



MAKING WAVES

A maritime news brief covering:

- **MARITIME SECURITY**
- **MARITIME FORCES**
- **SHIPPING, PORTS AND OCEAN ECONOMY**
- **MARINE ENVIRONMENT**
- **GEOPOLITICS**

EDITED BY:

Capt Sarabjeet S Parmar

execdir.nmf@gmail.com

Dr Oliver N Gonsalves

associatefellow1.nmf@gmail.com

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MARITIME SECURITY

MYANMAR OPIUM PRODUCTION DROPS AS METH SURGES, UN SAYS

- Vijitra Duangdee

BANGKOK - Opium production in Myanmar, the world's second-largest cultivator of the poppies that are the base ingredient for heroin, has dropped, according to a United Nations study released Thursday, as "Golden Triangle" drug lords focus on the more lucrative synthetic drug trade. Myanmar's lawless borderlands are home to fertile growing ground for poppies, but the area under cultivation has been in retreat, according to the annual survey by the U.N. Office on Drugs and Crime. Around 405 metric tons of opium were produced in Myanmar last year, about half the amount recorded in 2013.

Instead, the drug trade of the Golden Triangle -- a corner of remote, hilly land that cuts into Myanmar, Laos, Thailand and China -- is dominated by methamphetamine production. The drug is available both as the "yaba" -- "crazy drug" in Thai -- pills, in which the meth is mixed with caffeine, and the highly addictive crystallized version known as "ice." "Opium production is down 11 to 12% on the previous year," Jeremy Douglas, UNODC Southeast Asia and the Pacific Regional representative told VOA Monday. "This decline is intimately linked to the surge of synthetic drugs." Farmers are also earning significantly less from raw opium -- a collapse in income worsened by the pandemic -- and are therefore turning away from it, the report added, while the government eradicated around 2,000 hectares of poppy fields. However, the report said Myanmar "remains the major supplier of opium and heroin in East and Southeast Asia, as well as Australia," a region of around 3 million users consuming around \$10 billion of the drug each year. The money still helps drive a drug economy for crime groups who are interwoven with the patchwork of armed ethnic militias operating in Myanmar's northern Kachin state and eastern Shan state, where drug laboratories process heroin alongside meth. Myanmar's opium production "still has a clear impact on the conflict situation," the report added. "There has long been a connection between drugs and conflict ... a corrosive political economy and facilitates continued militarisation, ultimately helping sustain civil conflict," it said.

Meth money

Meth, though, is where the real money is to be made. Golden Triangle drug labs continue to pull in huge volumes of precursor chemicals and churn out record amounts of the yaba and ice, flooding neighboring countries and beyond with the drug. Thailand's latest seizure figures for 2019 show police netted nearly 400 million yaba pills and about 17 metric tons of ice. Drugs are making the meth lords of Asia extremely rich. It is impossible to quantify their illegal take, but some estimates reach up to \$70 billion a year, money Thai drug police say is laundered across the region into property,

construction, casinos and cryptocurrency. Yet, until recently the figures at the top of the crime pyramid remained shadowy figures, who avoid the spotlight and body count left by their more infamous Latin American peers.

That changed last month when Tse Chi Lop, the alleged leader of one of Asia's biggest drug syndicates, was arrested in the Netherlands. He is being prepared for extradition to Australia, where a 10-year investigation has him pegged for allegedly running a notorious syndicate called The Company, believed to be behind the sprawling meth trade of the Asia-Pacific. In Thailand, seizures of yaba pills and ice hit records annually and have not stopped despite the pandemic's restrictions on movement. This week 1.3 million yaba pills were found by Thai authorities left on a bank of the Mekong River in the northeast of Thailand, along the border with Laos, a sign of flourishing cross-border trade. The drugs pour through long, open borders with Myanmar and Laos into a kingdom which is both a large meth market as well as a storage and transit point for shipments south to Malaysia and as far as Japan and Australia.

In Bangkok, users and addiction counselors say the trend has long since moved from opiates to synthetic drugs as prices plummet. Fifteen years ago, a gram of ice would cost 2,200 to 3,500 baht, compared to 800 baht -- \$27 at current exchange rates -- a former ice addict told VOA, requesting anonymity. "That means virtually anyone can buy it," he said. At his drug clinic Shaowpicha Techo, a drug rehabilitation counselor at a Bangkok health clinic, said 80% to 90% of patients use meth and other synthetic drugs, "while patients addicted to naturally occurring substances like opium and kratom have gone down," he added, referring to mild narcotic derived from a Southeast Asian plant.

Source: [Voice of America](#); 12 February 2021

COASTAL CONCERN

Even as Indian and Chinese troops disengage along the Line of Actual Control (LAC) in eastern Ladakh, there's growing concern about China's militarisation of its maritime authority in the South China Sea which will have an impact on the geopolitics of the larger Indo-Pacific region. On 1 February, new China Coast Guard (CCG) laws came into effect which provide a regulatory framework for China's law enforcement operations in areas under its maritime jurisdiction. Till 2018, China's coast guard operated under a civilian agency but then the Central Military Commission took over. The message was clear: Coordination between the PLA Navy, CCG and the People's Armed Forces Maritime Militia to advance Chinese claims especially in the South China Sea (SCS) would be the name of the game.

