to prevent, deter and eliminate IUU fishing activities through the imposition of expeditious sanctioning schemes that deprive the operator, the beneficial owner, of any benefit from their illegal actions.

Effective interagency collaboration is possible through the wide use of the IORIS information exchange and operational coordination tool. The tool allows efficient communication among navies, coast guards, police, fisheries, immigration and customs authorities on all maritime-related matters.

The EU-funded tool is neutral, secure, and cost effective, providing a common operational picture and many other advantages to over 50 Indo-Pacific countries.



BACKGROUND

The efficient way to address illicit fishing activities is undoubtedly to control vessels once entering port, to discharge their catch and/or receive logistical services in accordance with the 2009 Port State Measures Agreement (PSMA). Nevertheless, there remains a real need for coastal States to conduct at-sea MCS operations in Exclusive Economic Zones (EEZs) and the High Seas to ascertain the legal status of fishing vessels and enforce the law as necessary. This is especially the case since vessels with illicit intentions can “go dark” by switching off their vessel monitoring systems (VMS) and/or automatic identification systems (AIS) to ‘disappear’ from monitors in fisheries monitoring centres (FMCs), which necessitates on scene presence.

Conversely, on-scene presence at the outer perimeter of EEZs and on the High Seas is challenging because of the cost and the limited range of patrol vessels. Therefore, rather than banking on luck, it is essential for surveillance assets to be deployed in a coordinated manner, with access to satellite services such as Hawkeye 360, MAS, Starboard and cost-free Skylight, for information.

ENHANCING CONNECTIVITY

Whilst the aspiration to enforce jurisdiction is clear, the practice of exchanging processed information between flag, port, coastal States, and regional organisations, is all too often hampered as there is currently no dedicated system to exchange secure information.

Moreover, commonly used communication platforms such as email and mobile phone applications do not have interactive mapping functions, making real-time security information sharing difficult.

IORIS offers direct secure electronic exchange of information that can be linked to existing databases, fulfilling **PSMA Article 16 (Electronic exchange of information)**. This enables FMCs, and even deployed assets, to access real-time and encrypted communications amongst countries/organisations. IORIS offers:

- ▶ the ability to create tailor-made and autonomous user-forums (virtual groups) with respective admin rights, to either broadcast information of IUU activities widely; or share information amongst selected users, if the information is sensitive.
- ▶ messages and chat functions with automatic translation of ALL languages for national and regional use.
- ▶ notification and alerts of IUU fishing incidents on an interactive map.
- ▶ encrypted sharing and archiving of documents/files by the user community, with the potential to upload information on fishing vessels including registration, licences, IUU history, crew composition, etc.
- ▶ menus translated into English, French, Portuguese, Arabic, Somali and Bahasa.

National Level: IORIS offers interconnectivity between FMCs and navies / coast guards / police / customs / health / immigration authorities in accordance with **PSMA Article 5 (Integration and coordination at the national level)** where fisheries related port State measures need to be integrated with the broader system of port State controls.

Regional Level: IORIS can connect national FMCs countries and/or Regional Fisheries Management Organisations together in accordance with **PSMA Article 6 (Cooperation and exchange of information)** with due regard to appropriate confidentiality requirements, to exchange information on suspicious and black-listed vessels and support the **transmittal of inspection results (PSMA Article 15)** to the flag State of the inspected vessel and, as appropriate, to relevant Parties and States.

With the introduction of the Coastal App, developed for Kenyan Fisheries authorities, fishing vessels are now able to submit **Advance Request for Port Entry forms (PSMA Article 8)**, to all agencies at once, streamlining the process to gain permission to enter a port. Vessels can request entry through mobile phone as soon as they are in range of a cellular network (about 25 nautical miles offshore / circa 5 hours prior to entry) or through satellite links when offshore.

SURVEILLANCE AND DATA ANALYSIS

Whilst IORIS was not designed and is not meant to offer dedicated surveillance and data analysis functionalities, it does interface with SKYLIGHT (and Spire AIS) as is depicted in the diagrams below, which offers visible notifications of vessels:

- ▶ conducting fishing activities.
- ▶ conducting transshipments at sea
- ▶ not active on AIS

This is possible thanks to the signing of a Memorandum of Understanding with ALLENAI, a US not for profit organisation, which acquires satellite data from donor partners.

IORIS also could import VMS data on an ad hoc basis for a fee.

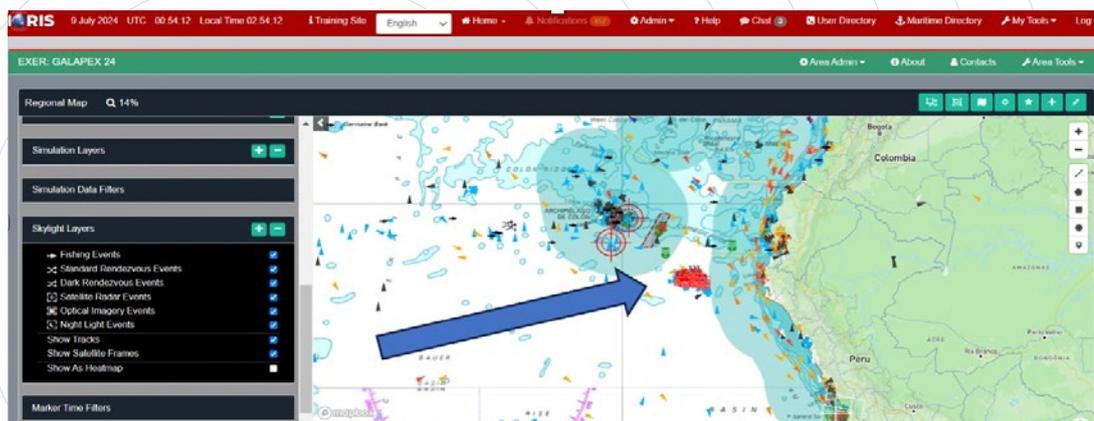


Diagram 1: Foreign fishing vessels operating off the Latin American EEZs.



