



INFORMATION
FUSION CENTRE

ANNUAL REPORT 2023

WITH CONTRIBUTIONS FROM



INFORMATION FUSION CENTRE

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NOTE

Information herein was derived from various sources such as open source, OPCENs and other maritime stakeholders. Seafarers should remain vigilant especially in areas where the threat level is assessed to be of concern in accordance with the IFC's assessments via its Weekly Report or Spot Commentaries. Ships should apply the appropriate security measures (such as Tugs and Barge Guide, Guide for Tankers Operating in Asia, or Regional Guide 2 to Counter Piracy and Armed Robbery Against Ships in Asia). Ship masters should also be aware of and refer to the Maritime Security Charts Q6112 and Q6113, both published by the UK Hydrographic Office.

ANNEX A

IFC Classifications of MARSEC Categories

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ANNEX B

Calendar for 2024

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The IFC team in 2023

The IFC was established in 2009 to collate and sense-make relevant commercial shipping and maritime information to increase MARSEC awareness. Through the strong support of our partners, the IFC has established itself as a regional maritime security (MARSEC) info-sharing hub, providing actionable information to cue operational responses for MARSEC incidents, which include Theft, Robbery, And Piracy At Sea (TRAPS), Maritime Terrorism (MT), Maritime Incidents (MI), Illegal, Unreported, and Unregulated Fishing (IUUF), Contraband Smuggling (CS), Irregular Human Migration (IHM), Environmental Security (ENVSEC), and Cyber Security (CYBSEC).

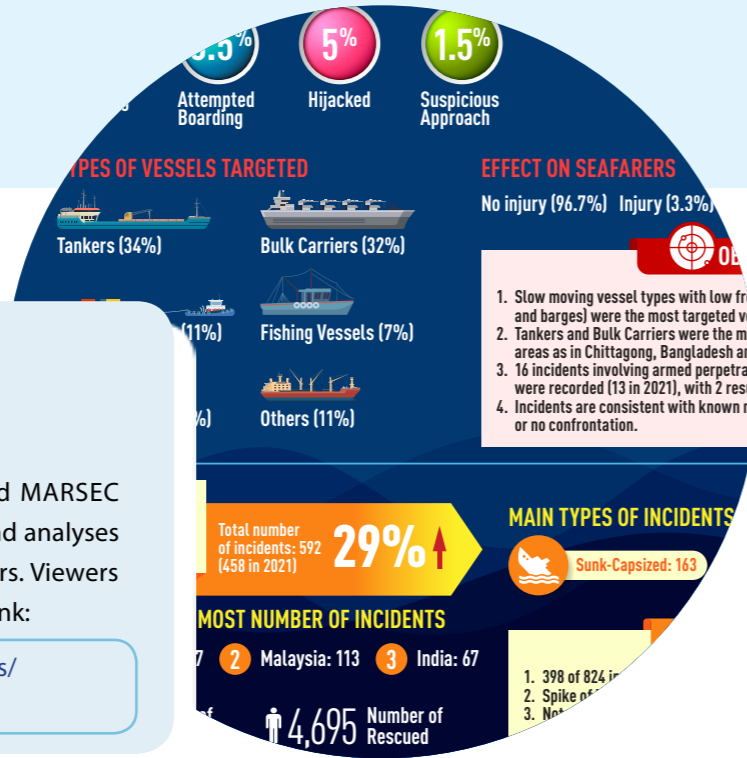
As of December 2023, the IFC has 24 International Liaison Officers from 20 countries deployed in the centre. The ILOs bring with them unique professional experiences, domain knowledge, and understanding of local waters in their respective home countries, helping to enrich the quality of IFC's products. Besides daily responsibilities at the IFC, the ILOs also take on leading roles in key MARSEC events. As Subject Matter Experts, they lead discussions amongst MARSEC stakeholders at events such as the IFC's Shared Awareness Meetings and other international conferences.

The IFC had also established worldwide linkages with 133 partners from 57 countries, which include navies, coastguards, maritime agencies, and influential shipping associations and companies enabling us to exchange MARSEC information across different regions.

IFC PRODUCTS

The IFC produces regular products and MARSEC advisories to provide our observations and analyses of MARSEC incident trends to our partners. Viewers can find all IFC products in the following link:

https://www.ifc.org.sg/ifc2web/app_pages/User/commonv2/pubsProducts.cshtml



Dear Partners and Friends,

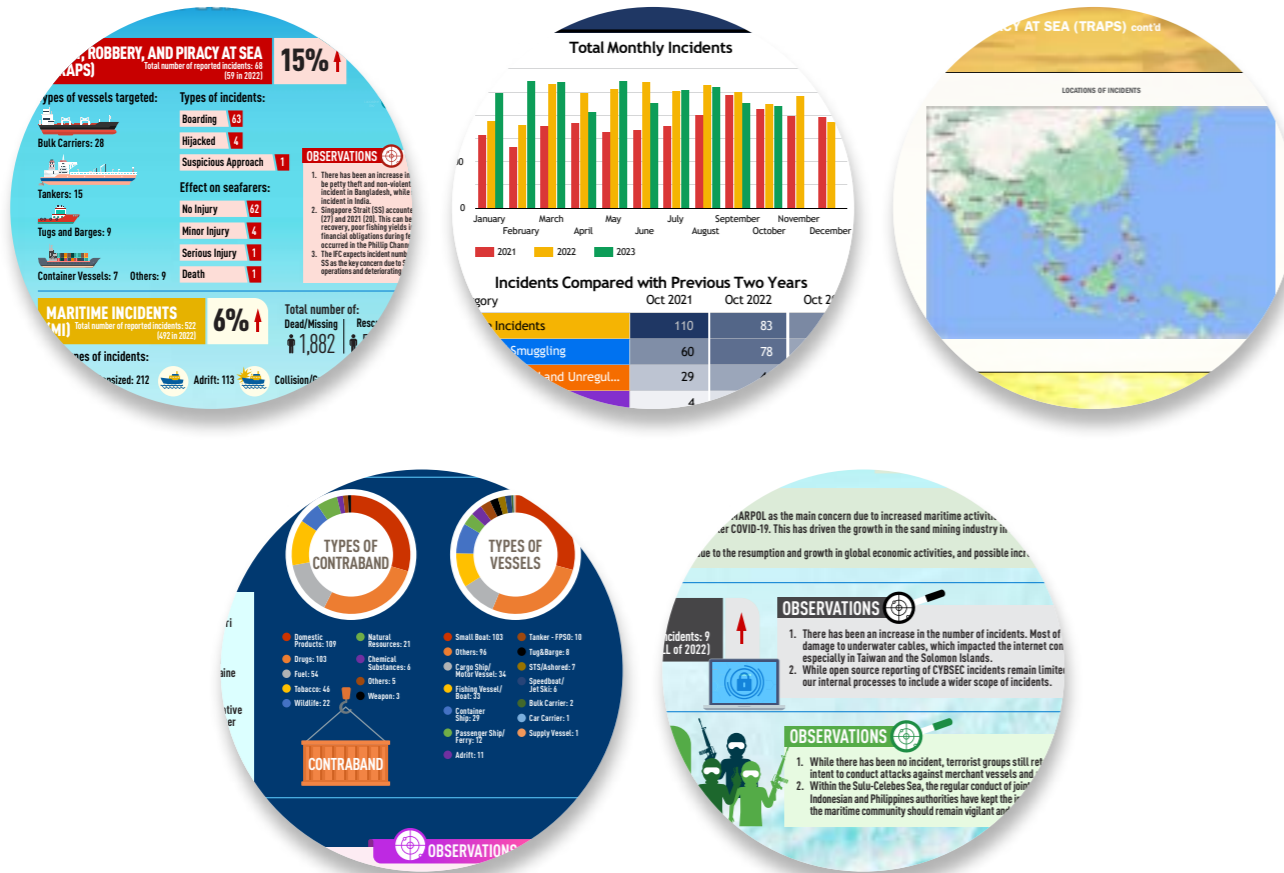
It is with an immense pride that we present the IFC Annual Report for 2023. This report is a culmination of the hard work put in by all our International Liaison Officers (ILOs), and it aims to provide a comprehensive overview of the maritime security (MARSEC) situation in the IFC's Area of Interest (AOI). In 2023, the IFC recorded a total of 2,972 incidents across our 8 MARSEC categories. While the overall incident number recorded remains high, it does

not necessarily represent a more precarious maritime environment; improved enforcement efforts and more forthcoming reporting across our maritime and shipping partners have played a key role as well. Of note, the IFC's info-sharing network has also grown, enabling us to not only be more "plugged in", but also to be able to corroborate information and gain additional insights, which we include in our products.

Against the winds of geopolitical challenges, the IFC continued to grow and bring value to our partners in 2023. I am happy to report that we expanded our ILO corps to 24 ILOs from 20 countries (which includes 4 Coast Guard ILOs), and we are expecting more ILOs to join us in 2024. This development strengthens the IFC's ability to better cue responses and support operations at sea. We also successfully conducted our flagship events, such as the 11th Regional Maritime Practitioner Program (RMPP), the 8th Maritime Information Sharing Exercise (MARISX), and regular Shared Awareness Meetings (SAMs). These events remain relevant and have helped to strengthen our operational linkages and support for all seafarers. In 2023, the IFC also introduced various new initiatives such as the Shipping Leadership Programme for partners to understand geopolitical developments in the maritime domain, and the Maritime Awareness Week Campaign to reinforce the importance of adopting shipboard protection measures. The IFC also continued to strengthen partnerships with overseas stakeholders through visits to the Information Fusion Centre – Latin America (IFC-LA) in Peru, and the International Centre for Research and Analysis Against Maritime Drug Trafficking (CMCON) in Colombia. We also participated in the inaugural Sea Indonesia Maritime 2023 Exhibition and Conference in Jakarta to extend outreach to the Indonesian shipping community. We undertake these initiatives to enhance information-sharing and deepen trust across the maritime community.

Our strong operational linkages and relationships with key stakeholders in the community have also enabled us to contribute to MARSEC and safety of seafarers even beyond our AOI. For example, in April 2023, the IFC worked closely with regional partners like MDAT-GOG and the French Navy, via our UK and France ILOs, to contribute to the successful search and rescue operation for hijacked Singapore-flagged tanker SUCCESS 9, which was eventually located ~50nm off the Ivory Coast. This underscores the significance of these linkages and strengthens the IFC's commitment to continue improving existing partnerships and forge new ones.

In closing, I would like to extend my personal gratitude to the all the ILOs at the IFC, who have meticulously compiled all the data and prepared this annual report; and to our partner agencies who have contributed write-ups on their respective AOs. We could not have done this without you. I hope all readers will find this report useful. Let us continue to work together for Safe and Secure Seas For All.



SECTION A: THEFT, ROBBERY, AND PIRACY AT SEA (TRAPS)

1. OVERVIEW

In 2023, the IFC recorded a total of 117 TRAPS incidents in the IFC's AOI, which was 13% higher than 2022 (104 incidents) and 27% higher than 2021 (92 incidents). The rise in incident numbers can be attributed to the combined effects of (a) global economic factors leading to increased cost of living and unemployment, and (b) challenging weather conditions affecting fishing yields, leading locals with requisite skillsets to resort to crimes at sea to supplement income for daily needs. As with past years, the Singapore Strait (SS) (58 incidents)

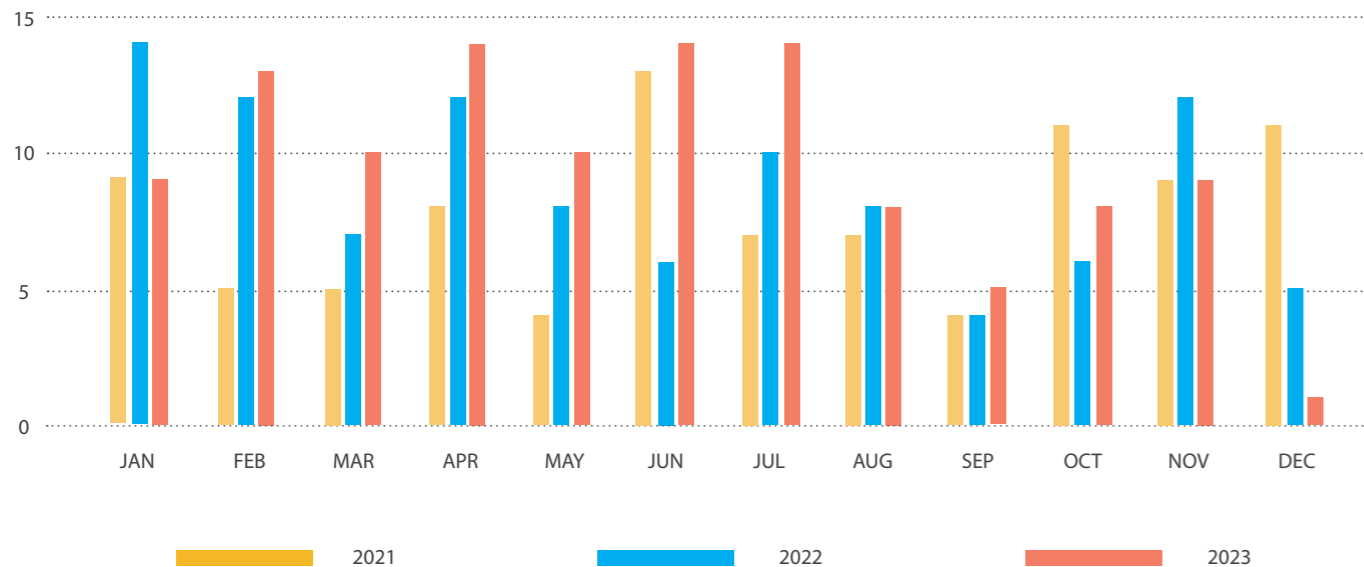
remains the main area of concern; notwithstanding, there was a notable 47% decrease in incidents in the second half of 2023. Of note, Indonesian authorities conducted operations in October 2023, resulting in the arrest of several suspects; this has had a significant impact in deterring other potential perpetrators, particularly in November and December 2023. Overall, the IFC expects incident numbers in 2024 to remain within similar levels as 2023 (within IFC's AOI); incident numbers may even decline if ongoing enforcement efforts continue to be effective.

2. KEY FACTS

The breakdown for the 117 TRAPS incidents is as follows: 111 boardings, 4 hijackings, 1 attempted boarding, and 1 suspicious approach. 88 incidents involved Sea Theft and 29 incidents involved Sea Robbery. Apart from SS,

Manila Anchorage and the Malacca Strait (MS) are the other key areas of concern based on incident numbers and/or severity. Notably, there has been an overall decline in incident numbers in the latter half of 2023, most likely due to increased regional enforcement efforts.

MONTH-TO-MONTH COMPARISON OF TRAPS INCIDENTS BETWEEN 2021-2023



2A. Hijackings

The IFC recorded 4 hijacking incidents, with 3 involving fishing vessels and 1 involving a small boat. These incidents occurred in waters off Bangladesh (2 incidents), Papua New Guinea (1 incident), and

Indonesia (1 incident). Of note, in the incident off the Kuakata Coast, Bangladesh, perpetrators armed with guns attacked a fishing trawler, resulting in the death of 1 fisherman and serious injuries to several others.

2B. Types of vessels

Bulk carriers were the most targeted vessel type in the IFC's AOI, involved in 41% (48 incidents) of all TRAPS incidents in 2023. This is followed by tankers and tugs

and barges targeted in 26% (31 incidents) and 13% (15 incidents) of all incidents respectively, primarily due to their lower freeboard and slow speed when transiting, especially when fully laden.

DISTRIBUTION OF INCIDENTS BASED ON TYPE OF VESSELS TARGETED

Type of Vessels	Bulk Carriers	Tankers	Tug and Barges	Container Vessels	Fishing Vessels	Small Boats	Cargo Vessels	Platform
Number of Incidents	48	31	15	10	7	3	2	1

2C. Weapons

29% of incidents involved weapons such as knives, firearms and machetes. Of note, firearms were

reportedly involved in 3 incidents occurring in waters off Bangladesh, Papua New Guinea, and the Philippines; however, there were no reports of a weapon being fired.