As a recent report by leading think-tank Gateway House points out, China not only has the largest navy in the world in terms of numbers of ships, but also the largest Coast Guard. "Unsurprisingly, global anxieties have risen with the operationalising of the new laws," says the report. India's worry is, if anything, even more pressing. For there is wide consensus among strategic experts that the new CCG laws have left the term "jurisdiction" geographically undefined, creating ambiguity over its applicability in disputed maritime zones. This is precisely the playbook adopted by Beijing along the

LAC, so a feeling of déjà vu in South Block would not be misplaced. According to the Gateway House report, the move “gives the CCG greater latitude for grey zone activities like attacking third-country fishing vessels, and creates uncertainty for smaller nations in the region... The ambiguity in the CCG’s jurisdictional limits, and China’s appetite for grey zone operations, has increased the likelihood of a confrontation between CCG and warships of other nations within the SCS.” Vietnam, Philippines, and Japan are among the nations in the region which have been victims of China flexing its maritime might. Vietnam has in the past urged India to stand its ground on the exploration of two oil blocks it has inked an agreement with ONGC Videsh for ~ in the face of China claiming the blocks for itself. The Philippines has been the worst sufferer but the regime in Manila has pivoted away from Washington and towards Beijing lured by economic benefits while Japan has been actively raising the issue of aggressive Chinese maritime claims in the Quad. If New Delhi wants a second front in what is likely to be a long-running battle of attrition with China, reclaiming its historical role of being the “net security provider in the Indo-Pacific” is certainly a way to do it. A possible Quad+France architecture would have the heft, if structured sensibly, to enable a rules-based Indo-Pacific region including in the South China Sea.

But such a strategy must adhere to a cardinal principle if it is to succeed: Smaller nations in the region whose economies are dependent on China should not be pressurised to take a tough stand against Beijing; the heavy lifting has to be done by the biggies.

Source: [The Statesman](#); 14 February 2021

SOUTH CHINA SEA: WISE TO PROVOKE CHINA?

- Anna Malindog-Uy

In the post-Cold War era, the formation and the creation of regional groups like ASEAN and the European Union (EU) bears the promise of promoting not only regional bargaining economic power but as alternative mechanisms and structures in facilitating and consolidating regional peace, security, and stability within the territorial boundaries of these regional groupings and beyond. Regional blocs like ASEAN were established in an attempt to facilitate and promote regional collective peace, security, and stability through idealised norms and practices of meaningful and peaceful cooperation among their member states.

Gunboat Diplomacy

Nevertheless, given the lingering cold war atmosphere between China and the United States (US) and the continuous drills in the exercise of the “gunboat diplomacy” in the disputed waters of the South China Sea (SCS) by the US and its strategic security allies like France, Great Britain, Australia, and even Japan to deliberately challenge to the point of provoking China several times over. This somewhat begs the question if ASEAN is indeed a “regional security architecture” (RSA) that is credible and capable of promoting regional peace, security, and stability that can withstand the on-going

power struggle, rivalry and the contest for supremacy of the two superpowers in the SCS. To note, gunboat diplomacy refers to the conspicuous displays of naval power to threaten other countries to achieve foreign policy objectives and force the threatened countries to make concessions in territorial or trade issues.

It can be recalled that recently, a French nuclear attack submarine “Émeraude” and naval support ship “Seine” carried out a patrol through the SCS as part of French efforts to challenge China’s “sweeping claims” over the disputed waters of the SCS. Also, around the third week of January 2021, the US sent the Theodore Roosevelt aircraft carrier into the highly contested waters of the SCS. The US, France, Great Britain, Australia, and even Japan have carried out several freedom of navigation operations with their military/nuclear ships and submarines sailing through the contested waters of the SCS in the recent past in an attempt to push back China’s growing regional power, presence, and influence in the SCS. Subsequently, China responded by conducting naval military drills in the SCS. Just recently, China’s People’s Liberation Army (PLA) held military exercises in the waters to the west of the Leizhou Peninsula in the South China Sea for four days. This is the first military drill by the PLA since the new US administration was inaugurated under Joe Biden.

Likewise, China has long protested against the presence of foreign warships in the South China Sea and has expressed time and again that it is serious and is strengthening its resolve to protect its territorial jurisdiction and sovereignty if challenged by external forces. Hence, it seems that the “gunboat diplomacy” being displayed by both sides of the fence not only further complicates the SCS dispute, rather it is also heightening the “security dilemma” in the contested waters, intensifying the prospects of a military confrontation between China and the US and its allies. If this happens, ASEAN and its member states could be the primary victims. As a matter of proviso, one must not neglect the possibility of the fact that the two superpowers may fall into the so-called “Thucydides Trap,” where the “tug of war” between a declining power and a rising power could lead to an actual war if the military exercises in the SCS are not managed well by both parties. This further complicates an already complex and tension-driven security situation in the SCS if competing parties involved in the maritime dispute including ASEAN are not able to manage the peaceful resolution of this maritime dispute involving China, the US and its allies.

