SENTINELS OF THE SEA: Quick-Look Report

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INTRODUCTION

SENTINELS OF THE SEA is a tabletop exercise (TTX) developed to improve common understanding of regional maritime domain awareness (MDA) capacities and enable more information sharing to address shared maritime security concerns. The game identified decisions, processes, requirements, and constraints that influence information sharing in the Indo-Pacific and explored ways to enhance participating countries' shared MDA through improved information sharing. The TTX was sponsored by the US Pacific Fleet N5 (Plans and Policy) and Commander, Logistics Group Western Pacific/CTF-73. The game was held on August 13, 2024, as part of the annual SEACAT multilateral exercise's Senior Leader Forum.

After a brief overview of the game, we discuss the challenges and key decision-making processes identified during game play and explore possible implications for necessary changes in information sharing.

GAME OVERVIEW

The TTX was a facilitated multiplayer discussion-based game in which players proposed actions, weighed supporting and detracting rationales, and determined an adjudication or judgment of player actions through facilitation and consensus (i.e., a matrix-style game). Players included navy and coast guard leaders from countries across the Indo-Pacific and beyond.

During the TTX, players collectively aimed to increase MDA across the region by identifying and responding to illicit maritime activities. To do so, players articulated the actions that they would take for each introduced event, and they committed Capability Tokens representing MDA capabilities such as patrol assets and sensing capabilities (see Figure 1).

Facilitators introduced events that spanned the spectrum of regional maritime security challenges, including search and rescue incidents, collisions, a Democratic People's Republic of Korea (DPRK) smuggling ship sanctioned by the United Nations

Figure 1. SENTINELS OF THE SEA game board
Source: CNA.

(UN), irregular human migration, terrorism, oil spills, piracy, a port cyberattack, severed undersea cables, weather damage, and illegal, unreported, and unregulated fishing (IUUF) incidents. For some events, participants found easy resolutions, especially if they had real-world experience resolving similar events and were practiced at sensing what was taking place within their maritime borders. Events requiring more coordination to achieve a resolution included those events spanning multiple countries' exclusive economic zones (EEZs) or occurring in locations of multinational interest, as well as events involving unlocated low-profile or well-concealed assets. Gameplay highlighted the successes of cooperation, potential gaps and areas for improvement, and some overall insights relevant to higher level decision-makers.

KEY TAKEAWAYS

KEY SUCCESSES
Gameplay revealed that countries in the region have multifaceted relationships among their respective navies and coast guards across international boundaries and an eagerness to further develop these relationships to improve cooperation in the maritime domain. Players highlighted that numerous methods of communication have been established among countries to share information and contribute to MDA, each with varying levels of formality.

FORMAL MECHANISMS
During the game, players communicated and shared information through formal mechanisms, particularly the Singaporean and Indian Information Fusion Centers (IFCs), to which participating countries have sent international liaison officers (ILOs) to coordinate information sharing. Players mentioned that the presence of ILOs at the IFCs helped facilitate faster information sharing. Other mechanisms included the Indo-Pacific Partnership for Maritime Domain Awareness, the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia, and the Maritime Rescue Coordination Centres. Also noted were the many bilateral and multilateral agreements among countries in the region that establish communication through hotlines and between headquarters and embassies. The clearest and most confident examples of coordinated action used well-established bilateral or multilateral arrangements, such as the Malacca Straits Patrol and Australia's Operation Sovereign Borders (an Australian operation that relies on coordination with neighboring countries).

Establishing formal agreements is especially important to enable the sharing of sensitive information that cannot be shared over personal lines. Issues related to sensitive information are particularly salient, as seen in the drug smuggling and cyberattack events, which required both domestic and international coordination. Players noted that classified information is usually shared among countries that have bilateral or trilateral agreements and compatible technology and that classified information sharing is not yet being done at a large scale. Ensuring that countries in the region are technologically equipped to deal with sensitive information while retaining the speed of transmittance is key to moving toward more formal methods and improving information sharing overall.