SECTION A: THEFT, ROBBERY, AND PIRACY AT SEA (TRAPS)

3. OBSERVATIONS/ASSESSMENTS

3A. General Insights

i. Singapore Strait (58 incidents)

The 58 incidents recorded in 2023 is higher than 2022 (55) and 2021 (49), and is a continuing trend possibly due to the current slow economic recovery and the rising cost of living, prompting more locals to resort to petty theft. Most of the incidents occurred in the Phillip Channel (34 Incidents), mainly Northeast of Karimun Besar Island and Northwest of Kepalajernih Island, where vessels have been known to decrease speed significantly when turning. The other area of concern is waters off Bintan and Batam islands (12 incidents). It is assessed that increased enforcement

efforts by regional authorities in the waters off Bintan and Batam islands have caused perpetrators to shift their operations to the Phillip Channel.

Notably, the number of incidents in SS fell by 47% in the second half of the year, assessed due to the overall stepped-up enforcement efforts by regional authorities. Particularly, a successful land operation mounted by Indonesian authorities in October led to the arrest of several members of a suspected sea robbery syndicate; following this, there was only 1 incident reported in November and December combined.

ii. Manila Anchorage (10 incidents)

The 10 incidents recorded in 2023 is significantly higher compared to 2022 (1 incident). Container vessels were

the most targeted, accounting for 8 out of the 10 incidents. There were no reported injuries to ship crew in majority of the incidents

iii. Malacca Strait (5 incidents)

The 5 incidents recorded in 2023 is higher than 2022 (1) and 2021 (0). In 1 incident onboard a bulk carrier, the ship master was stabbed, marking the first occurrence of such an attack in that area in recent years. Overall, IFC assesses that most perpetrators lack the capabilities

to board transiting ships in the MS as most proceed at higher speeds, compared to the SS. Transiting ships are also usually situated at a considerable distance from the coast, making it challenging for perpetrators to reach them without more deliberate effort.

3B. Modus Operandi

As with previous years, the modus operandi of the perpetrators in IFC's AOI remains largely consistent with that of petty crime and are generally opportunistic in nature. In most incidents, perpetrators avoided confrontation with ship crew, and opted to flee once sighted or when the alarm was raised.

i. Singapore Strait

Bulk carriers were the most frequently targeted vessel types in the SS, accounting for 69% of the incidents, followed by tugs and barges, and tankers making up 19% and 12% of the incidents respectively. This is due to their slower speed (7 to 12 knots), and lower freeboard (less than 8m). Stolen Items include engine spare parts and small tools (bulk carriers and tankers), and scrap metal (tugs and barges).

The perpetrators appeared to be familiar with the local waters, comfortable operating in periods of darkness, and blending in easily with local fishing concentration to avoid detection. They tend to operate in small boats with 4-5 pax. Perpetrators have been reportedly armed with weapons like knives and steel bars; however, they are assessed to be non-aggressive. Of the 58 incidents reported in

the SS, only 7 involved confrontations between the perpetrators and ship crew, with 3 incidents resulting in injuries to ship crew.

Recent investigations by Indonesian authorities have also revealed that perpetrators have become more tech-savvy, making use of commercially available online applications in their handphones to select suitable targets (using AIS information to identify vessel type and speed) to increase chances of success. The IFC assesses that it would be difficult to prevent perpetrators from using commercially available technology; the most effective measures against these perpetrators appear to be land-based operations/ sweeps conducted by regional authorities to confiscate equipment and send a strong deterrent signal.

ii. Manila Anchorage

Perpetrators are generally unarmed and tend to operate in small groups (3-4 pax); in some incidents the group size can be up to 8 pax. Perpetrators usually target tankers

and container vessels that are anchored or stationary, and operate during periods of darkness. Stolen Items include spare parts and ship stores.

iii. Malacca Strait

Most of the incidents in the MS occurred in the southern part of the strait close to the Phillip Channel, and have similar modus operandi to that of the SS. The perpetrators

have been observed to ingress and egress to and from the Karimun Island area This can be due to ships having to slow down while approaching SS, and the area serves as a strategic location for perpetrators to position themselves.

4. FORECASTS/WAY AHEAD

The IFC expects the number of incidents to remain within similar levels in 2024, or possibly decrease if ongoing enforcement efforts continue to remain effective. We expect the modus operandi of perpetrators operating in the IFC’s AOI to remain consistent with past trends (petty crime, generally non-confrontational and opportunistic in selection of targets). Based on trending, we may expect incident numbers to increase during monsoon periods, and in months leading up to festive periods; such trending is particularly prevalent in the SS.

Apart from SS, the Manila Anchorage remains an area of concern due to the significant increase in incidents in 2023. We should continue to be watchful and expect the trend to continue in 2024.



The IFC would like to reaffirm the important role of the shipping community in helping authorities to prevent further incidents and make better assessments. All vessels should follow the below recommendations, especially when transiting the SS:

- Remain vigilant: upon sighting of suspicious activities, immediately inform the local authorities.
- Report all incidents, report suspicious activities and presence of suspicious small boats in the vicinity to the nearest coastal State and flag State.
- Provide authorities necessary evidence (if any) for onward investigation.
- Participate in the IFC “Voluntary Community Reporting” as depicted in MARSEC Charts Q6112 and Q6113.
- Adopt Ship Protection Measures recommended in the Regional Guide 2 to Counter Piracy and Armed Robbery Against Ships in Asia.
- Turn on weather deck lighting around the accommodation block and rear facing lighting on the poop deck.
- Maintain an all-round lookout at an elevated position with focus on suspicious small craft(s) approaching or in proximity to the ship’s aft.
- Sound ship’s alarm when suspicious small craft are sighted.

In the realm of maritime security, the **MICA Center** has been a steadfast guardian against piracy, theft, and robbery incidents worldwide, particularly in the Gulf of Guinea with the MDAT-GoG, the Horn of Africa with the MSCHoA, and, with the support of IFC Singapore, the Malacca and Singapore Straits. These three hotspots exhibit distinct characteristics and trends, demanding nuanced approaches for effective mitigation strategies.

The Indian Ocean, despite occasional reports of suspicious approaches, has experienced a suppression of piracy due to a combination of various operations and the continuous presence of Operation EUNAVFOR ATALANTA for the past 15 years. However, the fear of piracy persists, overshadowed by a maelstrom of threats like illicit trafficking, IUU Fishing, and conflicts spillover, underscoring the multifaceted challenges in the region.

The Gulf of Guinea, once plagued by a surge in extremely violent piracy acts, witnessed a hopeful decline in incidents in 2021 and 2022. However, the optimism was short-lived, as 2023 saw a slight increase in incidents, with 14 crew members kidnapped and others temporarily held. Notably, the region experienced major piracy incidents, culminating in successful crew recoveries through collaborative efforts involving military or non-military interventions. These operations, although not resulting in pirate captures, showcased the commitment of various stakeholders, emphasising the need for mutual trust and cooperation.

Specific incidents in which the French Navy was specifically involved, brought forth valuable lessons, notably the importance of mutual knowledge, trust-building, anticipation, and information sharing. Collaborative efforts involving local, regional, and

international partners, including **IFC Singapore** and the Maritime Port Authority of Singapore, demonstrated the significance of coordinated responses to maritime threats.

The persistence of violence at anchorage and in the rivers of the Gulf of Guinea exacerbates the overall sense of insecurity among seafarers in the region, and the increasing number of incidents in the Strait of Malacca raises more concerns. However, while piracy remains a concern for sailors, the focus of maritime security stakeholders has shifted to other pressing issues like drugs and human trafficking. It is imperative to recognise the interconnected nature of these threats, necessitating a comprehensive and integrated approach to address the complexities of maritime security.

The key to success in tackling piracy lies in organised networking and information sharing that enhances Maritime Domain and Maritime Security awareness. **The MICA Center and IFC Singapore** are at the forefront of this effort, actively engaging with numerous partners to build a collaborative framework. Emphasising complementarity over duplication of resources and tools, along with the cultivation of trust, is crucial for creating a resilient maritime environment.

In conclusion, the evolving landscape of piracy and maritime threats requires adaptable and cooperative measures. By fostering mutual understanding, trust, and a shared commitment among stakeholders, the international community can navigate the complex waters of maritime security, ensuring the integrity of global trade routes as well as the safety and well-being of seafarers.



SHARPER ANALYSIS POINTS TO MORE EFFECTIVE SOLUTIONS

Dr IAN RALBY MARITIME EXPERT, INSTITUTE FOR SECURITY GOVERNANCE

Headlines have long decried the scourge of “piracy” in the Singapore and Malacca Straits. But piracy cannot occur, as a matter of international law, in the territorial seas of coastal states. At the same time, the term “IUU Fishing,” which stands for illegal, unreported, and unregulated fishing, has become a colloquial catchall for undesirable activities involving the fishing sector, even when there is no actual fishing involved. As the maritime context of Southeast Asia becomes increasingly complex, monitoring and fusion centres are beginning the critically important process of enhancing their analytical capacity. With more accurate diagnosis of maritime threats, these centres can become increasingly helpful in pointing towards effective solutions, not just at the national level but across the wider region.

Despite reports² suggesting that piracy is rampant in Southeast Asia, even a cursory analysis of the attacks that have been labelled as piracy indicate that that designation has not been conducted in a rigorous fashion. Under article 101 of the United Nations Convention on the Law of the Sea³ (UNCLOS), piracy is specifically defined with several key elements. Read in combination with UNCLOS article 58, piracy, as a matter of international law, can only occur outside the 12 nautical mile territorial sea of a state.

It is thus factually impossible for piracy to occur in the Singapore Strait and most of the Malacca Strait. This may seem like an esoteric legal issue, but the reason this matters comes when asking: Who can respond to the offence at issue? If the offence is truly piracy, it is a crime of universal jurisdiction under UNCLOS article 110, meaning that any navy or coast guard from any country on earth can intervene in an incident of piracy. If the offence occurs in the territorial sea, however, only the

coastal state can intervene. By calling these incidents in the Singapore and Malacca Straits “piracy”, the reports are effectively inviting foreign intervention, and thus undermining the sovereignty⁴ of Singapore, Indonesia and Malaysia.

Again to the question of “who can respond to the offence at issue”, the term IUU Fishing⁵ has become problematic in its use to classify any undesirable activity involving the fishing sector. Illegal fishing can be addressed by a coast guard or navy; unreported fishing must be addressed by a fisheries agency; and unregulated fishing requires a legislative and regulatory response. Lumping all three together already obscures a path to resolution, before arriving at the broader issue that “IUU Fishing” is also being used to label other problems including other, unrelated matters like fisheries crime and state-protected illicit fishing. IUU Fishing is fundamentally about fish and undermines the sustainability of the ocean. Fisheries crime⁶, by contrast, uses the infrastructure of the sector to commit other crimes like trafficking or money laundering. And state-protected illicit fishing⁷ is when a state uses its own institutions and assets to protect illicit fishing in another state’s waters. Only by accurately assessing what the issue really is can we identify a functional path to addressing it.

These issues of rigour in diagnosing maritime threats are not limited to piracy and IUU Fishing. Much could be said about the failure to effectively distinguish⁸ migrant smuggling, human trafficking and the slave trade, for example. And, equally, an excessive focus on spectacular attacks tends to blind us to the broader and seemingly benign activities of terrorists in the maritime domain⁹. As centres like the Information Fusion Centre (IFC) Singapore enhance their analytical capacity, these issues

are coming into focus. Precision in assessing the specific nature of maritime anomalies is not just about record keeping or credibility. Only with an accurate diagnosis of what is happening can an effective response and the appropriate responder be identified.

Furthermore, with sharper multinational analysis, centres like IFC can also help support all the states in the region in a manner that ensures that no state becomes a magnet for a particular offence on account of weaker monitoring or enforcement. Sharpening the rigour of analysis in regional centres, therefore, should be a welcome means of strengthening maritime security throughout the region.

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- ¹ <https://www.westpandi.com/news-and-resources/news/march-2023/malacca-and-singapore-straits-increase-of-piracy-i/>
 - ² <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/shipping/011823-singapore-2022-piracy-incidents-hit-7-year-high-watchdog>
 - ³ https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf
 - ⁴ [https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1090&context=scujil&httpsredir=1&referer=#:~:text=The geography of the Straits also hampers efforts to pursue, a third parties’ territorial waters.](https://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1090&context=scujil&httpsredir=1&referer=#:~:text=The%20geography%20of%20the%20Straits%20also%20hampers%20efforts%20to%20pursue%20a%20third%20parties%27%20territorial%20waters.)
 - ⁵ <https://www.fisheries.noaa.gov/insight/understanding-illegal-unreported-and-unregulated-fishing>
 - ⁶ <https://amti.csis.org/combating-fisheries-related-crime-in-the-south-china-sea-leveraging-maritime-information-sharing-centers/>
 - ⁷ <https://www.diplomaticourier.com/posts/beyond-iuu-fishing-fisheries-crime-state-protected-illicit-fishing>
 - ⁸ <https://centerformaritimestrategy.org/publications/china-is-enslaving-people-at-sea-we-dont-have-the-where-withal-to-stop-it/>
 - ⁹ https://www.realcleardefense.com/articles/2023/05/06/confronting_all_ten_modalities_of_maritime_terrorism_897900.html



SECTION B: MARITIME TERRORISM (MT)

1. OVERVIEW

No Maritime Terrorism (MT) incident was recorded in 2023 in the IFC's AOI, which is similar to 2022. The last incident reported was in 2021, in Maldives.

2. OBSERVATIONS/ASSESSMENTS

Initiatives such as the Trilateral Cooperation Arrangement between Indonesia, Malaysia, and the Philippines is likely to have a positive deterrent effect against terrorist activities in IFC's AOI through the regular conduct of joint patrols in their respective areas.

3. FORECASTS/WAY AHEAD

Although no MT incident was reported in 2023, all countries and the maritime community should remain vigilant and continue to share relevant information for effective monitoring on MT incidents.

SECTION C: MARITIME INCIDENTS (MI)

1. OVERVIEW

In 2023, the IFC recorded a total of 1,023 maritime incidents¹ (MI) in the IFC's AOI, which was 2% higher compared to 2022 (999 incidents) and 7% higher than 2021 (959 incidents). Majority of MI were reported in waters off Philippines, Indonesia, and Vietnam. Consistent with past years, most of these incidents

involved fishing vessels sinking or capsizing; these incidents also accounted for the most dead and missing persons in 2023. Given the high number of maritime activities and potential worsening of weather conditions (impact of climate change), the IFC expects the number of MI in 2024 to be similar or higher than 2023.

¹ In 2023, the IFC streamlined its SOP to exclude incidents involving medical evacuation, work accidents and man overboard incidents as they were not relevant to maritime security. The change saw 193 and 143 incidents removed for 2022 and 2021 statistics respectively.



