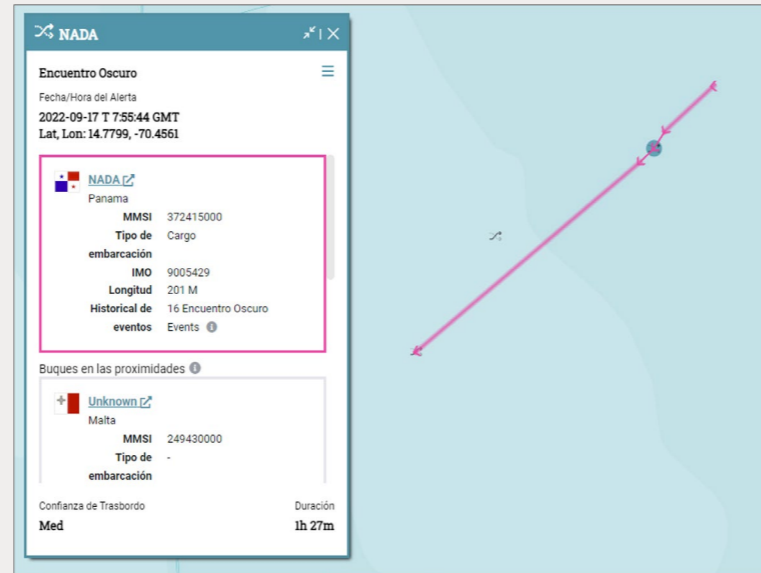


SKYLIGHT-GMCP PARTNERSHIP

Skylight, based out of the Allen Institute for Artificial Intelligence, is an online platform for monitoring vessel activities that may be noncompliant with fisheries and other maritime regulations. UNODC GMCP entered a partnership with Skylight in the summer of 2020 and has since introduced the platform to law enforcement agencies in over 40 countries around the world. UNODC has enhanced these countries' abilities to identify and combat maritime crimes by facilitating access to Skylight and providing training customised to each agency's mission and specific threats. More than 300 participants have been trained on how to use this tool in-person and hundreds more have been trained virtually.



Standard Rendezvous Events are generated when two vessels transmitting AIS may have conducted a transshipment. This is the type of activity Skylight automatically identifies and users can configure alerts for.