Diagram 2: Expanded picture of foreign fishing vessels operating off the Latin American EEZs for jumbo squid.

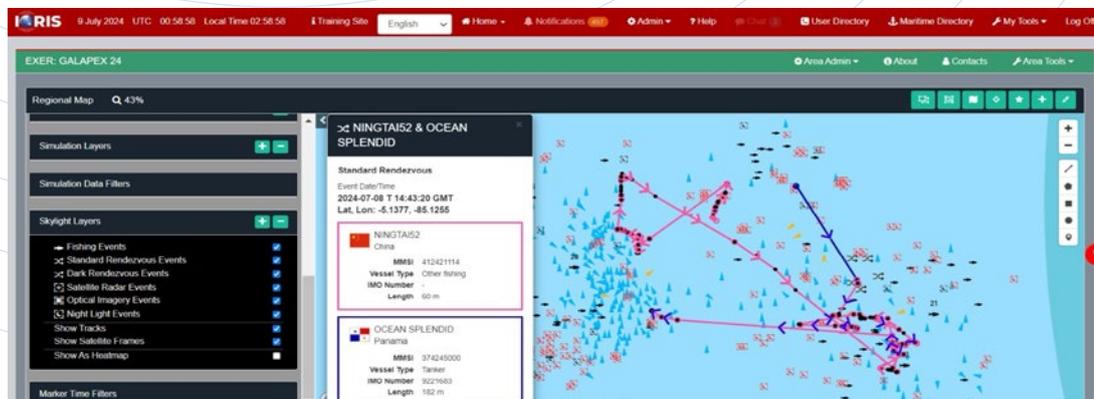


Diagram 3: SKYLIGHT perspective in IORIS showing a Chinese vessel being supplied by a Panamanian tanker. The red crosses show where other transshipments may have happened.

INTEROPERABILITY

Acquiring information is not of much use if it cannot be actioned and this is where IORIS offers additional strengths in enabling interagency and regional coordination of operations through its functionalities as follows:

- ▶ the ability to create tailor-made and autonomous user-forums (virtual groups) with interactive maps to jointly monitor fisheries activities and coordinate MCS and E, and distress operations.
- ▶ the ability to plot and share fishing vessels' positions/maritime protected areas on navigational charts.
- ▶ a target intercept tool to automatically calculate optimum interception points for fisheries enforcement assets tasked to investigate suspicious activities.
- ▶ the possibility to create standard fisheries forms such as Advanced Request for Port Entry (Port State Measures Agreement (PSMA) Annex A); Inspection Forms (PSMA Annex C); Crew Lists; etc; and
- ▶ the ability to archive information in shared folders.

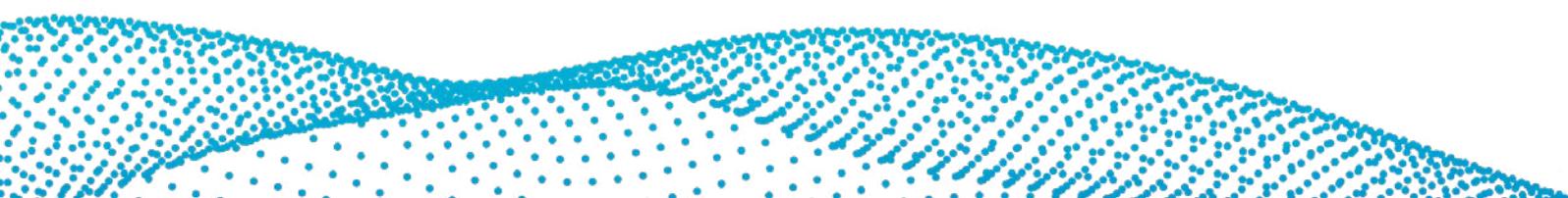
GALAPEX EXERCISE

The Colombian, Ecuadorian and Peruvian Coast Guards have come together IORIS to address IUU fishing, with Ecuador taking the lead. This is necessary given the predominantly foreign fishing fleet operating just outside Ecuador's and Peru's EEZs, as is evident in the IORIS graphics on the last page. In this context, the decision to adopt IORIS as the common information-exchange system has facilitated connectivity and interoperability, avoiding States having to invest in multiple independent systems, which cannot connect with one another.

It is in this context that CRIMARIO now supports the Ecuador Coast Guard in organising its regional GALAPEX counter-IUU exercise around the Galapagos islands in 2023 and 2024. Apart from Latin American countries, other participating nations came from Italy, Spain, Republic of Korea, the US and the UK amongst others, and all were able to interconnect through IORIS, even vessels at sea, proving that IORIS is the optimal for supporting coastal States and others address IUU incidents in a coordinated manner.

CONCLUSION

IORIS has already been tried and tested for over the 6 years with success and is being used by over 100 organisations from over 50 countries from across the Indo-Pacific. It is facilitating operations between fishing authorities of the Philippines, Sri Lanka, and Somalia with national maritime enforcement authorities. And in Latin America, IORIS is supporting the Colombian, Ecuadorian and Peruvian coast guards coordinate counter-IUU operations at sea daily. As it is evident, the potential for further expansion, to interconnect fisheries monitoring centres together, at the national and regional level, even with enforcement authorities at sea, is real and IORIS therefore offers a potent, cost-effective, force-multiplier worth considering.





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IORIS is a CRIMARIO initiative



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