SECTION C: MARITIME INCIDENTS (MI)

2. KEY FACTS

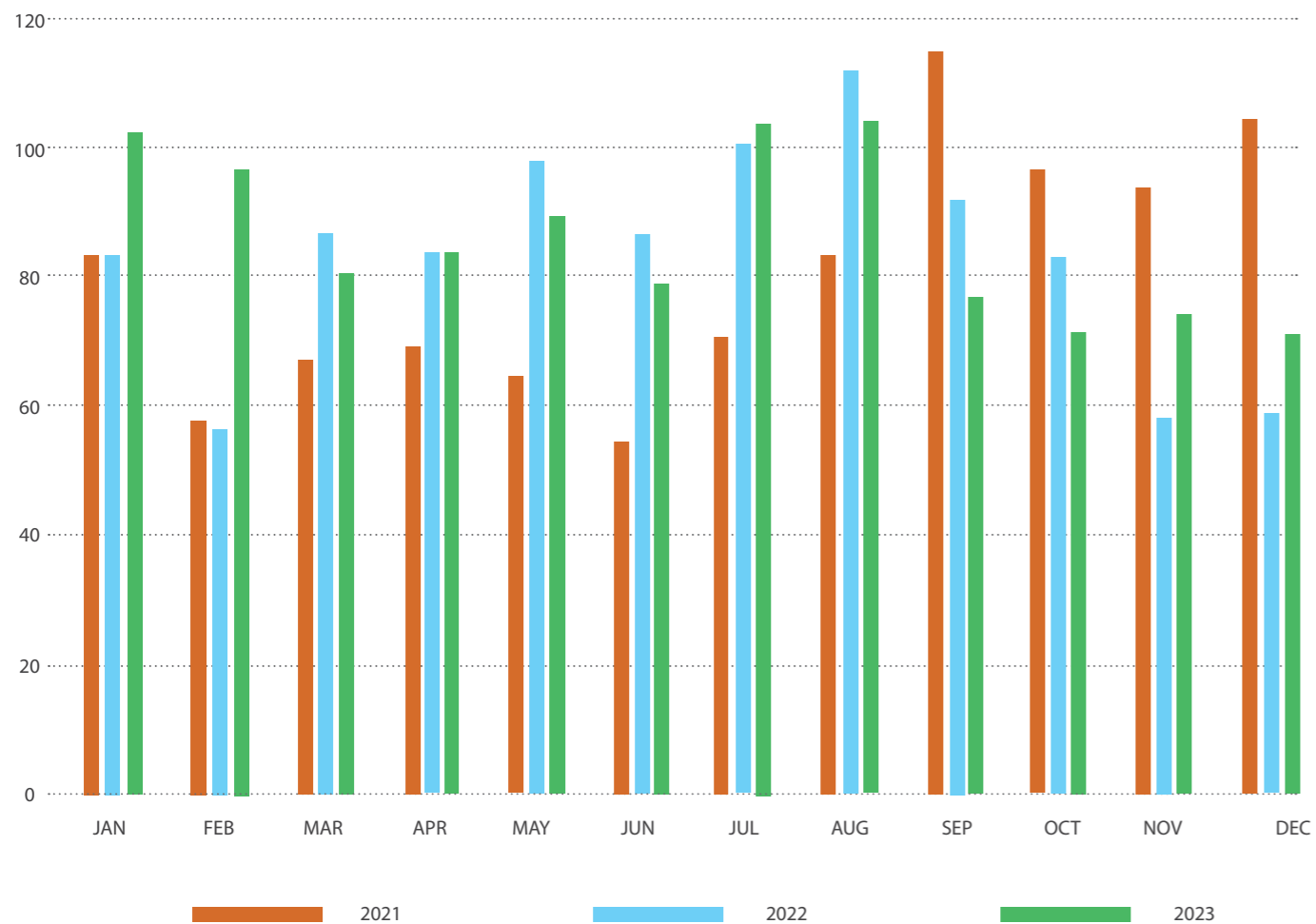
The top 3 most reported MI in 2023 involved vessels sinking/capsizing (403 incidents, 40%), vessels adrift (212 incidents, 21%), and vessels colliding/grounding (166 incidents, 16%).

Majority of the incidents involved fishing vessels (475 vessels, 39%), followed by container/cargo/bulk/tanker vessels (267 vessels, 22%), and small boats (147 vessels, 12%). Notably, the 3 leading causes of

incidents were bad weather (24%), equipment failure (21%), and collisions/grounding impacts (15%). A total of 1,501 persons were recorded dead/missing at sea in 2023.

Of note, there was a peak in MI numbers during the months of July and August. This surge was predominantly attributed to inclement weather and adverse sea conditions caused by the monsoon, impacting vessels, especially in the Philippine Sea and the Bay of Bengal.

MONTH-TO-MONTH COMPARISON OF MARITIME INCIDENTS BETWEEN 2021-2023



3. OBSERVATIONS/ASSESSMENTS

Vessel Types

i. Small Boats and Fishing Vessels

The high number of incidents involving fishing vessels is a continuing trend from 2022 and 2021. These incidents also contribute to the majority of dead and missing people (623 persons, 42%). The common causes for most of the incidents are bad weather and equipment failure. Many fishing vessels are characterised by small sizes

and wooden hulls that are vulnerable to severe weather conditions, especially in the open seas. Conversely, larger fishing vessels often experience equipment failures due to prolonged exposure to external elements during prolonged periods at sea, leading to frequent breakdowns.

ii. Passenger Vessels

Incidents involving passenger vessels contributed to the highest number of people rescued with most incidents occurring in the waters off Indonesia and the Philippines, both of which are archipelagic nations

and have large numbers of passenger vessels servicing their dispersed populations. Fortunately, the relevant regional authorities acknowledged this situation and have promptly responded to these incidents, resulting in the successful rescue of numerous individuals.

iii. Container / Cargo / Bulk / Tanker Vessels

While the number of collisions/groundings related incidents involving such merchant vessels decreased from 2022, there's been a notable increase in fires/explosion and equipment failure-related incidents. Of note, an explosion onboard Aframax oil tanker PABLO off the coast of Johor in Malaysia on 1 May, resulted in the tragic loss of 3 crew members. The incident also led

to a maritime pollution crisis with oil washing-up ashore in Malaysia and Indonesia.

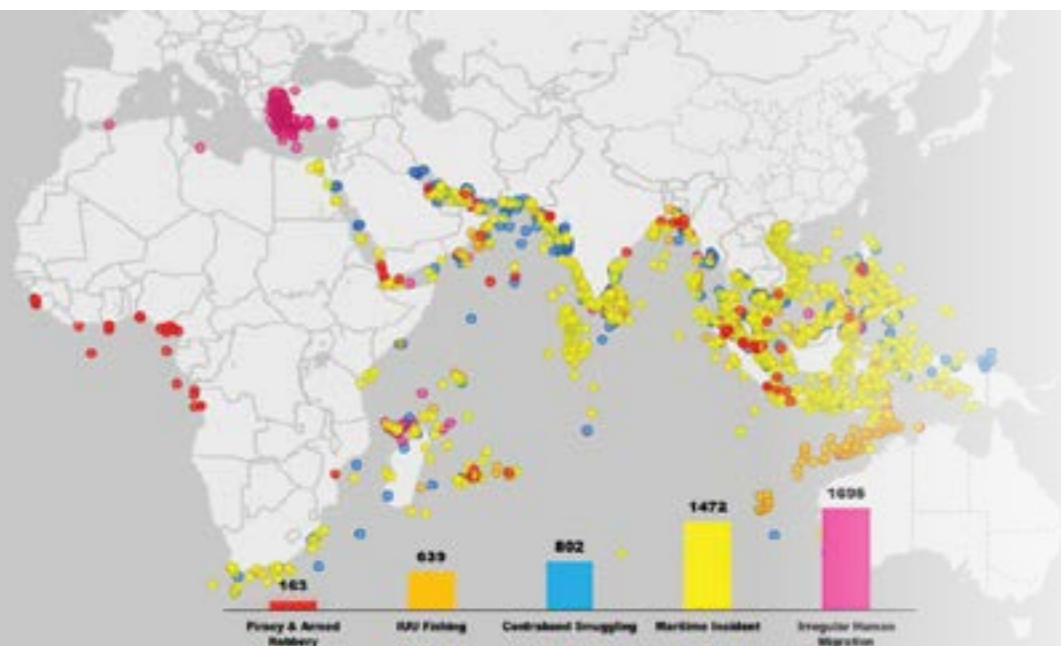
Separately, 75 incidents involving vessel detentions have been recorded in 2023, particularly related to unauthorised anchoring, of which majority occurred in waters off Malaysia. The shipping community is advised to thoroughly verify and adhere to local regulations before anchoring.

4. FORECASTS/WAY AHEAD

The IFC expects MI numbers in 2024 to be similar or higher than 2023, as maritime activities remain high and weather patterns have also become more unpredictable due to climate change. As regional monsoons have

traditionally caused major disruptions to maritime activities in IFC's AOI, seafarers transiting should step up their vigilance during these months and adhere to safety advice from local authorities.

MARITIME SECURITY SITUATION IN IOR: IFC-IOR PERSPECTIVE



Indian Ocean Region is a vital area for global trade and economy and experiences a plethora of maritime security challenges. IFC-IOR* classifies these challenges broadly into five major categories, namely Piracy and Armed Robbery, Contraband Smuggling, Illegal, Unreported, and Unregulated Fishing, Irregular Human Migration, and Maritime Incidents. An overview of the maritime safety and security situation in the region for the year 2023 (up to October) is provided in the succeeding paragraphs.

* Information Fusion Centre – Indian Ocean Region (IFC-IOR), located at Gurugram, India is the major information hub in the Indian Ocean Region which collaborates with partners to further maritime safety and security. The Centre hosts International Liaison Officers (ILOs) from 12 partner nations and has established working-level linkages with multiple stakeholders/organisations across the globe.

Piracy and Armed Robbery

Piracy and Armed Robbery has largely remained suppressed in most of the areas of the region except Southeast Asia which has witnessed an increase of 28% as compared to the same period in 2022. However, a greater part of these incidents recorded in this sub-region have been minor in nature and primarily that of petty thefts. Piracy and Armed Robbery continues to remain repressed in the Persian Gulf, Gulf of Aden, and Red Sea due to the continued presence/efforts of international forces. A major development in this context has been the removal of the HRA by industry bodies with effect from 1 January 2023. In the GoG, the monitored incidents, though reduced in numbers, have demonstrated the propensity for perpetrators being heavily armed and prone to violence. Kidnapping for ransom remains the biggest risk for crew.

Contraband Smuggling

The Centre monitors contraband smuggling under various sub-categories viz. drugs, domestic products, natural resources, fuel, tobacco etc, of which drug smuggling has been a major contributor. The smuggling of opioid-related drugs has been monitored to have reduced significantly, a likely outcome of the ban on opium poppy cultivation in Afghanistan. Trafficking of methamphetamine and ATS originating from the Makran coast to Southwest and Southeast Asia, including small island nations has, however, seen a surge in the region. Other goods monitored to be smuggled, especially in the Southeast Asia region included fuel, domestic products, weapons etc.

Illegal, Unreported and Unregulated Fishing

The biggest jump among all categories has been observed in IUU Fishing. A total of 639 incidents of IUU Fishing were recorded by the Centre in 2023 (Jan-Oct 23), a significant 32% increase compared to Jan-Oct 22. The legal gaps, areas

not regulated by RFMOs, violations of local regulations, fishing in banned periods, usage of illegal fishing methods and presence of extra-regional/distant water fishing fleets were the major contributors towards IUU Fishing incidents throughout the region.

Irregular Human Migration

A substantial (22%) increase in IHM incidents was captured as compared to Jan-Oct 22. The migrants (including women and children) transiting in small, overcrowded and unworthy small boats which pose significant risks to lives continues to be a major cause of concern. The motive for a majority of the rescued migrants attempting to enter a foreign country has been to seek a better livelihood and job opportunities. Economic downturns as well as conflict-related situations in some countries of the region has also been a reason for this witnessed increase in numbers under IHM. The recorded loss of 70 lives in IHM incidents during the period is, however, deeply unfortunate.

Maritime Incidents

The incidents captured under this category reveal a notable 15% increase in numbers from Jan-Oct 23 compared to the same period in 2022. Majority of the incidents have been observed to be closer to the coast and involving small vessels. Mechanical failures especially in rough weather are the most common cause, emphasising the importance of vessel maintenance. Incidents involving fire, collision, aground, SAR, and MEDEVAC underscore diverse challenges. Strengthening compliance, especially among fishermen and small boat operators, is crucial to significantly reduce the overall number of maritime incidents and enhance maritime safety. In addition, conflict-related incidents involving aerial attacks on ships using drones in the Red Sea and Western Indian Ocean in the latter part of the year has been an alarming development.

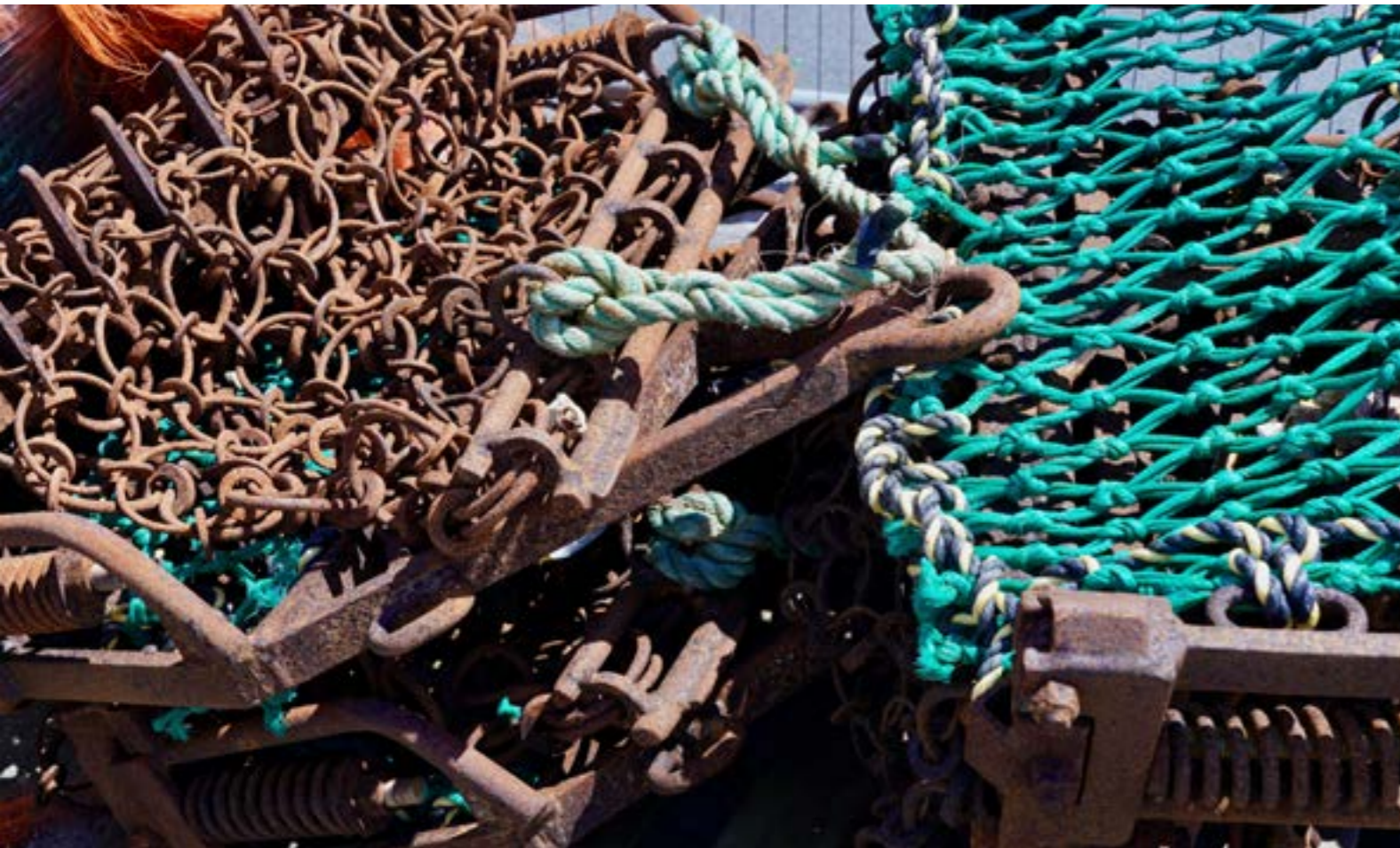


SECTION D: ILLEGAL, UNREPORTED, AND UNREGULATED FISHING (IUUF)

1. OVERVIEW

In 2023, the IFC recorded a total of 708 IUUF Incidents in the IFC's AOI, which was 27% and 95% higher than 2022 (559 incidents) and 2021 (364 incidents)¹ respectively. Better outreach efforts in implementing anti-IUUF measures and the stepped-up enforcement efforts by

authorities from last year may have contributed to the increase in the number of reported incidents this year. IFC expects a moderate increase in incidents for 2024 due to the ongoing strong enforcement efforts from regional and local authorities.