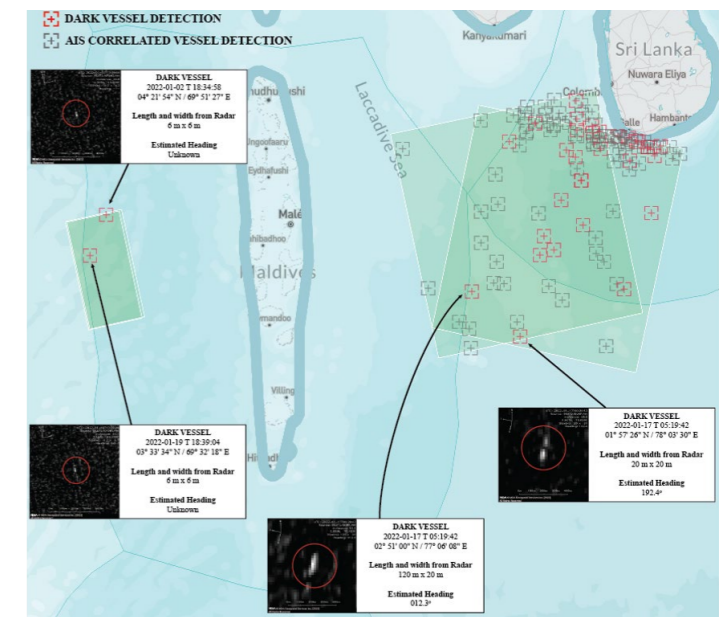
HIGHLIGHTS OF 2022

- ✓ In Southeast Asia, MDA training provided directly to Cambodia, Malaysia, Philippines, Thailand, Timor Leste and Viet Nam. UNODC also encouraged interagency collaboration by inviting different agencies from the same country to train together (e.g. Fisheries, Coast Guard, Navy, Intelligence, and Immigration in the Philippines).
- ✓ In the Indian Ocean, Skylight training was provided to Bangladesh, Sri Lanka and Maldives. It was combined with training on VBSS, which helped provide a fuller picture on how to take action based on the intelligence derived from MDA tools.
- ✓ In the Gulf of Guinea, GMCP has been working hand-in-hand with regional maritime authorities like ICC, CRESMAO, and CRESMAC to co-organize and co-lead virtual trainings with over 19 Member States.



Furthermore, the cooperation between Skylight and GMCP has resulted in numerous success stories.

- ✓ The Maldives Coast Guard apprehended five vessels in 2021 and two vessels in 2022 illegally fishing inside of their EEZ through the help of Skylight. "After starting to use Skylight, we have come to realise that much more fishing vessel movements are happening in Maldivian waters than we ever knew", said Captain Sawaad.
- ✓ The Navy of Colombia and the Dominican Republic have reported more than three occasions where a Dark Rendezvous Event helped them surface drug trafficking.
- ✓ The Panamanian Navy interdicted a vessel fishing illegally in Coiba Ridge Marine Protected Area and the Philippine Coast Guard saved the crew on a pleasure vessel with the help of Skylight's near-real-time AIS feed.
- ✓ The Fiji Navy shared that the amount of vessels to interdict on patrol has increased from 1 - 2 to 10 - 14, since they have started using Skylight. Their most recent success was surfacing alcohol and tobacco smuggling through their ports.
- ✓ During a training, the Madagascar Fisheries Monitoring Centre surfaced a vessel illegally trawling shrimp within their 2 nautical mile zone and sent an official warning letter.
- ✓ 90+ port officers in the Sri Lankan Fisheries Department have been using Skylight to check fishing industry compliance to AIS requirements for their boats and their gear.



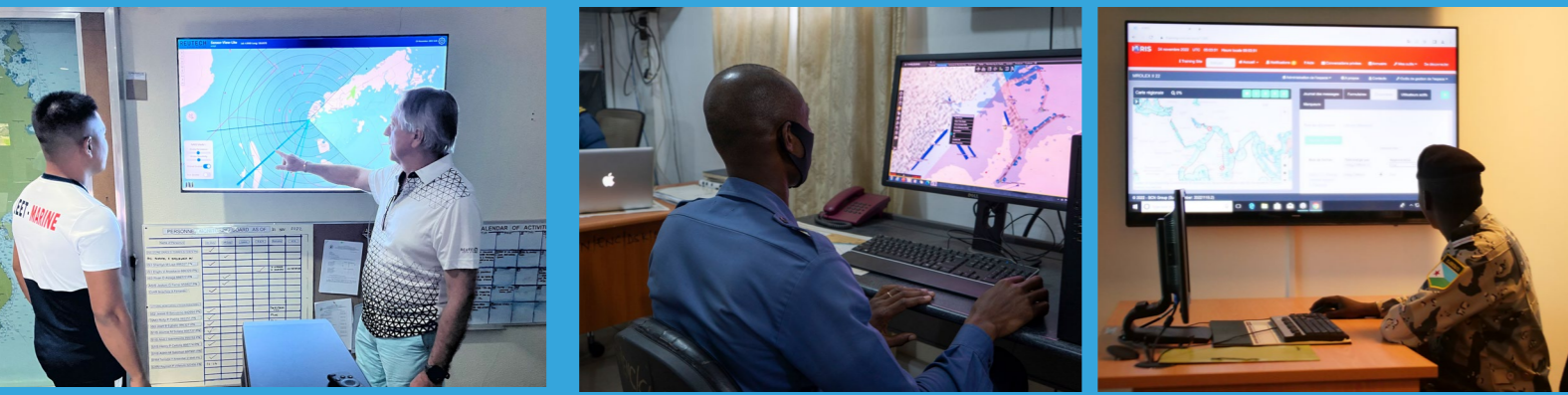
Looking forward, GMCP will continue to work collaboratively with Skylight, sharing feedback that Member States are providing to improve the tool and make Skylight even more complementary to what already exists in their watchrooms. Some highlights:

- ✓ Skylight is technically integrated with SeaVision and YARIS - two major information sharing tools - and Skylight is in early stages of integration with IORIS, Dark Vessel Detection, Global Fishing Watch, and some national tools.
- ✓ Skylight is expanding its functionalities from the provision of AIS and satellite radar-based events to automatically cueing high resolution optical imagery after events and providing VIIRS and low resolution optical imagery.
- ✓ In October 2022, Skylight added Potential Dark Activity Events by popular request. These events are generated when the AIS transmission for a vessel has not been received for a long period of time, some of which may be vessels who are purposely turning their AIS off to obscure illicit activity.



INNOVATION & TECHNOLOGY TO COUNTER MARITIME CRIME

GMCP supported innovative use of technology to overcome MLE challenges and pioneered the induction of new technology to counter maritime crime. GMCP initiatives have provided advanced technology solutions to enhance communication capability, automate processes, tamper-proof vessel registration, strengthen vessel detection capability and advance drone technology.



WORK WE DO

ENHANCING MARITIME COMMUNICATION

- ✓ GMCP has installed radio repeater systems and procured radio communication systems in archipelagic states such as Bangladesh, Maldives, Seychelles, and Tanzania to expand the coverage of the police radio network.
- ✓ In efforts to strengthen existing radio communications systems, GMCP has installed new antenna masts, high performance antennas and radio communication equipment to improve maritime communication capability in regions of Somalia.

AUTOMATING PROCESSES

- ✓ GMCP has provided innovative solutions to automate manual systems in court administration. In Seychelles, GMCP facilitated the development of a computerised court administration system to streamline court processes. This also included automatic transcription capability for recording of court proceedings. In Kenya, GMCP facilitated the digitalisation of court records to better store and these.
- ✓ GMCP installed face recognition technology at the Hazrat Shahjalal International Airport in Dhaka (Bangladesh), Brunei International Airport in Bandar Seri Begawan (Brunei Darussalam), and Colombo International Airport (Sri Lanka) to automate passenger screening by law enforcement at the arrival and departure terminals.

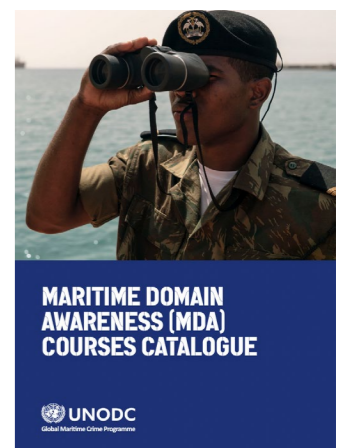
TAMPER-PROOF VESSEL REGISTRATION

- ✓ GMCP, in partnership with the Sabah Fisheries Department in Malaysia, tested the use of RFID Tags and RFID Readers for verification of vessel registration details from a distance of 50m and without requiring physical contact with the vessels. The RFID technology overcomes the need for close contact to authenticate vessel registration details.
- ✓ GMCP, in partnership with the Philippine Coast Guard, is pilot testing the use of QR Codes as a tamper-proof method for boat registration markings on the hull. The QR Codes make it difficult to tamper the vessel registration markings on the boat.
- ✓ GMCP is working closely with maritime regulatory agencies to enhance protection against fraudulent documentation by embedding QR Codes that support other maritime authorities and law enforcement agencies to swiftly verify the authenticity of documentation and vessel details.