INFORMAL MECHANISMS
Players communicated informally through calling via personal lines and sending information (such as photos of suspicious vessels) via WhatsApp. Such methods rely on close, amicable, and trusting interpersonal relationships between officers that have been built through years of cooperation during joint exercises, patrols, and operations. This form of communication demonstrates that countries are willing to cooperate and that fast and efficient information sharing among countries is a critical need. However, informal communication can be unstable and dependent on an individual's tenure and personal relationships in a particular role. Reliance on informal communication methods may reveal a gap in formal methods. Players mentioned that formal mechanisms can be slow and bureaucratic, which could explain why informal communication methods sometimes outpace formal ones.

OTHER MECHANISMS
Beyond mil-to-mil cooperation, players also coordinated with nongovernment entities such as oil companies, undersea cable companies, and local and commercial fishing fleets to request information on vessels of interest (VOIs) or identify the location of an issue such as a cut undersea cable or an oil spill. This type of information sharing is particularly valuable because it increases the sources of information available to authorities and contributes to a common operating picture.

POTENTIAL GAPS
The game also identified potential areas for improvement—particularly the challenges of searching for "dark" vessels, navigating the constraints resulting from differing authorities, and monitoring the large areas for which some countries are responsible.

"DARK" VESSELS
Gameplay related to tracking VOIs uncovered several challenges that can result from vessels engaging in deliberate illicit activity or from a vessel's size. These challenges are particularly apparent in tracking dark vessels (ships operating with a faulty automatic identification system (AIS), operating with AIS intentionally offline, or transmitting falsified AIS data via spoofing), smaller vessels, and ships that may have changed their appearance after their last known sighting. Players noted the lack of enforceability in the use of AIS to be an additional challenge. Alternative sensing methods such as satellite-based radio frequency detection could help counteract some of these shortcomings.

AUTHORITIES
Maritime nations may also be constrained by the authorities that they can exercise in certain regions, particularly in EEZs and adjacent high seas. These restrictions may come from domestic or regional sources, such as existing local agreements or political sensitivities to interfering in international matters without actionable intelligence, or they may be tied to the international law of the sea. When a VOI's activity was of interest to a player but the VOI was in another country's EEZ, action depended on cooperation between the two states. Some

players readily shared information via established channels with those from neighboring EEZs if they anticipated that the VOI that they were tracking might cross boundaries; others stated that they would provide information only upon request, which rarely occurs in reality. This finding demonstrated the variance in existing relationships and highlighted regions where proactive cooperation may be lacking.

Players experienced the greatest challenge related to authorities when a VOI was in EEZs and the high seas. International law restricts visit, board, search, and seizure (VBSS) actions to extremely narrow grounds on the high seas and only slightly widens the aperture in EEZs. Players talked through these restrictions and the slight variations in national interpretations of when VBSS activities are justified. For example, in the DPRK smuggling event, players noted that confirming whether a vessel was smuggling goods under UN sanctions would generally require a search but that authorizing a search would require a degree of suspicion that remote sensing methods alone may struggle to provide. As a result, players agreed that MDA is valuable but that actionable intelligence is often essential for addressing nefarious behavior in the maritime domain.

Players also noted during the smuggling event that their response would depend on the particular sanctions that were believed to be violated. If goods on the ship transiting from Iran to the DPRK were sanctioned by only the US, then some players were willing to track and monitor the ship but not necessarily take action. If the goods were sanctioned by the UN, then certain countries would be willing to take additional action within their EEZ, including VBSS.

SIZE OF AREA OF RESPONSIBILITY
During several events, players highlighted that their primary obstacle in creating a complete picture of MDA is a lack of capacity rather than capability. Players generally said that they have vessels and technologies that are capable of reliably increasing MDA but that they have a limited number of these assets and can provide coverage for only a small geographical area at a particular time. This finding could indicate that to holistically improve a nation's MDA picture and maritime security, investment in new technology and training should be coupled with increasing the number of existing assets or increasing the workforce of maritime authorities.