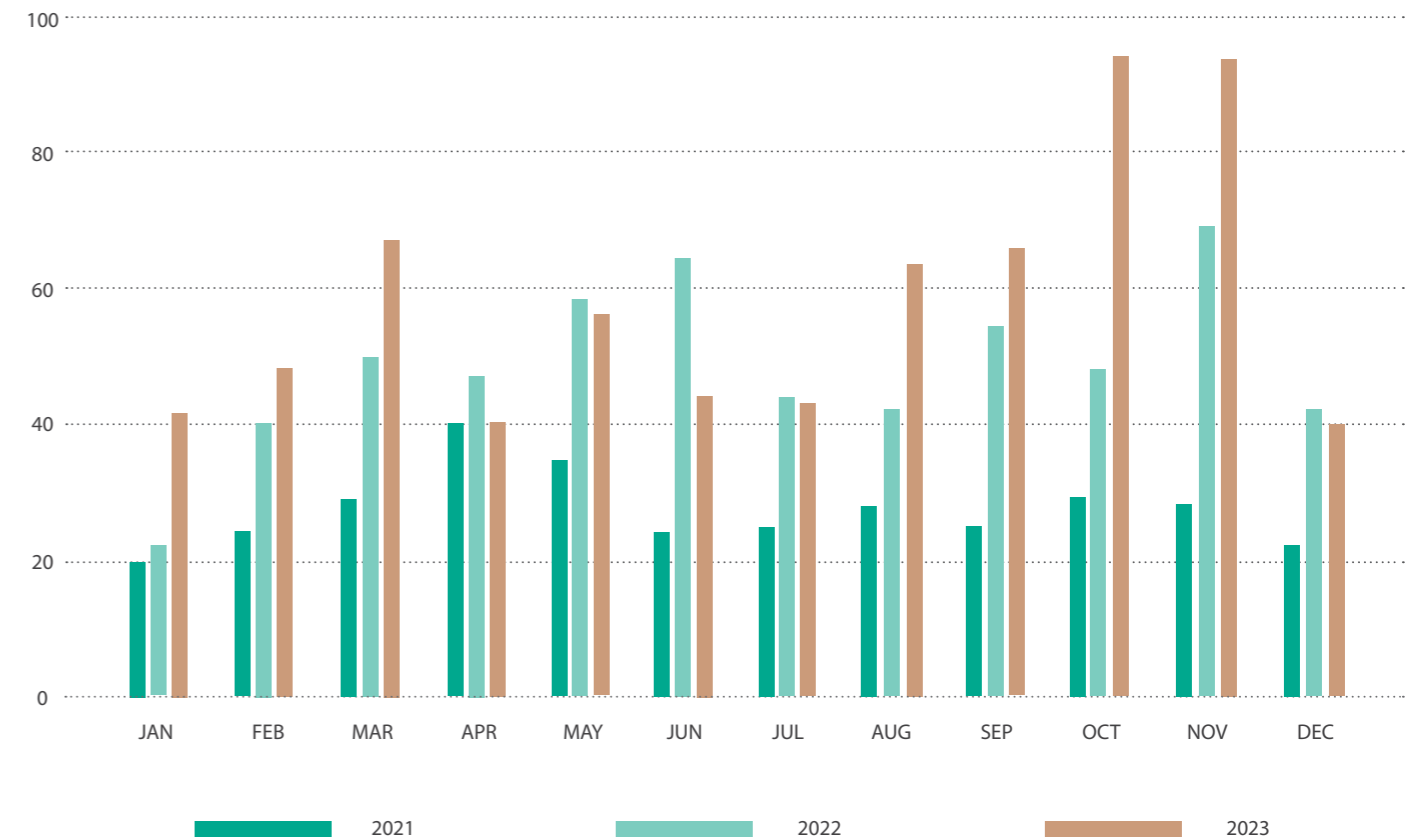
¹ The significantly lower numbers in 2021 are likely due to the combination of the following factors: (1) resumption of fishing activities in regional countries after COVID-19; (2) increase in OPCEN reporting in areas such as Northern Australia; and (3) stepped-up enforcement efforts by authorities.

2. KEY FACTS

IUUF incidents peaked in the months of October and November with 96 incidents in each month. April and December had the lowest incident numbers recorded in 2023 with 40 incidents in each month. The decrease in incidents could be attributed to the Northeast Monsoon that extended into the second half of April, causing

unfavourable fishing conditions. IUUF incidents in waters off Australia made up 30% (222 incidents) of total incidents, forming the majority of IUUF incidents in IFC's AOI. This is followed by incidents in waters off Malaysia and Sri Lanka, which made up 22% (161 incidents) and 16% (112 incidents) respectively.

MONTH-TO-MONTH COMPARISON OF IUUF INCIDENTS BETWEEN 2021-2023



3. OBSERVATIONS/ASSESSMENTS

3A. Local IUUF

The 353 reported local IUUF incidents in 2023 is 15% higher than the 308 incidents recorded in 2022. Local IUUF incidents in waters off Malaysia made up 34% (121 incidents) of total incidents, forming the majority

of local IUUF incidents. The other areas of concern for local IUUF incidents in IFC's AOI are waters off Sri Lanka, which made up 27% (95 incidents) and Indonesia, which made up 9% (32 incidents).

3B. Poaching IUUF

The 354 reported poaching IUUF Incidents in 2023 is 33% higher than the 267 incidents reported in 2022. The main areas of concern for poaching IUUF incidents in 2023 are waters off Northwest Australia (222 incidents), Malaysia (40 incidents), and Sri Lanka (17 incidents).

Indonesian fishing vessels were involved in the highest number of poaching IUUF incidents, with 189 vessels incidents off Malaysia, Northwest Australia, and Thailand. Chinese and Vietnamese fishing vessels were the next highest, with 37 and 28 of them respectively.

The increase in number for poaching IUUF incidents recorded is primarily due to the increase in incidents reported in waters off Northwest Australia. Incidents

involving Indonesian fishing vessels detained off Northwest Australia saw a continued rise in 2023 due to the ongoing demand for trepang and sharks in the region. The increase in detainments is an outcome of the ongoing collaboration efforts between the Australian Border Force (ABF) and Indonesia Coast Guard (BAKAMLA) to combat IUUF.

The number of reported poaching incidents in the waters between India and Sri Lanka has continued to increase from last year. This can be attributed to the ongoing active patrols conducted by authorities from both Sri Lanka and India, which have enabled them to take more effective action against vessels that venture into unauthorised fishing areas.

4. FORECASTS/WAY AHEAD

The demand¹ for seafood is expected to continue its upward trajectory in 2024, prompting an anticipated increase in corresponding fishing activities to meet this demand. To address the potential increase in IUUF incidents, regional law enforcement agencies are expected to step up coordinated patrols and

facilitate more information sharing among authorities². Cooperation between global organisations related to maritime fisheries, including the International Maritime Organisation (IMO), the Food and Agriculture Organisation (FAO), and the International Labour Organisation (ILO)³ will also be crucial in preventing IUUF incidents.

As such, the IFC assesses that the number of reported IUUF Incidents in 2024 will continue to rise, albeit modestly, due to the ongoing education efforts led by international organisations, targeting fishermen in the region on IUUF practices.

¹ <https://www.statista.com/outlook/dmo/ecommerce/food/fish-seafood/asean>

² Malaysia's National Plan of Action to prevent, deter and eliminate IUUF - <https://www.fao.org/faolex/results/details/en/c/LEX-FAOC163554/>

³ <https://www.ioe-emp.org/events/event/joint-fao-ilo-imo-working-group-on-illegal-unreported-and-unregulated-fishing-and-related-matters>



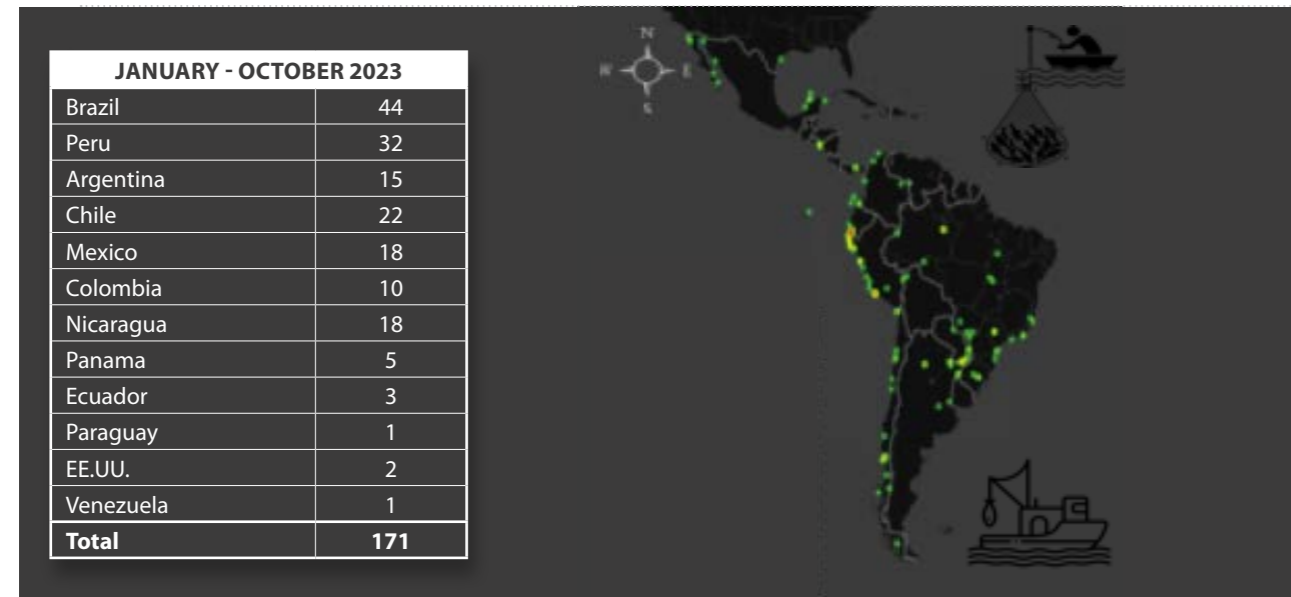
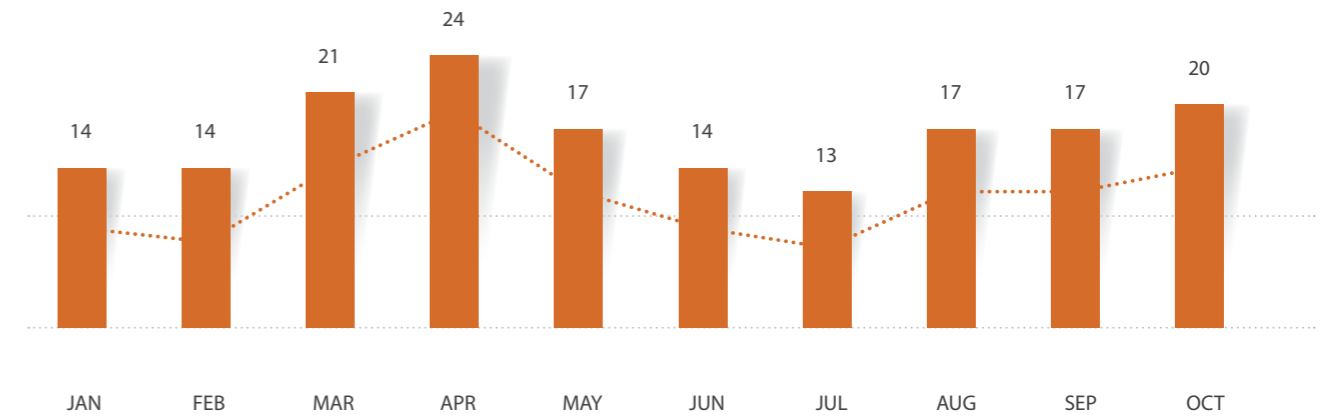
ILLEGAL, UNREPORTED, AND UNREGULATED FISHING IN IFC-PERU'S AREA OF INTEREST

The Peruvian Maritime Information Fusion Centre for Latin America (IFC-Peru), has an area of interest from Baja California-Mexico to Tierra de Fuego-Chile in the Latin American region, formed by the countries of the Regional Operational Cooperation Network of Maritime Authorities of the Americas (ROCRAM), located in the Pacific Ocean, the Gulf of Mexico, the Caribbean Sea, and the Atlantic Ocean, where fishing activity represents one of the main incomes of the gross domestic product (PBIP) of these nations.

The IFC-LA has been able to identify that a large part of the fishing activity in the region is undeclared and unregulated, according to the statistical studies

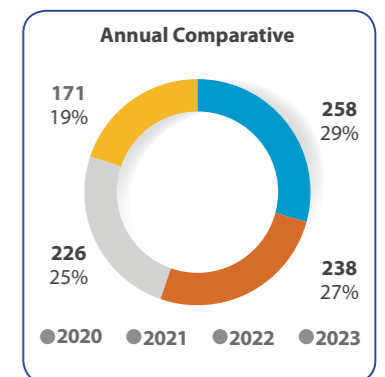
carried out during the preparation of reports and specialised guides issued by the Fusion Center. The issue remains a constant problem for governments due to the adverse impact it represents for the marine biomass, affecting the sustainable consumption of hydrobiological resources. It can be identified through the heat map that the most affected areas are Brazil's rivers and the maritime border zone between Ecuador and Peru. However, all countries in the region have had incidents in this category. On the other hand, the Galapagos Islands are a sensitive area for IUUF, due to their marine biodiversity and large amount of hydrobiological resources, as they are shallow waters with warm temperatures.

NUMBER OF FISHING INCIDENTS



In the years 2020, 2021 and 2022, **258**, **238** and **226** IUUF incidents have been reported respectively. During the current year, **171** cases were recorded in this category, resulting in a positive decrease, which reflects the result of the efforts being made by governments to combat and reduce IUUF in the Latin American region.

Illegal, Unreported, and Unregulated Fishing (IUUF) mainly involves the Asian flagged fleet located in this region. According to the indicators recorded during the year 2023, the months of March, April and May were the months with the highest number of cases. A total of **235** people were arrested, **422** vessels were seized and **399.5** tons of hydrobiological resources were seized, either at sea or in port.



**"SAFE AND SECURE SEAS,
EVERYONE'S EFFORT"**

SECTION E: CONTRABAND SMUGGLING (CS)

1. OVERVIEW

In 2023, the IFC recorded a total of 834 Contraband Smuggling (CS) incidents in the IFC's AOI, which is comparable to 2022 (823 incidents)¹, but 49% higher than 2021 (561 incidents). The high number of incidents can be attributed to rising costs of living, in turn driving people to substantiate their income through the black market, and the effectiveness of enforcement efforts leading to more incidents being reported, similar to

2022. Domestic Products, Drugs, Tobacco, and Fuel smuggling incidents contributed to the majority of reported incidents. While the Southeast Asia region still accounts for most smuggling incidents, there was also a notable increase in smuggling incidents in South Asia. As global economic uncertainty and regional political instability looms, the IFC expects the number of CS incidents to remain high in 2024.

2. KEY FACTS

Similar to 2022, smuggling of Domestic Products (203 incidents) and Drugs (201 incidents) accounted for the majority of reported incidents in 2023. However,

there was a 16% and 14% decrease in incidents respectively compared to 2022. Conversely, Tobacco and Fuel Smuggling incidents increased by 20% and 2% respectively, compared to 2022.

TYPES OF CONTRABAND SMUGGLED

Type of Contraband	Number of Incidents (2023)	Number of Incidents (2022)
Domestic Products	203	243
Drugs	201	234
Tobacco	158	132
Fuel	137	134
Others	135	135

¹ Higher incidents in 2022 are attributed to spill-over effects of Russia-Ukraine war.