ZOPFAN

ASEAN member states should at least come up with a common understanding of how they should deal with China and the US vis-à-vis the geopolitical complexities and realities around the SCS. This challenging and daunting task can be guided and facilitated through the operationalisation of the principles enshrined in the ZOPFAN (Zone of Peace, Freedom, and Neutrality). ZOPFAN is a declaration signed by Foreign Ministers of the original five member-states of ASEAN namely Indonesia, Malaysia, the Philippines, Singapore, and Thailand on 27 November, 1971 in Kuala Lumpur. 49 years ago, these ASEAN member states declared their intent to keep Southeast Asia free from any form or manner of interference from “outside powers,”; practicing peaceful co-existence, preserving the independence and sovereignty of individual states, and broadening areas of cooperation.

COC in the SCS

The Code of Conduct (COC) in the SCS without the intervention of the US and other countries not party to the dispute is yet another mechanism that offers a set of norms of behaviour that may regulate the interaction of states that are party to the dispute. The COC will play a very important role in resolving the SCS dispute, and in reducing the potential for conflict. ASEAN and China signed a declaration on conduct for the South China Sea in November 2002, which was the first time that China had accepted a multilateral agreement on the issue. China is pushing for the COC with ASEAN and wants negotiations completed as soon as possible. Likewise, the COC is important as it provides a framework of rules, principles, norms, and decision-making procedures for the management and resolution of disputes among claimant countries over the SCS. An ASEAN-China COC on the SCS will create new forms of commonality and cooperation among the parties through dialogues and negotiations. It is a viable diplomatic mechanism as it can provide international rules-based order for the SCS. However, for the ASEAN-China COC to be effective, it must be supplemented by the institutionalisation of additional multilateral and bilateral negotiations among claimant countries on matters related to fishery management, environmental cooperation, and oil and gas development among others, which are important economic issues that might trigger potential conflicts if not addressed adequately.

MDT And The VFA

Nevertheless, Foreign Affairs Secretary Teodoro Locsin Jr. on Monday (8 February, 2021) stated that the Philippines has opposed efforts to block foreign powers, particularly the US from having access to the SCS under the Code of Conduct being drummed-up by ASEAN member states and China. "Here is the non-negotiable, the COC will never exclude a Western power, well the United States, from the area because that's part of our national defense, it's the MDT (Mutual Defense Treaty), and that America's continuing presence will ensure "balance of power" in the region," he said in a media interview. This is testament that ASEAN governments see security and stability through the lens of the nation-state. To note, the MDT is a 70-year-old defense accord that binds America to defend its Asian ally from aggression. The MDT between the Philippines and the US was signed on 30 August, 1951, in Washington, D.C. and was established to provide mutual support in case of a foreign attack. Nevertheless, the MDT is actually "hanging in the balance" at the moment. It was no less than President Rodrigo Duterte who expressed some kind of ambivalence to the MDT and raised some foreboding thoughts if in any case the US is indeed is a reliable security partner.

Duterte made a bit of elucidation in this regard in his speech during the inspection of air assets at Clark Air Base in Pampanga on 12 February, 2021, striking a chord by reminding the Americans that the military pact allowing joint Philippine-U.S. military operations is a "shared responsibility." The commander in chief and the sole architect of the country's foreign policy also expressed that the US government failed to deliver some of its previous promises to the Philippines. "In the past, we ordered so much from them and so much were not delivered at all. What I don't like is para kang bata na (you're like a child), they promise you, magpunta ang top brass nila (the top brass will visit), this group promises you and once they take-off they forget about it," Duterte said. The Visiting Forces Agreement (VFA) is an agreement between the Philippines and the US in support of the MDT.

Balance Of Power

On the issue of balance of power, one has to take note of America's policy of containing China by keeping around a hundred thousand troops in East Asia and providing security guarantees to Japan and South Korea. This is intended to prevent a new balance of power from forming in Asia or in the Indo-Pacific region, that may require the military presence of the US and its allies' in the region. The US is containing contending powers like China from rising to keep the world a unipolar one; to maintain its hegemonic position and the status quo in Asia and the Indo-Pacific so as not to alter the power equation in the region. In the balance of power discourse surrounding the SCS, it's not an individual member state alone that is dealing with China but rather ASEAN as a regional bloc. ASEAN is a contending force to reckon with that can offer a counterweight if it gets its act together, and stands solid and united as the SCS dispute could be resolved peacefully and amicably through dialogue and cooperation within the ambit of ASEAN structures, processes, and mechanisms.

Conclusion

In retrospect, what the SCS needs at the moment is a cooling-off period in which western powers step back from exercising "gunboat diplomacy" intended to challenge and provoke China. Instead, they should leave ASEAN, China, and the rest of the claimant states to hammer out the conclusion of the COC by exploring all possible mechanisms to manage and resolve disputes surrounding the waters of the SCS peacefully guided by relevant international laws. Hence, the US and other countries which are not party to the conflict should refrain from intervening so as not to muddle and complicate the issues surrounding the SCS further. Whereas, China must take greater responsibility and behave constructively and responsibly as a stakeholder in the SCS with other claimant countries. If ASEAN wants the region to be a cohesive "zone of peace" or a "security community", it must transcend and uphold the intent and purpose of the ZOPFAN and the COC. If not, it will be like "a tree without roots, and water without a source."