WORK WE DO

VESSEL DETECTION CAPABILITY

- ✓ GMCP has partnered with the Allan Institute for Artificial Intelligence (AI2) Skylight to enable Member States to access a satellite vessel tracking system. This system uses algorithm-based machine learning to detect dark rendezvous and entry alerts within geo-fenced areas to improve MLE, with a particular focus on countering fisheries crime. The Skylight system has been provided on a pro-bono basis to 40 states and 3 regional bodies. The support also includes regular training and guidance on effective use.
- ✓ GMCP has established MDA Schools in Indonesia, Philippines and Viet Nam, providing fit-for-purpose training facilities dedicated for MDA training. The MDA Schools are equipped with interactive smart boards and access to MDA training platforms.
- ✓ GMCP has developed eight MDA training courses including MDA Foundational Training (3 courses), MDA Analytical Training (3 courses), specialised training in Radar Analysis (1 course), and the collection of soft-MDA (HUMINT) from coastal communities (1 course). These courses are delivered to MLE personnel across all teams.
- ✓ GMCP introduced cutting-edge technology for dark vessel detection with the installation of a Terrestrial-based Passive RF Sensor system on Bongao Island in the Tawi-Tawi Province of Western Mindanao in the Philippines. The Terrestrial-based Passive RF Sensor will detect radio emissions from vessels in the Sulu Sea to locate vessel activity.
- ✓ GMCP, as the Secretariat for the Forum of National Maritime Fusion Centre (FNMFC) of Southeast Asia and the Pacific, convened the 3rd Heads of Centre (HoC) Meeting under FNMFC in Bali, Indonesia in August 2022. The Meeting provided an opportunity to discuss advancements in MDA technology and adaptation for MLE.
- ✓ GMCP has supported the upgrading of surveillance equipment at Maritime Operations Centres in Cook Islands, Fiji, Kiribati, Nauru, Tonga and Tuvalu in the Pacific region, Seychelles and Tanzania in the Indian Ocean West region, and Maldives and Sri Lanka in the Indian Ocean East region to improve maritime surveillance and response capability.
- ✓ GMCP installed maritime x-band coastal radar equipment on Tarawa island in Kiribati to improve the MDA capability of Kiribati Police maritime unit. In addition, radar equipment was also provided to the Tanzanian Marine Police Operations Centre.
- ✓ GMCP has facilitated the provision of pro-bono synthetic aperture radar (SAR) imagery to national law enforcement agencies to detect vessels of interest (VoI) in support of counter-narcotics operations at sea.
- ✓ GMCP engaged closely with the European Maritime Safety Agency (EMSA) and the Copernicus programme on satellite imagery to support maritime operations to counter crimes in the fisheries sector.
- ✓ GMCP is working with MDA information providers using algorithm-based machine learning analytics to support Member States to detect vessels that are in breach of sanctions imposed under United Nations Security Council Resolutions.
- ✓ GMCP facilitated community-level engagement to collect human intelligence on maritime activity by training Village Headmen in Kadavu and Lau Island Provinces of Fiji, and Community Leaders in Kiribati and Samoa. The training focused on Maritime Surveillance and Island Security, to enhance the reporting of suspicious activity at sea observed by coastal communities to maritime surveillance centres.



DRONES FOR MARITIME SURVEILLANCE

- ✓ GMCP provided aerial drones and training to the Royal Thai Marine Police to support riverbank patrolling to counter drug trafficking across the Mekong River. In addition, drones have been provided to Mozambique, Seychelles, and Sri Lanka for maritime surveillance to counter narcotics trafficking and other illicit activity at sea routes.
- ✓ GMCP supported the Lebanese Armed Forces (LAF) Navy to identify man-portable drones that will enhance MDA and operational capacity. GMCP is also evaluating the integration of drone imagery into the LAF-Navy operations center to develop an improved picture of illicit activities in Lebanon's territorial waters.