3. OBSERVATIONS/ASSESSMENTS

3A. Areas of Concern and Regional Characteristics

i. Southeast Asia

57% of overall incidents in 2023 occurred in Southeast Asia (compared to 61% in 2022); majority of incidents occurred in the waters of Indonesia, Malaysia, and Vietnam. The three main types of smuggling that took place are:

(a) Drugs, mainly methamphetamine, coming from the Golden Triangle and Middle East via land routes, and then shipped to Indonesia and Malaysia (particularly Port Klang) by sea using large vessels such as container

and cargo vessels, which are ideal for high volume smuggling;

(b) Domestic products, in particular used clothes and alcohol, driven by rising cost of living; and

(c) Fuel, driven by a comparatively lower fuel price in Malaysia compared to its neighbours. In the waters off Vietnam, there have been increased reports of activities involving the illicit transfer of diesel oil from large to smaller vessels.

ii. South Asia

21% of overall incidents in 2023 occurred in South Asia (compared to 20% in 2022). Most of these incidents involved Drugs and Tobacco smuggling in India, off the Palk Strait and the Western Coast along the shores of

Gujarat and Maharashtra, and also Sri Lanka. Cannabis is frequently smuggled across the Palk Strait, while Heroin is frequently smuggled off the coast of Gujarat. The supply is driven by the flow of Afghan heroin and cannabis from the Persian Gulf, smuggled by boat.

iii. Northeast Asia

21% of overall incidents in 2023 occurred in North Asia (compared to 19% in 2022). Most incidents involved the

smuggling of Domestic Products (mainly frozen meat) and tobacco between China, Hong Kong, and Macau, mainly to avoid tariffs.

SECTION E: CONTRABAND SMUGGLING (CS)

3. OBSERVATIONS/ASSESSMENTS CONT'D

3B. Types of Smuggling and Modus Operandi

i. Drug Smuggling

The IFC recorded 201 drug smuggling incidents in 2023, which is 13% lower than in 2022 (232 incidents), but 13% higher than in 2021 (178 incidents). The decrease in 2023 is due to the deterrence effect from operations mounted by regional authorities, particularly in Bangladesh, India, and Hong Kong.

Methamphetamine (Meth) and its derivatives (including Yaba) were the most common type of drug smuggled (by number of incidents) due to its continued popularity and high demand in the black market. These incidents were recorded predominantly in the waters of Malaysia-Indonesia and India-Sri Lanka. Meth continues to flow in large quantities from various regions including the Golden Triangle (Southeast Asia), the Golden Crescent (South Asia), Central America, North America, and Africa.

ii. Domestic Products Smuggling

The IFC recorded 203 such incidents in 2023, which is 16% lower than 2022 (243 incidents), but 27% higher than 2021 (160 incidents). The decrease is largely due to the deterrence effect of stepped-up enforcement by authorities especially in Hong Kong and China. Incidents in Southeast Asia have increased by 15%, while the incidents in South and North Asia have decreased by 10% compared to 2022.

Smuggled products include frozen meat (in China and West Asia); cooking oil (in Malaysia); alcohol, used

The most common vessel types used for smuggling are fishing and container vessels. Meth seizures by authorities have been valued at US\$3.3B. In one incident alone, Indian authorities seized Meth worth an estimated US\$1.4B from a fishing vessel in Indian waters.

Another common drug smuggled in the region (by weight) is Cocaine (4.5 tonnes), predominantly in the waters of Australia and Hong Kong, with seizures totalling US\$402.8M in value. Of note, more than half (1.8 tonnes) were seized in Australia (predominantly in Western Australia) and smuggled via bulk carriers and container vessels.

Notably, the amount of heroin smuggled in the region has increased from 3.8 tonnes in 2022, to 4 tonnes in 2023.

clothing, and agricultural products (in Southeast Asia); as well as sea cucumber and agricultural products (in India and Sri Lanka).

Notably, the modus operandi has changed over the past few years, shifting from the usage of container vessels to small boats and fishing vessels to smuggle these products in the said areas. This tactic allows smaller vessels to blend in more easily with legitimate maritime activities, making it difficult for law enforcement to identify and intercept them.

iii. Tobacco Smuggling

The IFC recorded 158 tobacco smuggling incidents in 2023, an 18% increase from 2022 (134 incidents), and an 80% increase from 2021 (88 incidents). The increase in 2023 is mainly attributed to more lucrative opportunities for smugglers due to continued high demand but lower supply of Tobacco resulting from the implementation of tobacco control measures by countries, especially in Southeast Asia². Authorities reportedly seized over

iv. Fuel Smuggling

The IFC recorded 137 fuel smuggling incidents in 2023, a 6% increase from 2022 (129 incidents), and almost 3 times higher than in 2021 (49 incidents). The rise is due to global energy instability, exacerbated by the prolonged Russia-Ukraine conflict, driving fuel prices higher and making it more lucrative for smugglers. Authorities in the region reportedly seized over 963,700 tonnes of fuel in 2023, a significant increase from the

v. Other Goods

Smuggling of weapons, natural resources, and chemical substances constitute less than 15% of reported CS incidents. Wildlife Smuggling, predominantly in Southeast Asia, has increased by 11% compared to 2022. The number of Natural Resource Smuggling incidents (35 incidents) is comparable to 2022

1.5 tonnes of tobacco or related products in 2023, a 72% increase from 2022. Similar to previous years, Tobacco smuggling from China and Hong Kong remains most prevalent, followed by the Philippines, Sri Lanka, and India due to the lower cost of purchase and taxes imposed on Tobacco products in those countries. Small boats continue to be commonly used to smuggle tobacco and related products in the region.

mere 5,900 tonnes seized in 2022. Of note, Dalian Customs in China seized over 70% of the total oil in multiple incidents, while another 28% was seized when Indonesian authorities detained the tanker Arman 114 for illegal oil transshipment in the North Natuna Sea. These incidents are reportedly linked to illicit ship-to-ship transfers of sanctioned oil from countries such as Iran, Venezuela, and Russia.

(37 incidents); however, such incidents have shifted from China and the South China Sea to India and Sri Lanka due to undetermined factors that the IFC will continue to monitor. There have been 4 reports of weapons smuggling in 2023 – 2 of these cases involved weapon replicas, 1 involved explosives, and another included guns and ammunition.

² These measures are supported by the World Health Organisation to help Southeast Asia countries reduce the demand and supply of tobacco to successfully tackle the tobacco epidemic.

4. FORECASTS/WAY AHEAD

The IFC expects the number of CS incidents in 2024 to remain high, and possibly even increase due to 3 key reasons. First, inflation of prices makes the smuggling of domestic products (meats, cooking oil, vegetables, luxury items, and various manufactured products/goods) more lucrative. Second, ongoing instability in areas like Afghanistan and the Golden Triangle

makes enforcement challenging, enabling large-scale production of methamphetamine, including Yaba pills, to thrive and flow to other regions. Finally, the impact of ongoing wars and resulting sanctions will continue to have a destabilising impact on the energy market and be a significant factor in the cost of energy around the globe. This may also lead to increased illicit oil activities in 2024.



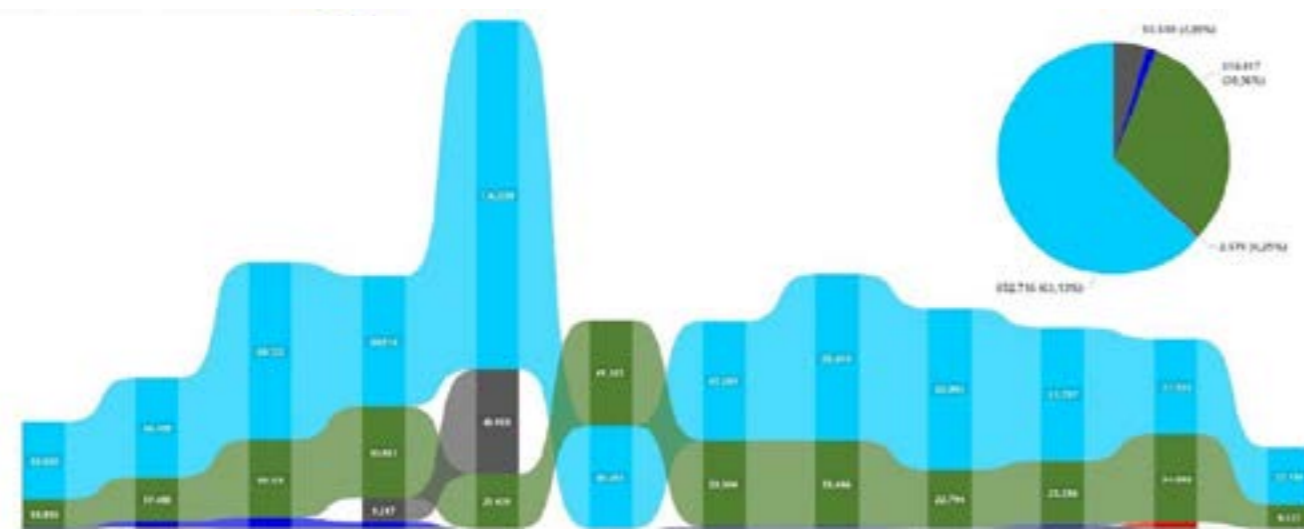
Drug trafficking worldwide, recognised as one of the main drivers of maritime organised crime, has been understood by experts and specialists in the field of security and defence as a changing, adaptive and resilient system with a multiform and multi-criminal character. This has evolved over time and space through the use of defence mechanisms and continuous learning, greatly strengthened by the financial capacity resulting from its illicit and transactional activity. It negatively impacts the stability and integrity of society, the State and its interests.

Accordingly, for the International Center for Research and Analysis against Maritime Narcotrafficking (CMCON), it is of great importance to identify the criminal dynamics of trafficking of illicit substances. Permanently seeking through research and analysis activities on the phenomenon, CMCON aims to achieve an effective understanding of the problem in each territory to solve the questions that currently arise within the political and military drivers regarding the real impact of drug trafficking globally. In this regard, to respond to the hypothetical scenario of increased criminal activity in maritime trafficking of illicit substances, CMCON presents over the next few pages the specific situation of the scenario in the Americas and Asia.



AMERICA

BEHAVIOUR OF SEIZURES REGIONAL SCENARIO – AMERICA



Note: The figure represents the behaviour in substance seizures during the period Jan-Dec 2023 in the Americas scenario.
Source: Global database, maritime, river and port domain events CMCON.

From the surveillance of the regional drug trafficking environment, a growing trend was evident in the detection of illicit substances throughout the American continent. There were declines in seizures during the months of January, February and November, but with noticeable impact on drug trafficking structures during the months included in the period March – October. This growth was largely driven by the operational efforts and cooperation mechanisms in force in the region such as maritime agreements and the ORION Naval Campaign. As of 17 Dec 2023, a total of 1,034,027kg of conventionally monitored substances were seized, marking a 29% increase compared to the same period the previous year with 799,841kg. Notably, 50,549kg of D.S. were neutralised, demonstrating an EXTRAORDINARY INCREASE of 900% compared to the 5,052kg of synthetic drugs observed in 2022.

Territorial Affectation

Based on the monitoring of open sources carried out by the CMCON in the regional environment of drug trafficking in the Americas scenario, a greater persistence of illicit markets for substance trafficking (CHC, Marijuana and D.S) was observed during the analysed period. This was recorded in the maritime corridors, rivers and ports of countries such as:

- Colombia** (197,609kg)
- Mexico** (164,934kg)
- Brazil** (144,244kg)
- Ecuador** (141,331kg) and
- Panama** (115,145 kg).



Persistent Modalities

Regarding the modalities of greatest recurrence in the mobilisation of illegal substances during the period analysed, the following stand out in the regional scenario of America:

- Go Fast Boat** (320,324kg in 345 events)
- Containers** (240,443kg in 232 events)
- Illegal Deposit** (328,174kg in 464 events)
- Fishing Vessel** (50,215kg in 76 events) and
- Semisubmersibles** (38,459kg in 24 events).

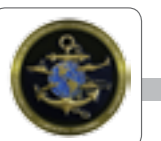
These persist as mechanisms for intraregional or extracontinental drug trafficking illicit.

Transnational organised crime structures have reconfigured their substance transfer routes. They utilise river border lines leading to land spaces, territories and maritime corridors, or port facilities that offer greater

vulnerability and opportunity for penetration and/or mobilisation of illegal substances. In these areas, the criminal workforce manages to consolidate temporary or permanent alliances to strengthen their substance trafficking and money laundering capabilities.

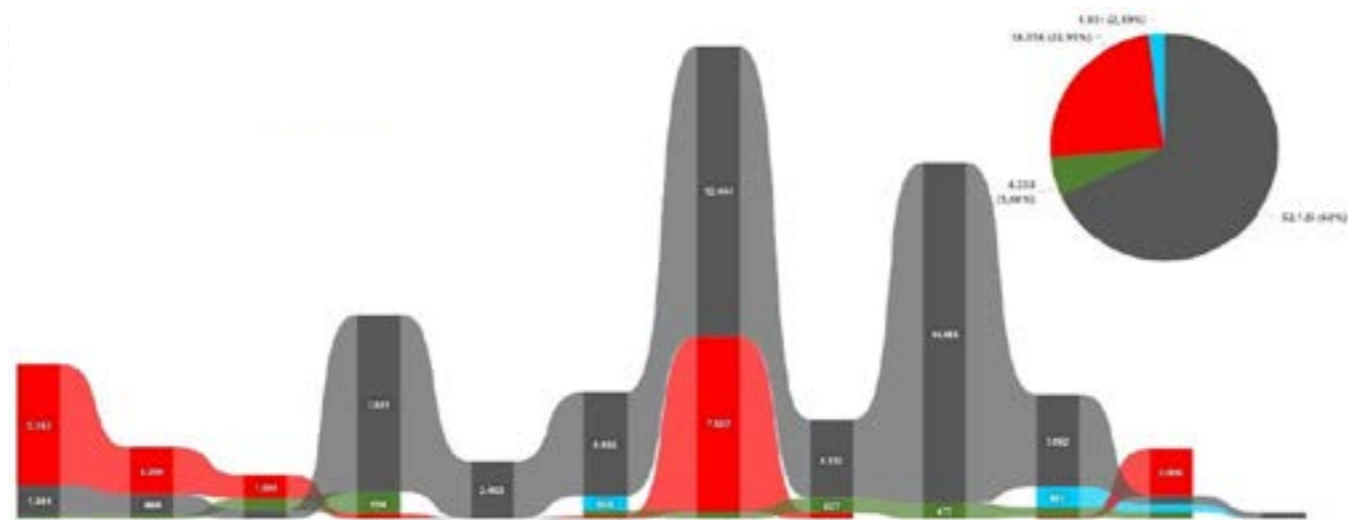
In the Americas, criminal groups have displayed remarkable adaptability by meticulously adjusting their routes and tactics to capitalise on the opportunities offered by riverine border zones, vulnerable territories and maritime corridors. This demonstrates their ability to exploit institutional vulnerabilities to substantially expand their capacity in illicit drug trade and money laundering.

The emergence of these patterns highlights the need and operational opportunity to implement lines of action. These should be interstate and/or interagency to reduce the risks derived from each of the previously exposed trends.



ASIA

BEHAVIOUR OF SEIZURES REGIONAL SCENARIO – ASIA



Note: The figure represents the behaviour in substance seizures during the period Jan-Dec 2023 in the Asia scenario.
Source: Global database, maritime, river and port domain events CMCON.

From the surveillance of the regional drug trafficking environment developed by the CMCON in the Asian scenario for the period analysed, a marked downward behavior was evident in the detection and seizure of illicit substances. During this period, seizures of Synthetic Drugs predominated, accounting for over 60% compared to other substances such as Hashish and CHC throughout the continent. This is unlike 2022, where significant peaks in seizures were evident, particularly during the month of October with 12,907kg of narcotics detected, of which 46% corresponded to Hashish.