Source: [The Asean Post](#); 14 February 2021

FRANCE WADES INTO SOUTH CHINA SEA AGAINST CHINA

- Richard Javad Heydarian

In an unmistakable sign of the growing internationalization of the South China Sea disputes, France has just confirmed the deployment of a nuclear attack submarine and naval vessel to the hotly contested waters. In a tweet earlier this week, France's Defense Minister Florence Parly announced that the European power has deployed the nuclear attack submarine *Émeraude* along with naval support ship *Seine* to the maritime area to "affirm that international law is the only rule that is valid, whatever the sea where we sail." "This extraordinary patrol just completed its passage in the South China Sea," declared the French defense chief following its unprecedented military maneuvers in Asian waters this week. "This is striking proof of the capacity of

our French Navy to deploy far away and for a long time, together with our Australian, American and Japanese strategic partners,” she continued, emphasizing that France’s actions are part of a broader international effort to uphold international law in global sea lines of communications. The move came just weeks into the administration of US President Joseph Biden, who has warned of a new era of “extreme competition” with China and emphasized the necessity for a joint response along with like-minded allies in Europe and Asia. In an unmistakable sign of the growing internationalization of the South China Sea disputes, France has just confirmed the deployment of a nuclear attack submarine and naval vessel to the hotly contested waters.

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America’s deployment of the Nimitz Carrier Strike Group and Theodore Roosevelt Carrier Strike Group to the disputed waters was the first of its kind in almost six months, “to demonstrate the US Navy’s ability to operate in challenging environments,” according to a statement by the US Navy. “Through operations like this, we ensure that we are tactically proficient to meet the challenge of maintaining peace and we are able to continue to show our partners and allies in the region that we are committed to promoting a free and open Indo-Pacific,” said Rear Admiral Doug Verissimo, commander of the Theodore Roosevelt Carrier Strike Group.

Other European powers such as the United Kingdom and Germany are also expected to deploy warships to the area in what increasingly looks like a concerted Western pushback against China’s maritime ambitions. The recent naval deployment was just the latest instance of French muscle-flexing in Asian waters, a move that is bound to spark China’s ire. Back in 2019, the French frigate *Vendémiaire* conducted an unprecedented freedom of navigation operation in the Taiwan Strait amid rising tensions between China and Taiwan. In response, an enraged Beijing unceremoniously disinvited the French delegation from taking part in the celebrations of the 70th anniversary of the People’s Liberation Army (PLA) Navy in the port city of Qingdao. At the time, a source close to the PLA told the South China Morning Post that “[s]uch a passage embarrassed Beijing. So, we advised them [France’s navy] not to send the warship to the parade, though a delegation would still be welcomed.” In response, the

French Defense Ministry said it was “in close contact with the Chinese authorities” about the incident while reiterating its commitment to upholding rule of law across the Indo-Pacific. “The navy passes on average once a year in the Taiwan Strait without incident or reaction,” said the French defense ministry, portraying its naval deployments to the area as routine and consistent with international law. Similar to the UK, which has territorial as well as strategic interests in the region and is a permanent member of the United Nations Security Council, France has consistently maintained that it’s a “resident power” in the Indo-Pacific. In its Indo-Pacific Strategy paper, titled “French Strategy in the Indo-Pacific for an inclusive Indo-Pacific”, Paris calls for “a stable, multipolar order based on the rule of law and free movement, and fair and efficient multilateralism.”

French President Emmanuel Macron has adopted a proactive regional diplomacy by expanding defense and economic ties with like-minded powers such as Australia and India as part of a broader “Paris-Delhi-Canberra axis” vis-à-vis China. In another unprecedented move, France spearheaded a joint note verbale with the UK and Germany to the United Nations last year, where the three European powers categorically criticized China’s maritime and territorial assertiveness in the South China Sea, which “do not comply with international law.” “France, Germany and the United Kingdom underline the importance of unhampered exercise of the freedom of the high seas, in particular the freedom of navigation and overflight, and of the right of innocent passage...in the South China Sea,” said the joint statement by the three powers, which called firmly on China to comply with prevailing international law. European powers’ growing involvement in regional geopolitics is consistent with the strategic priorities of the Biden administration, which has underscored its commitment to “working with our allies and partners” based “on the international rules of the road.”

Authoritative studies also show that a growing European strategic footprint is broadly welcomed by China’s smaller neighbors, including among rival South China Sea claimants who are deeply worried about both Beijing’s aggressive intentions as well as a brewing Cold War in the region. According to the latest “The State of Southeast Asia” survey, annually conducted by the Singapore-based Institute for Southeast Asian Studies (ISEA), a think tank, European powers and Japan, “are the clear front-runners for ASEAN’s most favored and trusted strategic partners in the hedging game against US-China rivalry.” A majority of respondents (51.0%), composed of elite policy-makers and strategists in Southeast Asia, rated the EU as a reliable partner and global champion of the rule of law. In contrast, mistrust towards China “is trending upwards” from 60.4% last year to 63.0% in 2021. The Biden presidency, meanwhile, led to a whopping 18.0% jump in US’ trust ratings in the region according to the survey, a reflection of growing hopes Washington will reassert regional leadership in cooperation with allies and strategic partners. What’s increasingly clear is that Beijing is facing a concerted pushback over its aggressive behavior against smaller neighbors across international waters.

Source: [Asia Times](#); 12 February 2021

LORENZANA: PH MILITARY WON'T JOIN US TROOPS IN SOUTH CHINA SEA DRILLS

The Philippine defense chief conveyed to the US his continued support for a military pact which President Rodrigo Duterte earlier wanted scrapped.