In addition, because of the challenges in patrolling the outer edges of a country's EEZ, players noted that VOIs engaging in illicit activity such as IUUF would be able to move to adjacent EEZs or the high seas before being apprehended, even if authorities had a complete MDA picture of their territory. This issue was especially relevant for countries with large areas of high seas outside their EEZs, particularly South Asian countries and those bordering the Indian Ocean. This challenge could be addressed if several countries cooperated to combine assets to

solve a particular problem. In one instance, players discussed an agreement that helps address IUUF vessels traveling between their EEZs by allowing their coast guard authorities to access each other's waters and pursue their domestic ships.

ADDITIONAL HIGH-LEVEL CONCLUSIONS
The gameplay raised several important points related to cooperation, particularly on cross-boundary issues, intelligence versus information, and future topics to explore.

CROSS-BOUNDARY COOPERATION
Players readily recognized the need for enhanced information sharing, considering that an incident affecting one country may affect many others. For example, during the port cyberattack event, a player pointed out that the cyberattack on one country caused the other countries to be on alert in case their ports would be targeted next. Players also noted that cooperation can improve countries' chances of success in identifying and responding to an incident, **indicating a desire for expanded multilateral information sharing.** Players readily cooperated and participated in gameplay, contributed their resources and information, and brought up several examples of previous coordination on similar events with other countries in the region. This finding indicates a history of regional cooperation on specific issues and may signal a willingness to continue strengthening information sharing in the region through dedicated channels, resources, or other means. However, note that the game was designed to encourage and reward players for cooperation. In addition, during some events, players were willing to have open discussions about capabilities but were more cautious when committing to action tokens. Some countries also expressed that they were willing to offer resources but were not often asked for help, **indicating a need to further explore the mechanisms for countries to request and share resources among each other.** Finally, in countries where a precedent of information sharing and communication existed via personal relationships, government agreements, or regular interaction, this existing level of "activation energy" appeared to drive stronger cooperation on MDA efforts. In contrast, more time and effort may be needed to establish the minimum communication and trust required to increase MDA between some partners with no history of established or normalized cooperation. **This finding could indicate that increased efforts to improve and formalize regional cooperation could have long-term MDA benefits.**

INTELLIGENCE
Although players readily shared information, they drew a distinction between intelligence and information, and they emphasized the sensitivity surrounding sharing information collected by a military or government entity that tends to be viewed as "intelligence." This distinction is seen in the kinds

of information that can be shared in IFCs or more informal relationships; as a result, much of the game focused on information sharing instead of intelligence sharing. Players noted that **information without intelligence may not be sufficient to address certain maritime security challenges,** especially events such as smuggling and port cyberattacks.

FUTURE TOPICS TO EXPLORE
Players identified both drug smuggling and the nuances of refugee flow as areas for future exploration. These events are particularly challenging in the region, and responding to them with existing coordination efforts is difficult because these efforts are less practiced than those used for other kinds of maritime events. Players suggested developing a regional drug enforcement mechanism and referenced Europe's drug enforcement coordination structures. The drug smuggling event also highlighted the challenges resulting from the fact that each country's domestic agencies have different drug smuggling laws and standard operating procedures (SOPs) and that the International Criminal Police Organization may need to be involved in these cases. The involvement of different agencies and the differences among laws and SOPs could further complicate interoperability.

Although facilitators did introduce an irregular human migration event, the game did not address the outcomes of refugee migration in depth, and multiple players suggested that this topic be included in future iterations of the TTX. Players discussed the effect that refugees have on their own countries, the distinction between regular migrants and refugees, the international law governing treatment of refugees versus migrants, and the challenge of dealing with people coming to their countries via maritime vessels. **A closer look at both drug enforcement and the nuances of refugee flows could improve MDA cooperation in the region.**

Finally, some players noted that it was unrealistic to focus on only one event at a time. These players expressed interest in future TTXs, including a TTX that challenges players to address multiple ongoing events. The prioritization of MDA assets and operations was largely unexplored and is an important area for further analysis.

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