In general terms, the scenario demonstrated a slight decrease of 0.36% in the total seizures and seizures of illegal substances. On the other hand, a noteworthy 132% increase in D.S. findings stands out, with 52,125kg seized as of December 17, 2023 compared to 22,385kg for the same period in 2022.



Territorial Affectation

Based on the monitoring of open sources carried out by the CMCON on the regional environment of drug trafficking in the Asian scenario, during the period analysed, a greater persistence of illicit markets for trafficking of Synthetic Drugs was recorded in the maritime, river and port corridors of countries such as the United Arab Emirates (15,061kg), Sri Lanka (11,008kg), and Saudi Arabia (6,165kg).

Similarly, in monitoring the flow of illicit drugs, in what corresponds to seizures of CHC that is not common in this scenario, the countries of Turkey (786kg), Malaysia (403kg) and China (302kg) predominate as emerging traffic scenarios.

On the other hand, Sri Lanka stands out as an important exit and transit corridor for Marijuana, with 3,271kg seized, emerging as a connection centre with nearby countries for transnational organised crime structures.

Persistent modalities

Regarding the modalities of greatest recurrence in the mobilisation of illegal substances, for the period analysed, the following stand out in the Asian scenario:

- Fishing Vessel** (35,164 kg in 34 events)
- Containers** (26,975 kg in 20 events)
- Illegal Deposit** (26,975 kg in 39 events)

as persistent mechanisms for illicit drug trafficking on the Asian continent.

Asia has a large number of ports and waterways that are used by OCTs to traffic narcotics. Some of the most important routes are found in Southeast Asia, the Bay of Bengal and the coasts of the Indian Ocean, where there is a wide distribution network and connections with several countries that are of constant benefit to the OCT.



SECTION F: IRREGULAR HUMAN MIGRATION (IHM)

1. OVERVIEW

In 2023, the IFC recorded a total of 218 Irregular Human Migration (IHM) incidents in the IFC's AOI, which is 14% lower than 2022 (253 incidents), but more than twice of 2021 (93 incidents)¹. Despite the lower incident number compared to 2022, more people were reported to have been involved in IHM in 2023 (6,996 people in 2023 compared to 6,108 people in 2022), mainly through Human Smuggling, Human Trafficking, or because

of illegal documentation. Of note, a large number of illegal migrant workers operating in the fishing industry without proper legal documentation, identified during enhanced operations mounted by regional authorities. While baseline activities across shared maritime borders such as Indonesia and Malaysia continue to be significant, there were lower incident numbers in some countries, such as Sri Lanka, due to an improving political and economic situation.

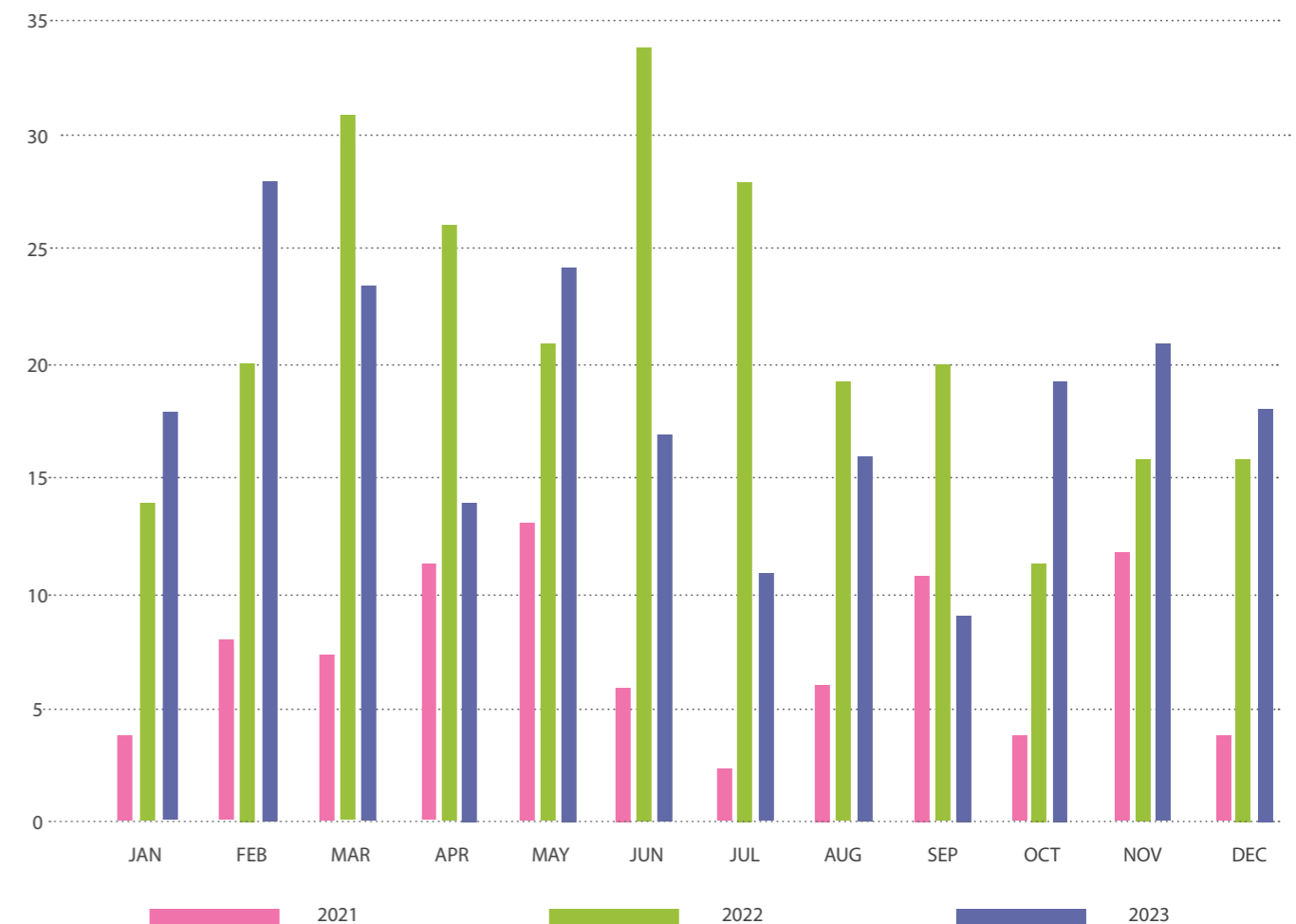
2. KEY FACTS

The majority of incidents recorded in 2023 involved Human Smuggling (147 incidents), which accounted for 67% of all IHM incidents; in comparison to 2022, however, this was 36% lower (229 incidents) and is likely due to improved economic and political stability in countries like Sri Lanka. 27% of all IHM incidents in IFC's AOI were related to Illegal Documentation (58 incidents), almost three times more compared to 2022 (19 incidents). 6% of the IHM incidents were related to Human Trafficking (12 incidents), more than double compared to 2022 (5

incidents). Of note, there was also 1 Human Exploitation incident reported in 2023 (none in 2022).

In a similar pattern to 2022, incident numbers peaked during the Northeast monsoon period (February to June), which allowed for more favourable sea conditions for transit. The second half of the year showed a general decline in incidents, likely due to increased enforcement efforts by authorities combined with unfavourable transit conditions due to the monsoons between July to November.

MONTH-TO-MONTH COMPARISON OF INCIDENTS BETWEEN 2021-2023



¹ Restrictive movement control and enhanced law enforcement during the COVID-19 pandemic led to significantly lower incident numbers in 2021.

SECTION F: IRREGULAR HUMAN MIGRATION (IHM)

3. OBSERVATIONS/ASSESSMENTS

3A. General Insights

Consistent with past trends, Malaysia continues to be the destination of choice for the vessels involved in IHM, originating from Myanmar, Indonesia, and the Philippines. The Malaysian authorities have cited economic opportunities and high demand for labour as strong “pull” factors, contributing to the high number of transit attempts to Malaysia. Malaysian authorities continue to maintain stepped-up coastal operations to interdict/prevent successful IHM attempts. Malaysian authorities also mounted successful operations to crackdown on illegal migrant workers operating in the fishing industry working without legal documentation.

Long-distance transit attempts, while low in number, continue to occur in the IFC AOI. Of note, the IFC recorded 2 long-distance single-vessel IHM incidents in 2023. The first involved an attempt from Pakistan to Hong Kong (37 people) and the second involved an attempt from

Sri Lanka to Australia (41 people). The IFC expects that such attempts will remain relatively low due to improving political and economic stability in the countries of origin, increased risk of vessels experiencing mechanical failures during such long-distance transits and/or being intercepted at sea by authorities.

Human Exploitation incidents continue to be under-reported within the IFC’s AOI due to the complexity surrounding underground activities, making it difficult to recognise relevant incidents. Authorities also faced challenges in detecting such incidents. In the single Human Exploitation incident in 2023, the Australian Maritime Safety Authority inspected a ship at the Port of Hay Point, in Queensland, and found evidence of several violations under the Maritime Labour Convention, including wage theft and mistreatment of crew. The vessel was banned from operating in Australian waters for 1 year.

3B. Main IHM Routes

There are 3 main IHM routes identified in the IFC’s AOI based on incident numbers:

i. Myanmar/Bangladesh to Malaysia/Indonesia (73 incidents)

2,840 people reportedly moved from Myanmar/Bangladesh, accounting for 41% of overall IHM people moved in the IFC AOI in 2023. This represents a 58% increase compared to 2022, and a 73% increase compared to 2021. Most of these people attempted to land in Indonesia (Aceh) and Malaysia (Kedah) due to their close proximity and to seek asylum and/or work illegally.

Similar to past years, such attempts are due to the continued civil unrest and targeted violence against minorities. Of note, there was a spike in incidents towards the end of the Southwest Monsoon (in late October and early November),

likely due to a combination of factors such as overcrowding in Bangladesh refugee camps, lack of shelter and amenities from floods and heavy rainfall, and a decrease in international aid for the maintenance of refugee camps. Small boats and fishing vessels were the most common types of vessels used to transport people from Myanmar or Bangladesh through the Andaman Sea.

In recent times, there have been alleged reports of young women and children being trafficked from Myanmar as potential brides, or with the promise of sending money back to other family members unable to leave their homes or refugee camps.

ii. Indonesia to Malaysia (57 incidents)

Incidents originating from Indonesia to Malaysia are comparable to 2022 (52 incidents). However, the number of people moved has decreased by 38% compared to 2022, primarily due to increased enforcement efforts by

iii. Philippines to Malaysia (20 incidents)

IHM routes originating from the Philippines and destined for Malaysia, have become an emerging area of concern, recording a 33% increase in 2023 compared to 2022 (15 incidents). About 324 people were moved, a 79% increase compared to 2022 (181 people), mainly

3C. Emerging Watch Areas

The modus operandi of smuggling syndicates is evolving, preying on vulnerable people on social networks and recruitment sites with false promises of lucrative work opportunities. These people are then kidnapped and detained in inhuman living conditions, and often beaten and abused. Online scam centres that

both Indonesian and Malaysian authorities. Most incidents involve small groups of people (<10 people), facilitated by human smugglers using small boats to transit during a period of darkness.

through Human Trafficking. Of note, operations led by Philippine authorities resulted in the rescue of 202 Human Trafficking victims, the majority of whom were to be transported to Malaysia, to be forced to work as domestic or construction workers.

employ such methods are mostly in Cambodia, with some in Laos and Myanmar. Due to growing concerns and a rise in such incidents, Interpol has also recently issued an Orange Notice to its 195 member countries signalling a serious and imminent threat to public safety due to large-scale human trafficking linked to online job recruitment scams.

4. FORECASTS/WAY AHEAD

Conditions are still conducive for large numbers of people to be moved illegally using maritime routes throughout the Indo-Pacific region. The continued displacement of minorities, state-on-state conflict, civil war, communal violence, extreme weather events, and economic insecurity will act as a catalyst for the mass movement of people throughout the region in 2024. Notwithstanding, the IFC assesses that there may be some changes in observed patterns as the regional situation is dynamic and continues to evolve.

The IHM activities from Indonesia and the Philippines to Malaysia will almost certainly continue to challenge

maritime border control and law enforcement efforts in 2024 due to Malaysia’s economic “pull” factors. Also, the flow of people from Myanmar and Bangladesh via maritime routes will likely continue at current levels or possibly increase in 2024 if civil unrest and heightened communal or targeted violence against minorities continue, and/or living conditions in refugee camps, particularly in Bangladesh, does not improve.

The IFC requests the shipping community to report any sighting of vessels with unusually high numbers of personnel on board to local authorities. The shipping community can remain up to date with IHM insights through IFC products and Voluntary Community Reporting (VCR) messages.

NYKSM VESSEL HELIOS LEADER RESCUES 303 PEOPLE AT HIGH SEA



MV Helios Leader, a vehicle carrier managed by NYK Shipmanagement, was en route from Japan to Singapore when the Maritime Rescue Coordination Centre (MRCC) Singapore notified the carrier about a distressed craft located about 6nm away. The Master promptly acknowledged the call and headed towards the provided coordinates.

Upon reaching the specified location, the fishing boat was not visible to the crew. Responding to this, the Master decided to extend the search in the direction of the drift and eventually located the boat using RADAR. As the carrier approached the distressed craft, the ship staff were shocked to find a small boat overflowing with men, women and children, all desperately seeking assistance.

As the fishing boat had no engine, the Master decided to bring the 200m massive ship alongside the small boat. It involved huge risk to the boat as well as to their own ship. With very challenging manoeuvres in strong winds, the Master managed to bring the boat alongside, and passed some mooring lines to steady the vessel.

With darkness setting in, the decision was made to lift the individuals up one by one. At 4.30pm, using safety harnesses, two ship staff secured themselves to a strong point on the ship, leaning over the side to retrieve the survivors. Initially planning to rescue around 50 survivors, Helios Leader was instructed by MRCC Singapore, as night fell, to save as many of them as possible. The last survivors were rescued at 7.30pm, and the boat was confirmed empty. Subsequently, the vessel headed directly to the nearest port in Vung Tau, Vietnam.

The challenge of providing food and living space for the survivors became apparent. Utilising the available empty space in the cargo hold, all survivors were accommodated. The crew had no respite, as they continued to coordinate the safety of the rescued individuals and tend to their basic needs. Upon anchoring in Vietnam, authorities boarded, assessed the medical conditions of the survivors, and disembarked them at the shore facility, adhering to proper legal procedures outlined in government protocols.

The success of this operation underscores the significance of timely information sharing and robust coordination among the vessel, IFC, Singapore and Vietnam authorities, and NYK Shipmanagement.



MESSAGE FROM THE HEROIC STAFF OF HELIOS LEADER

"The greatest reward for us was the gratitude we saw on the faces of the survivors, which we will treasure forever."