But even while the Philippines wants to keep the Visiting Forces Agreement, it prefers to stay out of US maritime drills in the tension-filled waters of the South China Sea.

Source: [ABS-CBN News](#); 11 February 2021

RUSSIA, CHINA, AND IRAN TO HOLD JOINT NAVAL DRILLS IN INDIAN OCEAN SOON - RIA

- Reuters Staff

MOSCOW (Reuters) - Russia plans to hold joint naval drills with Iran and China in the Indian Ocean later this month, the RIA news agency cited Moscow's ambassador to Tehran as saying on Monday. The three countries held similar naval drills in the Indian Ocean in December 2019. "The next multilateral naval exercises will take place in the northern part of the Indian Ocean in mid-February 2021," Levan Dzhagaryan, the ambassador, told RIA in an interview. The drills would rehearse search and rescue operations and ensuring the safety of shipping, he said.

Source: [Reuters](#); 08 February 2021

MARITIME FORCES

BHEL BAGS ORDER TO SUPPLY 2 SUPER RAPID GUN MOUNTS FOR INDIAN NAVY FRONTLINE SHIPS

- PTI

State-run engineering firm BHEL on Thursday said it has bagged an order from the Indian Navy for supplying two Super Rapid Gun Mounts (SRGM), main guns standardised for all warships of the Indian Navy. BHEL has indigenised these guns and has established dedicated, intricate manufacturing and inspection facilities at its Heavy Electrical Equipment Plant, Haridwar for production, installation & commissioning and lifecycle support of these guns, Bharat Heavy Electricals Ltd (BHEL) said in a statement. Standardisation of these guns by the Indian Navy for all major warships has resulted in optimisation of cost and consolidation of expertise and self-reliance. BHEL is also working on an upgraded version of these guns, with enhanced range, to cater to future requirement of warships, it added.

The state-run engineering firm is a supplier of critical equipment and services in the Defence & Aerospace sector for over three decades. Towards this, specialised manufacturing facilities and capabilities have already been set up with the aim of making a major contribution towards self-reliance in Defence equipment production and initiatives taken will be a driving force towards the AatmaNirbhar Bharat Abhiyan of Government of India, the company said. In addition to the thermal power sector, BHEL offers a broad range of products for the major sectors of the Indian economy. With focus on growth of non-coal based business, the company offers comprehensive solutions for Transportation, Transmission, Renewables, Energy Storage Systems and e-mobility, Water Management, Defence & Aerospace, Captive Power Generation and Mechanical & Electrical Industrial Products.

Source: [Money Control](#); 11 February 2021

AMAN-21 INTERNATIONAL NAVAL EXERCISE KICKS OFF IN PAKISTAN

- Sana Jamal

Islamabad: Pakistan Navy kicked off one of the largest naval exercises in the Arabian Sea along with the participation of navies of 45 countries. The opening ceremony, held on Friday at Navy Dockyard in Karachi, was attended by a large number of military

representatives, observers and diplomats from participating countries. Strict COVID-19 protocols have been put in place to ensure safety this year. Naval forces from 45 countries, including the US, UK, China, Russia, Turkey as well as several Arab and African countries are participating in the week-long exercise called 'Aman-21' (Peace) from February 11-16. The exercise is held every two years since 2007.

'Together for peace'

Welcoming the participants, Pakistan Navy Chief Admiral Amjad Khan Niazi said the 7th exercise of the series would provide a platform to “develop doctrinal synergy to tackle maritime security challenges” and to enhance interoperability among navies “at different pedestals of the technological prowess to come together and secure a sustainable maritime environment.” In his speech, the admiral also highlighted Pakistan Navy’s initiative of Regional Maritime Security Patrols (RMSP) to fulfil international obligations besides protection of national interests in the Indian Ocean Region. The maritime collaboration will “bring us even closer to the cherished goals of realising regional peace and shared prosperity through collaborative efforts” he said.

Commander Pakistan Fleet, Rear Admiral Naveed Ashraf, acknowledged the support of the participating states towards Pakistan’s quest for peace and order at sea under the motto of ‘Together for Peace’.

Exercise Aman-21

Pakistan Navy initiated the exercise in 2007 with only three participants but the message of collaborative maritime security was widely accepted and the participation greatly expanded as 45 nations including the three largest navies, US, China and Russia, have joined the exercise this year. Experts say “it is a huge achievement for Pakistan as Aman-21 brings the world superpowers together for peace under one platform for maritime collaboration.” Aman-21 includes two phases, harbour and sea. The harbour activities include seminars, demonstrations and get-togethers, while the sea phase would demonstrate tactical manoeuvres on anti-piracy, counterterrorism, gunnery firing and search and rescue missions. The international fleet review would be the hallmark of the sea phase.

Bridging gaps, strengthening partnerships

One of the key goals of the Exercise Aman is to bridge gaps and to operate together in the pursuance of shared objectives to achieve stability, peace and prosperity at sea. The naval drills exhibit a united resolve against multi-faceted maritime threats. “The exercise is a reflection that nations can play a constructive role in building new ties, establishing innovative relationships while strengthening existing ones” Rear Admiral Ashraf said. Exercise Aman (Peace) aims to strengthen and develop naval cooperation among the world navies to promote regional stability and counter maritime threats. It offers the participating counties a chance to “work together keeping differences aside to defeat common adversaries” and hybrid warfare such as terrorism, piracy, terrorism, drugs and arms trafficking, human smuggling, climate change, Pakistan Navy Chief said.