SECTION G: ENVIRONMENTAL SECURITY (ENVSEC)

1. OVERVIEW

In 2023, the IFC recorded a total of 52 ENVSEC incidents in IFC's AOI, which is 63% higher than 2022 (32 incidents) and 24% higher than 2021 (42 incidents). The majority of incidents involved Maritime Pollution (MARPOL) as

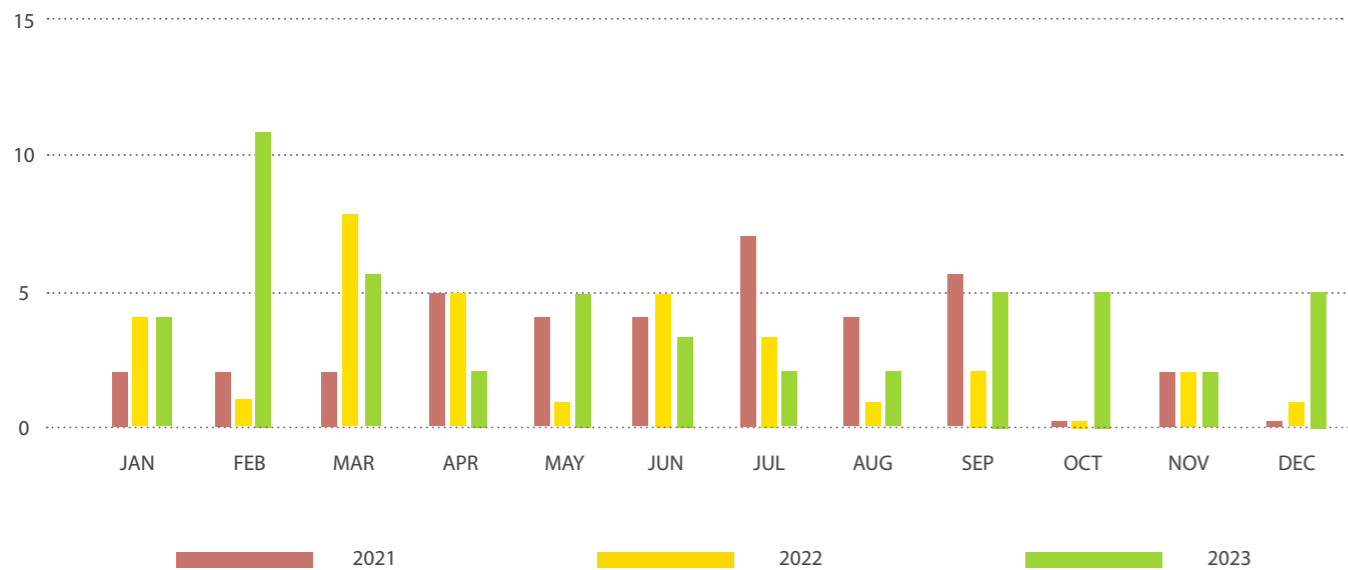
oil leakages and indiscriminate discharge from merchant vessels continue. The IFC expects the number of incidents recorded to increase in 2024 due to the combined effects of an improved global economy (resulting in more maritime traffic) and better collation/collection of information.

2. KEY FACTS

February recorded the highest numbers, accounting for 11 out of the 52 incidents in 2023 due to a series of oil spills/leakages caused by boats being flooded at sea during the monsoon season, along with illegal sand

mining activities occurring in the region. 33 incidents were classified as MARPOL, accounting for 63% of incidents reported; this was followed by Maritime Illegal Exploitation (MIE) (15 incidents) and Others (4 incidents)¹.

MONTH-TO-MONTH COMPARISON OF INCIDENTS BETWEEN 2021-2023



¹ Includes incident such as fish kill that washed-up ashore, transportation of invasive species and contaminated cargo.

3. OBSERVATIONS/ASSESSMENTS

Similar to the last 2 years, MARPOL continues to be the most commonly reported incident in the AOI as oil leakages from land-based infrastructure and damaged tankers remain prevalent. 25 of the 33 MARPOL incidents recorded involved Petrochemical spills; this is likely a result of the region's high demand for these products, leading to increased activities and contributing to a higher likelihood of incidents occurring.

The rise in MIE incidents can be attributed to illicit sand mining activities, mainly by unlicensed companies, following the lifting of the ban on sea sand export by Indonesian authorities in May 2023.

Of note, the wash-up of several thousand tons of fish kill in various parts of Japan's coast stirs concerns of its unknown cause and measures that could be implemented to prevent reoccurrence of such phenomena.

4. FORECASTS/WAY AHEAD

The IFC estimates that the incident numbers will increase in 2024 as the industry improves its reporting and collating of ENVSEC information, and as the global economy improves.

A number of tankers carrying sanctioned oil or crude oil linked to Russian, Iranian and Venezuelan trades have been involved in ship-to-ship transfers, mainly in the South China Sea. If these illegal activities continue into 2024, they have the potential to cause significant environmental harm through oil lost overboard during ship-to-ship oil transfer operation, or collision between vessels.

SHIP POLLUTION IMPACTS IN THE ASIA-PACIFIC REGION, ITOPF'S PERSPECTIVE

Firstly, let's just be clear. Large-scale maritime pollution events have declined over the last 50 years. Decades of effort to improve preparedness and operations combined with technological improvements have paid off, reducing the number of incidents despite the increasing traffic. Sadly, though, maritime incidents still happen, and we must remain diligent to their implications.

The Asia Pacific region is characterised by busy shipping lanes, congested ports, older fleets than Europe and the Americas, and extreme weather events. As a result, the region consistently features as a global hotspot for vessel losses over the last decade (Allianz Shipping Report, 2023). This region also boasts more than 60% of the world's population, many of whom are reliant upon the rich and biodiverse coastal and marine ecosystems.

In the last five years, ITOPF has been involved in 79 ship sourced pollution events in Asia Pacific (Figure 1, below),

each presenting unique impacts to the environmental and socio-economic security of coastal states in the region. The incidents have involved a variety of vessel and pollutant types, including oil carried as cargo and fuel, along with various cargos including hazardous and noxious substances and more inert materials such as pine kernel husks.

Each incident creates a unique set of direct impacts depending on the location, type and volume of pollutant spilt. However, indirect impacts can occur even when relatively small quantities are spilt. The demands of response on authorities and other stakeholders can be intense, requiring immediate reaction to provide labour, skills, expertise and other resources to understand, record, mitigate and manage the incident. Impacts also extend to coastal businesses in affected areas including fisheries and tourism, potentially affecting the food and economic security of remote and vulnerable communities.

Fortunately, well-established international and national legislation exists to provide financial security for these incidents, when countries have ratified or transcribed the relevant laws, and vessels are suitably insured. The small tanker PRINCESS EMPRESS (508 GT) which sank on 28 February 2023 highlighted this issue. Whilst carrying only 800m³ of Heavy Fuel Oil (HFO), claims submitted (up to 6 October 2023) exceeded USD\$50 million, thankfully though as the Philippines is signatory to the 1992 Fund Convention, over USD\$25 million of these have been paid (as of 6 October) and the case remains ongoing (<https://iopcfunds.org>).

Sadly, the region faces pollution threats beyond the organised maritime frameworks. Unlawful vessels moving sanctioned cargoes of oil and chemicals are reported to be increasing. Typically, this involves older ships that are rarely inspected, follow substandard maintenance, and move with disabled AIS to avoid tracking. The substandard operations of this unrecorded fleet do not qualify for compensation under international legislation and in the event of damage, no funding to support those who respond or are impacted is available.

Of the eight recorded dark fleet incidents in the last 12 months, 6 have occurred within the Asia Pacific region (Allianz, 2023). 3 of these occurred close to the Singapore Straits (Figure 2, right), an area of significant marine traffic and home to one of the busiest ports in the world. Implications of a large spill of unknown cargo could be significant.

The paradigm of international shipping is also about to significantly change. Attempts to decarbonise the maritime industry by 2050 mean ships bunkers are diversifying to accommodate a wide range of fuel types which are currently being trialled. Some of these are much less persistent than established bunker fuels but present a variety of risks depending on the fuel, potentially including cryogenic freezing, increased flammability, explosivity and toxicity.

As shipping adjusts to accommodate these fuels, their potential implications will at some point be realised, either as impacts from the bunker fuel itself, or to the overall response to a damaged ship or a spilling cargo. On top of this, the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (the HNS Convention) is yet to come into force.

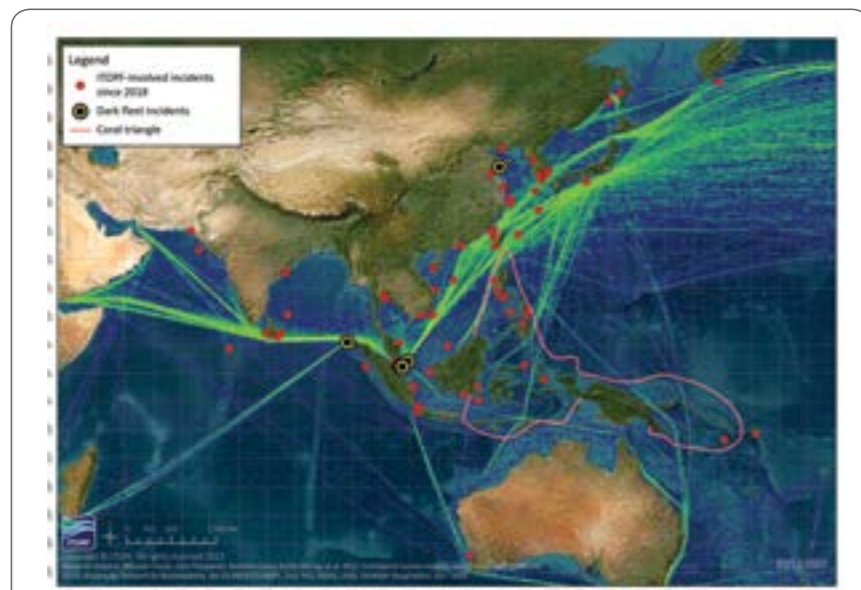


Figure 1: Map showing vessel traffic density in conjunction with incidents that ITOPF has been involved in since 2018, with known dark fleet incidents. The Coral Triangle is symbolised by the pink line.

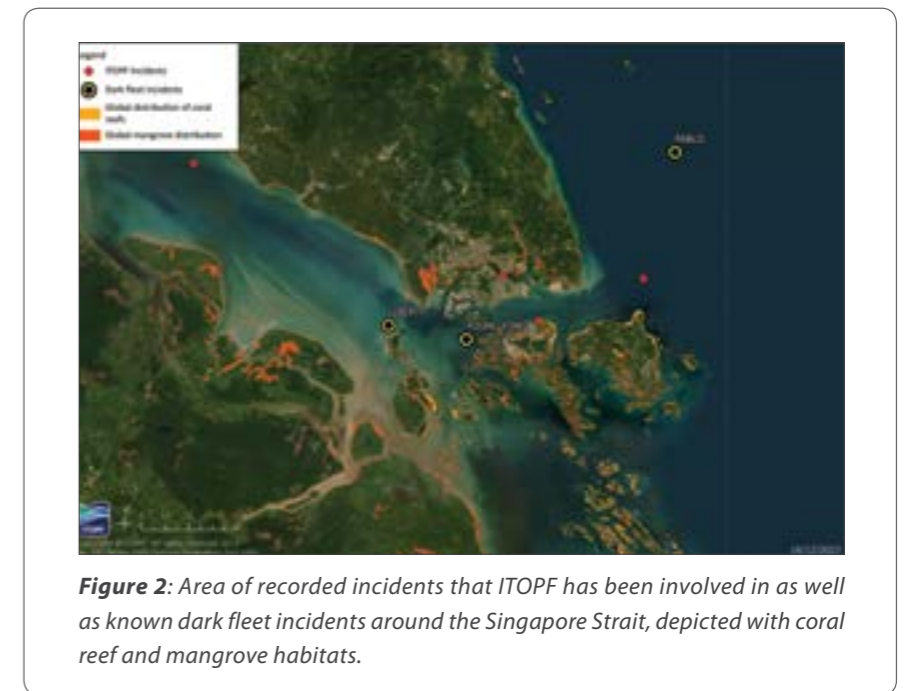
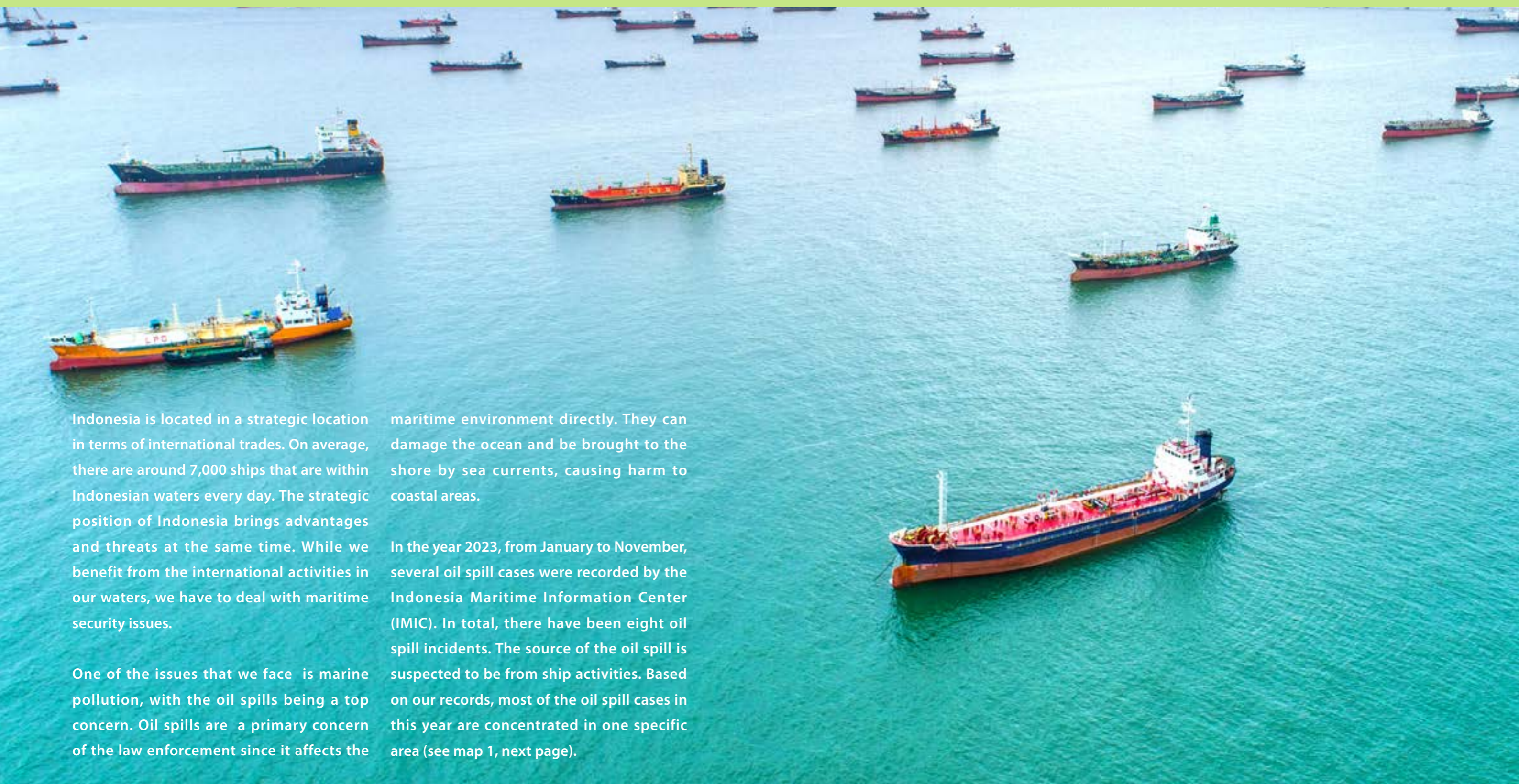


Figure 2: Area of recorded incidents that ITOPF has been involved in as well as known dark fleet incidents around the Singapore Strait, depicted with coral reef and mangrove habitats.