Objectives of Aman Exercise:

- Contribute towards regional peace and stability.
- United resolve against terrorism, crimes and other threats in maritime domain.
- Bridge the gap and enhance interoperability between regional and extra-regional navies with Pakistan Navy acting as a bridge in the region.

Source: [Gulf News](#); 12 February 2021

PLA DESTROYER FLOTILLA JOINS MULTINATIONAL DRILLS IN PAKISTAN WITH US, RUSSIAN NAVIES

- Liu Xuanzun

A Chinese People's Liberation Army (PLA) Navy flotilla led by a Type 052D destroyer on Thursday started participating in a multinational exercise in Pakistan, a unique platform experts said that provides opportunities for Chinese and Russian navies to come together with their counterparts from the US and other Western countries. Invited by the Pakistan Navy, the PLA Navy 119 Flotilla arrived in waters close to Karachi, Pakistan on Thursday to participate in the multinational exercise AMAN-21, after the flotilla wrapped up its escort mission in the Gulf of Aden, the PLA Daily reported on Friday. The 119 Flotilla, led by the Type 052D guided missile destroyer Guiyang and consisted of also the Type 054A guided missile frigate Zaozhuang and the Type 903A comprehensive supplement ship Dongpinghu, was the 36th escort task force to the Gulf of Aden setting out from Qingdao, East China's Shandong Province on September 3, 2020, and completed a handover ceremony to the 37th escort task force on January 31 in the Gulf of Aden after completing 38 escort missions on 52 ships around the region, the PLA Navy announced in a statement released on February 1. The Global Times learned from the Pakistan Navy on Friday that the AMAN-21 exercise is scheduled in two phases: the harbor phase and the sea phase. The harbor phase will comprise of the International Maritime Conference, seminars, table talks, cross ships visits, calls on and the International Band Display and Maritime Counter Terrorism Demonstration, while the sea phase includes practical execution of operational plans and activities finalized during the harbor phase.

The exercise has been planned with focused objectives, which include enhancing interoperability with regional and extra-regional navies thereby acting as a bridge between the regions, and the display of united resolve against terrorism and crimes in the maritime domain, according to the Pakistan Navy. Naval forces from more than 40 countries, including those from Russia, and the US as well as some other NATO countries will also participate in the exercise, foreign media reported. This is the eighth time the PLA Navy has participated in the Pakistan Navy-initiated AMAN series

multinational exercises, which aim at enhancing professional communication and friendly interactions with other navies, the PLA Daily said. The drill comes after increased military tensions between China and the US in regions like the South China Sea and the Taiwan Straits since the start of the COVID-19 pandemic and former US president Donald Trump's play of military cards on China, and it also marks the first known time China and the US have been in the same military exercise since US President Joe Biden assumed office in January, a Chinese military expert who asked to remain anonymous told the Global Times on Friday. In November 2020, the Chinese and US militaries held a three-day online seminar on humanitarian assistance and disaster reduction, and this time the two militaries can get the chance to operate together, get to know each other better and build up mutual trust, when misunderstanding was on the rise over the past few months, the expert said. It is also a rare occasion in which Russia joins an exercise together with NATO countries, analysts said.

The exercise this time is unique in a sense that it provides an opportunity to navies from China, Russia and the US and other Western navies to come under one platform, an officer from the Pakistan Navy told the Global Times on Friday on the condition of anonymity. AMAN represents a "bridge" that allows several countries to meet and operate through their naval forces being with each other, even though there may not be open relationships between a few nations due to various politico-strategic differences, the Pakistani officer said, noting that this exactly was the role that Pakistan had played back in the 1960s-70s, by acting as a link between the East and the West, when the China-US barrier was broken and a new bond was established.

Source: [Global Times](#); 12 February 2021

THE ROYAL NAVY KEEPS SHRINKING— FRIGATES TO DROP BY THREE OVER FIVE YEARS

- David Axe

If you aim to go to war with the Royal Navy, plan to fire the first shot in 2026—the year the British fleet could be at its weakest. In five years under current projections, the Royal Navy will have just 10 frigates—down from 13 today—as aging Type 23 vessels decommission. The 10 frigates, plus the six Type 45 destroyers that should still be in service at the time, could struggle to meet the United Kingdom's naval needs.

There will be aircraft carriers and amphibious ships to escort, fisheries and shipping lanes to patrol, vessels of rival fleets to shepherd near U.K. waters and at least one key territory—the Falkland Islands—to protect. A force of 16 warships can't possibly handle all of those tasks. Especially considering that, at any given time, just a third of the vessels will be available for operations. The others will be in maintenance or refit or working up for deployments. Indeed, a single carrier battle group—built around one

of two new Queen Elizabeth-class flattops—could require a destroyer and three frigates. That might leave one frigate for other tasks or to replace any ships that suffer damage or sink in combat.