INDONESIA'S EFFORT TO TACKLE MARINE POLLUTION: OIL SPILL

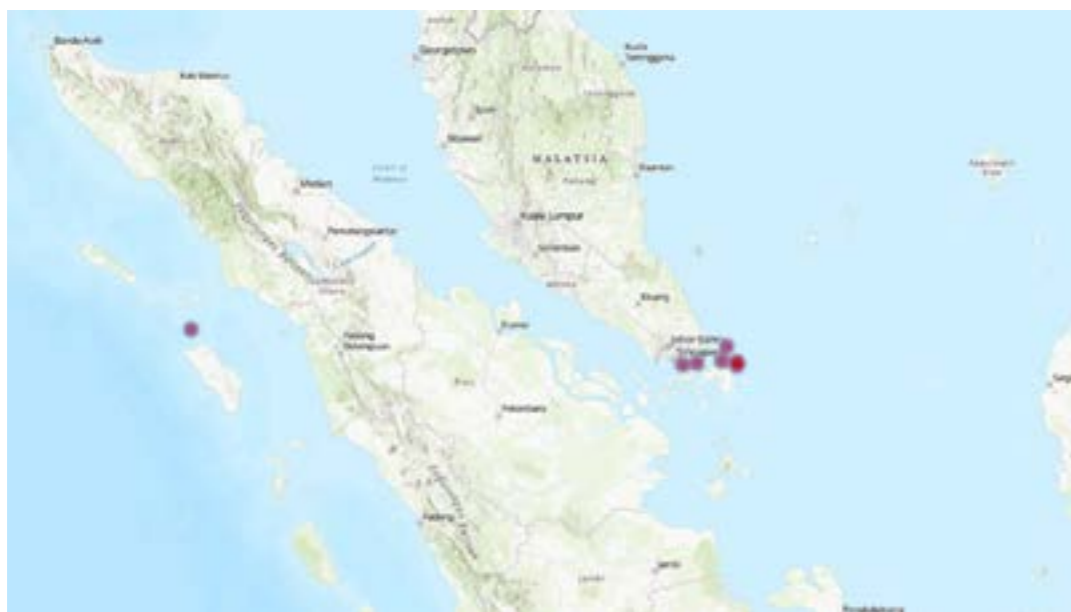


Indonesia is located in a strategic location in terms of international trades. On average, there are around 7,000 ships that are within Indonesian waters every day. The strategic position of Indonesia brings advantages and threats at the same time. While we benefit from the international activities in our waters, we have to deal with maritime security issues.

One of the issues that we face is marine pollution, with the oil spills being a top concern. Oil spills are a primary concern of the law enforcement since it affects the

maritime environment directly. They can damage the ocean and be brought to the shore by sea currents, causing harm to coastal areas.

In the year 2023, from January to November, several oil spill cases were recorded by the Indonesia Maritime Information Center (IMIC). In total, there have been eight oil spill incidents. The source of the oil spill is suspected to be from ship activities. Based on our records, most of the oil spill cases in this year are concentrated in one specific area (see map 1, next page).



Map 1. Oil spill incident in 2023.

The oil spill cases in this area has become a challenge to be addressed. Several main factors are analysed, such as ship conducting oil spills taking advantage of bordering waters, spilling the oil far from the shore and the coastal stations. Another factor is that the location is not a fishing ground where fishermen operate, making oil spill incidents less possible to have eye witnesses. The oil spill incidents are also suspected to occur at night time, reducing visibility to observe spilling activities. To solve this challenge, Indonesia, through the Indonesia Coast Guard, has strengthened two elements.

The first is strengthening patrols in the hotspot areas for oil spill, and the second is to maximise the early warning system to detect abnormal behaviour and prevent oil spill incidents. To cover the huge area of Indonesia waters, we have to rely on many observation sensors, both terrestrial and satellite.

For Indonesia Coast Guard, specifically in the Indonesia Maritime Information Center, we use different types of monitoring sensors, such as AIS Satellite, Coastal Radar, Visible Imaging Infrared Radiometer Suite (VIIRS), Satellite Imageries, and visual sensors that are installed on patrol ships.

IMIC is also supported by the National Agency for Research and Innovation (BRIN), providing satellite imageries and daily analysis of oil spill incidents.

In addition to these efforts, IMIC is strengthening relations with maritime users, and encourage them to report any incidents including oil spill to IMIC. Furthermore, IMIC has established regional cooperation to enable exchange of information. Through these combined efforts, we hope to reduce and prevent oil spill incidents.

1. OVERVIEW

In 2023, the IFC recorded a total of 20 CYBSEC incidents in the IFC's AOI, which was a significant increase compared to 2022 (3 incidents) and 2021 (0 incidents). This observation correlates with the rising number of cyberattacks across all industries in 2023. It is also possible that people are becoming more forthcoming

to report CYBSEC incidents. Additionally, as Information Technology (IT) and Operational Technology (OT) systems become more connected and remotely accessible, the potential for exploitation increases as well. The IFC expects an increase in incidents due to the greater connectivity of digital systems and the evolving sophistication of cyberattacks.

2. KEY FACTS

The incidents in 2023 mostly involved Malware attacks, accounting for more than half of the CYBSEC incidents recorded in IFC's AOI.

Notably, the port of Nagoya, Japan, and four major ports in Australia experienced cyberattacks. The Nagoya attack, carried out by the LockBit ransomware gang in July, disrupted container operations, marking the first known instance of a cyberattack impacting a Japanese port. In November, Australian ports faced a similar

incident, disrupting operations and leading to the theft of employee data. Such cyberattacks on ports pose significant risks, as the cascading effects of disruptions can impact numerous ships, resulting in substantial economic losses due to time delays and possible safety concerns particularly if the disruptions cause confusion between vessels and affected ports.

In addition, there were 5 incidents involving damage to undersea internet cables, mainly located in the waters of Vietnam, Taiwan, Solomon Islands, and Guam.



3. OBSERVATIONS/ASSESSMENTS

The number of incidents is significantly lower than any other category, and IFC assesses that the reported number does not accurately reflect the actual situation. Even though people are more forthcoming to report incidents, many incidents still go unreported due to reputational risk and potential disclosure to sensitive information. This can be improved through close cooperation with shipping companies and port authorities to encourage more reporting.

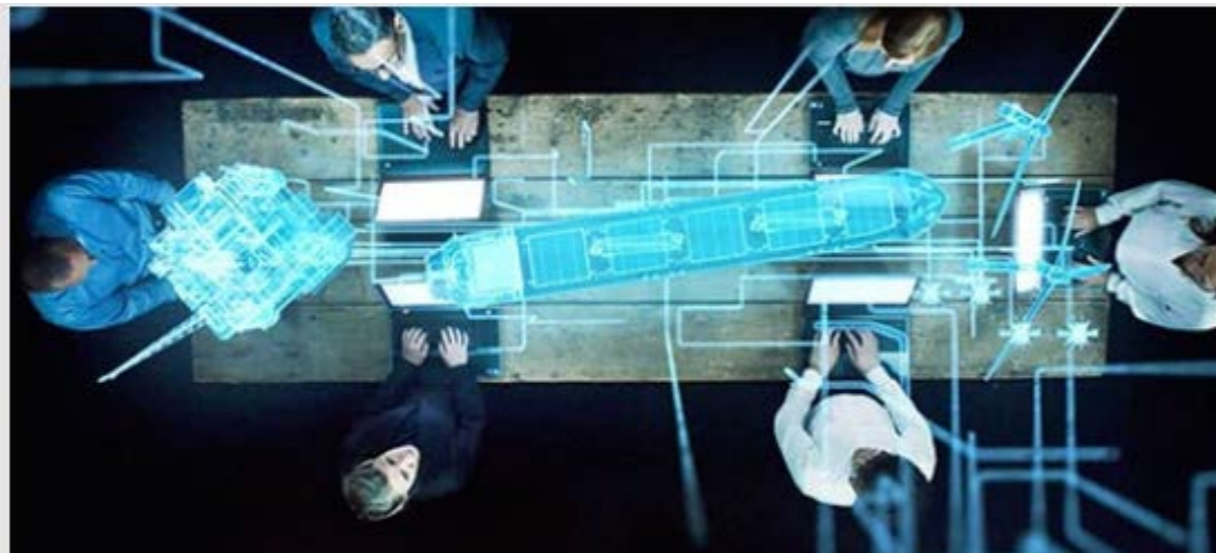
In a recent survey report conducted by DNV¹, 90% of surveyed maritime professionals believed that a cyberattack leading to the disruption of a ship and/or fleet operations was "likely" in the near future. With the introduction of several new maritime-related environmental, climate, and cyber regulations, ship owners will need to update their shipboard technology, particularly OT systems that may potentially introduce new vulnerabilities that could be exploited by malicious actors. For example, efforts to reduce the CO2 emissions from ships will likely result in the installation of new monitoring systems and software, creating more opportunities for hackers to exploit.

With fewer than 600 operational undersea cables in the world, these have become a vital component of the global communication network. Notwithstanding, they have become vulnerable to attacks and damage, and can cause serious landward disruptions. Additionally, repairs are often costly, difficult, and time-consuming. For example, 2 undersea cables in Tonga were damaged by an undersea volcanic eruption in January 2022. It took over 18 months before the cables were fully operational again.

¹ <https://www.dnv.com/cybersecurity/cyber-insights/maritime-cyber-priority-2023.html>

4. FORECASTS/WAY AHEAD

The IFC expects the number of actual and reported maritime CYBSEC incidents to increase in the upcoming years. Enforcement agencies are also expected to increase collaboration to address and thwart threats. IFC recommends all maritime stakeholders to stay up to date on industry best practices and share information related to cyber threats and attacks.



DNV's Cyber Priority research explores the changing attitudes and approaches to cyber security in key industrial sectors. The research draws on surveys of industry professionals complemented by in-depth interviews with leaders and experts.

In June 2023, we published the latest edition of the research with reports on cyber security in the Maritime and Energy industries:

- *Maritime Cyber Priority 2023: Staying secure in an era of connectivity.* Research based on a survey of 801 maritime professionals conducted in March and April 2023, complemented by in-depth interviews with leaders and experts from leading maritime organisations including the US Coast Guard, Wärtsilä, Meyer Werft, Bundeswehr (German navy), Stena Drilling, Beazley, Hamburg Port Authority, UK Chamber of Shipping, and DNV.
- *Energy Cyber Priority 2023: Closing the gap between awareness and action.* Research based on a survey of 601 energy professionals conducted in February and March 2023, complemented by in-depth interviews with leaders and experts from leading energy sector companies including Equinor, Dominion Energy, Vattenfall, Institute for Security and Safety, Skagerak Energi, SCADAfence, and DNV.

Maritime Cyber Priority 2023 – Key Messaging No 1: Maritime professionals warn of insufficient investment in cyber security as risks escalate in the era of connectivity.

Insufficient funding is the biggest barrier to maritime industry cyber security. Safety is at risk as assets and infrastructure become more digitally connected. Maritime professionals expect tightening regulation to be the greatest driver for unlocking new cyber security funding, but compliance doesn't ensure cyber resilience. Greater collaboration and knowledge-sharing is needed across the industry to accelerate cyber security best practice.

- Less than half (40%) of the 800 maritime professionals surveyed by DNV think their organisation is investing enough in cyber security.
- This comes at a time when new risks are emerging as vessels and other critical infrastructure become increasingly networked and connected to IT systems.
- Six in ten (61%) maritime organisations are in the process of linking their existing assets, including vessels, to their onshore IT networks and across business units worldwide.
- While the maritime industry has focused on enhancing IT security over recent decades, the security of operational technology (OT) – which manages, monitors, controls, and automates physical assets, such as sensors, switches, safety and navigation systems, and vessels – is a more recent and increasingly urgent risk.
- Three quarters (75%) of the 800 industry professionals surveyed by DNV believe that OT security is a significantly higher priority for their organisation than it was just two years ago. Just 1 in 3 is confident that their organisation's OT cyber security is as strong as its IT security.

- Threats to OT security are threats to safety. More than half of maritime professionals expect cyber-attacks to cause ship collisions (60%), groundings (68%), and even result in physical injury or death (56%).

DNV's POSITION:

- Maritime organisations must treat cyber risks like safety risks in an operational setting. Investments in cyber security must keep up with the emerging threats that maritime organisations now face.
- When making the case for greater budgets, it pays to make the case for the strategic necessity. Cyber security is a growing safety risk, and perhaps even **the** risk for the coming decade. Crucially, it is also an enabler of innovation and decarbonisation. 9 in 10 (87%) maritime professionals say the future of the industry relies on an increase in connected networks, and 85% say that connected technologies are helping the industry reduce emissions. Cyber security is a prerequisite for the success of this digital transformation.
- Where investments in cyber security are being made, we urge maritime companies to assess whether budgets are being spent where they are needed most. Our research indicates that the maritime industry is still thinking IT in an era of connected systems and assets. With ship systems being increasingly interconnected with the outside world, cyber-attacks on OT are likely to have a bigger impact in the future.

Maritime Cyber Priority 2023 – Key Messaging No 2: Maritime professionals expect tightening regulation to be the greatest driver for unlocking new cyber security funding, but compliance doesn't ensure cyber resilience.

- There is strong acknowledgement among maritime professionals (89%) that cyber regulation will become stricter in the coming years.
- Tighter regulation of maritime cyber security is on the horizon as industry bodies and government authorities seek to encourage the sector to improve its security posture.
- Most maritime professionals rank regulation among the strongest motivators to unlock much-needed cyber security funding, with 84% believing that regulation will drive investment in cyber security.
- Examples of regulation soon coming into force include the revised Directive on Security of Network and Information Systems (NIS2), set to be transposed into national laws in EU member states in 2024. In the US, the Department of Energy is continuing to work on the National Cyber-Informed Engineering Strategy – a bi-partisan plan to raise standards.
- Specific to the maritime industry, new requirements from the International Association of Classification Societies (IACS), for example, will be mandatory from the start of 2024.
- While compliance is driving investment, many maritime professionals acknowledge that they need to go further to ensure cyber resilience, with only around half (56%) believing that regulation alone is enough to keep them sufficiently secure from cyber threats.
- Many in the sector appear to be struggling to comply with the existing rules, as just 36% of maritime professionals agree that complying with cyber security regulation is straightforward, and less than half (44%) say that their organisation is lacking the in-house technical knowledge required.
- Two thirds (66%) of maritime professionals say that cyber security regulation is seen as lower priority than other regulations governing the industry.

DNV's POSITION

- Regulation is key to achieving sufficient funding.
- Regulation only sets a baseline; it doesn't guarantee security. Rather than taking it as the goal, the maritime industry should use it as a foundation, on which to further improve and adapt to the changing threat landscape
- Regulation invariably represents a response to threats and issues that have already been identified, so organisations with a compliance-only mindset risk falling behind. Compliance needs to be complemented by work to identify and manage new risks and weaknesses with a proactive mindset.
- Maritime leaders have long asserted that work is never so important that it cannot be carried out safely. For decades, employees have been encouraged to stop work and blow the whistle if they believe that safety protocols are being neglected. In our view, a similar mantra should be adopted for cyber security, with cyber security regulation – and the security it aims to achieve – being among the highest priorities for maritime organisations.

- The maritime industry has used regulation effectively to keep safety high on the agenda. However, the good cyber security foundation that regulation brings also needs to be supported by additional cyber security actions as cyber security is constantly changing due to new vulnerabilities being uncovered.
- The industry should pursue a combination of regulatory cyber security actions towards known weaknesses as well as more exploratory cyber security actions, employing penetration testing and intrusion detection systems to cover unknown threats.

Maritime Cyber Priority 2023 – Key Messaging No 3: Greater collaboration and knowledge-sharing is needed across the industry to accelerate cyber security best practice.

- Barely three in 10 (31%) maritime professionals believe organisations in the industry are effective at sharing information and lessons learned around cyber security threats and incidents.
- Reluctance to share information may be counter-productive at a time when businesses would benefit significantly from hearing first-hand about the challenges faced by their peers and the methods they are adopting as a result.
- Transparency key to creating industry standards, and with information-sharing currently limited in the industry, it is perhaps not a surprise that a majority (60%) of maritime professionals believe the industry lacks standards for building an effective, repeatable approach to cyber security.
- More than half (57%) of maritime professionals say their organisation urgently needs to get better at addressing gaps in their suppliers' cyber security. Standards adopted across the industry could play a role in addressing this issue, ensuring everyone in the supply chain understands what is required.

DNV's POSITION

- The maritime industry needs to take big steps forward in openly sharing cyber security experiences – the good, the bad and the ugly – to collectively create security best practice guidance for a safer, more sustainable maritime sector.
- Better information-sharing would help regulators, and it would enable them to better help the industry. Information on potential vulnerabilities – if shared in a timely, detailed enough manner – could prevent their exploitation affecting others, in the maritime industry or in other sectors.
- As we have seen in the safety domain, regulation becomes more straightforward and effective when it is supported by industry players coming together to share knowledge.





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Please refer to the IFC website for the annexes.