The warship-shortage is not new. “It is a serious challenge that has been building for more than 20 years,” said Iain Ballantyne, a naval historian and editor of *Warships International Fleet Review*. Periodic cuts since the fall of the Soviet Union in 1991 have shrunk the British military roughly by half. A round of cuts starting in 2010 eliminated, among other forces, two light aircraft carriers, two amphibious ships and four frigates. The only consolation prize, besides the long-planned new carriers, was a new batch of small offshore patrol vessels that expanded the OPV flotilla to eight boats. Those OPVs are now doing the work that frigates used to do. They patrol U.K. waters, escort passing Russian warships and even protect the Falklands. But an OPV isn’t a frigate. Where a Type 23 displaces around 5,000 tons of water and packs 32 vertical launch cells for surface-to-air missiles plus room for eight box-launched anti-ship missiles, a River-class OPV displaces just 2,000 tons and carries no weaponry heavier than a 30-millimeter cannon. The difference in size has implications for the OPVs’ endurance and thus usefulness. Frigates can, on short notice, deploy anywhere in the world. OPVs ... can’t. “If you want to send them overseas, you have to drag them with multiple refuelings along the way,” pointed out Jerry Hendrix, a military expert and author of *To Provide and Maintain a Navy*.

Dragging an OPV to, say, the Persian Gulf or the Western Pacific might be practical if the Royal Navy had tankers to spare. But the fleet has cut back on key support vessels, as well. Perhaps most ominously, the Royal Fleet Auxiliary has just one dry-stores ship with rigs that are compatible with the two new flattops. “Part of the problem is the mentality in successive U.K. governments that the navy can always do more with less and it always rises to the challenges,” Ballantyne said, “but as the U.S. Navy has also seen, there are limits to what can be done before strain tells.” The U.S. fleet is struggling to keep up with its global commitments as the pace of shipbuilding falls and maintenance problems pile up. The Americans have vague plans to grow their front-line fleet from around 295 ships to 355 or more, but back-to-back presidential administrations have failed to make much progress toward that goal. The Royal Navy has its own expansion plan. But it, too, might prove unrealistic. The government has launched three new frigate programs that together could cost \$8 billion. Eight missile-heavy Type 26s, each displacing around 7,000 tons, would replace some of the Type 23s on the most dangerous missions.

Five each of 5,000-ton Type 31 and Type 32 frigates—which are smaller and less heavily-armed than the Type 26s are—would handle less intensive tasks. Construction began on the first Type 26 back in 2017. Work on the first Type 31 should start this year. Construction of the Type 32s commences in 2027, under current planning. But shipbuilding takes time. In the best-case scenario, the frigate force shrinks to 10 in 2026 before slowly growing to a new high of 18 ... in the year 2038. A lot could happen between now and then to undermine even this slow, modest recovery. A new strategy review is underway in London. “More frigates and other ships may yet be cut in the defense review, which would be folly but entirely possible,” Ballantyne said.

Source: [Forbes](#); 12 February 2021

REPORT TO CONGRESS ON JOHN LEWIS- CLASS OILER PROGRAM

From the report

The Navy procured its first John Lewis (TAO-205) class oiler in FY2016, and a total of six have been procured through FY2021, including the fifth and sixth in FY2020. The first six TAO-205s are being procured under a block buy contract that was authorized by Section 127 of the FY2016 National Defense Authorization Act (S. 1356/P.L. 114-92 of November 25, 2015). The Navy wants to procure a total of 20 TAO-205s. The ships have an estimated unit procurement cost of roughly \$650 million when purchased at a rate of two ships per year, and something more than that when purchased at a rate of one ship per year. The ships are being built by General Dynamics/National Steel and Shipbuilding Company (GD/NASSCO) of San Diego, CA.

Under the Navy's FY2021 budget submission, no TAO-205 class ship was requested for procurement in FY2021, and the Navy did not request any FY2021 procurement or advance procurement (AP) funding for additional TAO-205s. As part of its action on the Navy's FY2021 budget, Congress provided \$20.0 million in procurement funding for the TAO-205 program for "affordability initiatives," meaning design or other work that could help reduce the procurement costs of future TAO-205s. The Navy's FY2021 budget submission projected that no TAO-205 class ship would be requested for procurement in FY2022, and that the next TAO-205 class ship (i.e., the seventh ship in the class) would be requested for procurement in FY2023. Under a draft version of an FY2022 30-year shipbuilding plan that was released by the Trump Administration on December 9, 2020, however, the next TAO-205 class ship (i.e., the seventh ship in the class) would be requested for procurement in FY2022.

Issues for Congress include the following:

- the potential impact of the COVID-19 situation on the execution of U.S. military shipbuilding programs, including the TAO-205 program;
- whether to procure no TAO-205 class ship, one TAO-205 class ship, or two TAO-205s in FY2022;
- the total number of TAO-205s the Navy will require in coming years to support its operations, particularly in light of the Navy's new Distributed Maritime Operations (DMO) operating concept;
- issues regarding the TAO-205 program discussed in a June 2020 Government Accountability Office (GAO) report assessing major DOD acquisition programs; and
- whether to encourage or direct the Navy to build TAO-205s with more ship self-defense equipment than currently planned by the Navy.

Source: [USNI News](#); 12 February 2021

7 AGEING PH NAVY SHIPS, TOO COSTLY TO MAINTAIN, TO RETIRE IN 2021

- Frances Mangosing

MANILA, Philippines—The Philippine Navy is setting its sights on decommissioning at least seven ships in 2021, because these are no longer economical to maintain. On March 1, the Navy will retire BRP Quezon (PS-70), BRP Pangasinan (PS-31), BRP Salvador Abcede (PC-114), and BRP Emilio Liwanag (PC-118), according to Philippine Fleet Commander Rear Admiral Loumer Bernabe. He said it was part of the Navy's phase-in, phase-out program which calls for the retirement of old vessels as new ones come in. The BRP Quezon is a former Auk-class minesweeper of the US Navy, while BRP Pangasinan, a Malvar-class corvette, was a former patrol craft of the US Navy. Littoral combat ships BRP Abcede and BRP Emilio Liwanag are Tomas Batilo-class patrol craft acquired from South Korea.

Three more vessels are marked for retirement within the year, Bernabe said. The ships needed to be retired due to their age as they have been in service for nearly 50 years, or almost half-a-century. "We need to phase out these vintage and WWII vessels whose average age ranges from 40-50 years old. The vessels' spare and repair parts are obsolete and not economical to maintain," Bernabe said. Replacement ships are expected to arrive in two to three years, but the Navy does not see the decommissioning having a major impact on operations. "These ageing vessels are down for maintenance most of the time and eating a lot of our maintenance funds. We can already divert our funds in the acquisition of new and more efficient platforms," Bernabe said. "Considering the age of these vessels built in the 1970s and 80s, having them decommissioned will not significantly affect our operational tempo since they are no longer capable of providing their optimum level of capability and utilization," he said.

The Navy sees the disposal of these ships as actually beneficial because it will "no longer provide for their costly maintenance" and instead allow them "to support other high impact projects, acquisitions and modernization programs." The plan to ditch Navy's legacy ships was put on hold in 2020 as the anticipated acquisition of new vessels was disrupted by the COVID-19 pandemic. The Navy is set to commission its second brand new frigate, to be christened as BRP Antonio Luna (FF-151), which is missile-capable and one of two procured from South Korea's Hyundai Heavy Industries for P16 billion. Luna and its sister ship BRP Jose Rizal, which joined the naval force in 2020, would be the Navy's most potent warships. The Philippine government is also expected to sign a deal with the Israeli government this month for nine missile-armed boats worth P10 billion. On Thursday (Feb. 11), Defense Secretary Delfin Lorenzana reiterated a long-announced plan to buy offshore patrol vessels and corvettes for the Navy to effectively sustain operations around the vast archipelago. "Hopefully, we can have them already ordered soon. Otherwise we will wait for the next administration to do that," he said.

Source: [inquirer.net](https://www.inquirer.net); 12 February 2021

NAVY EMPLOYED MAXIMUM PERCENTAGE WOMEN AMONG THREE SERVICES

- PTI

New Delhi: The Indian Navy has the maximum percentage of women in its workforce among the three services at 6.5 per cent, according to details provided by the government in Rajya Sabha on Monday. The percentage of women in the Army and the Indian Air Force is 0.56 and 1.08 respectively. In a written reply to a question, Minister of State for Defence Shripad Naik said 6,807 women are employed in the Army while the number of men serving the force is 12,18,036. "There has been an increase in the number of women personnel in the armed forces (excluding medical, dental and nursing cadres) during the year 2020 compared to the figures in the year 2019," he said. The minister said the Indian Air Force has 1.08 per cent women officers excluding those serving in the medical and dental wings. The number of women and men in the IAF is 1,607 and 1,46,727 respectively.

In case of the Indian Navy, the percentage of women officers is 6.5. The number of women serving the Navy is 704 while the strength of men in the force is 10,108, according to the details furnished by the minister. The figure is in respect of women officers only as women are inducted at officer level at present, the reply mentioned, referring to the Navy. "In addition to the provision of permanent commission to women officers in Judge Advocate General and Army Education Corps, the government of India has recently announced Grant of permanent commission to women officers in all other Arms/services in which they are eligible for commission," Naik said. Further, the government of India has sanctioned 1700 women in the Military Police Corps in a phased manner, he added. "The Indian Air Force undertakes various induction publicity measures to encourage youth including women to join IAF," he said. Naik said women have been employed as officers in Indian Navy since 1992 wherein only three streams were available to them namely law, education and logistics. However, over a period of time, a number of other avenues have been opened for women which include positions like observers for maritime reconnaissance aircraft, pilots and avenues in the naval armament inspectorate, he said. Replying to a separate question, Naik said the number of suicide cases in the Army has been going down due to a large number of measures initiated by the force. "The number of suicide cases in the Army has been going down due to a large number of measures initiated by the Army including conduct and implementation of recommendations of studies by Defence Institute of Psychological Research. Instances of fratricide are also not on the rise," he added. He said the steps taken by the Army include employment of trained psychological counselors, improvement in the quality of living, food and clothing, training in stress management and provision of recreational facilities.

Source: [NDTV](#); 09 February 2021

A GUIDE TO CHINA'S UNPRECEDENTED NAVAL SHIPBUILDING DRIVE

- Andrew S. Erickson

Sometime between 2015 and 2020, China's Navy crossed a critical threshold: it fielded more battle force ships than the U.S. Navy, making it the world's largest navy numerically. Today, at around 360 hulls, it exceeds its American rival by more than sixty warships. The gap continues to grow rapidly. And China has two other fleets subordinated to its armed forces: the Coast Guard and Maritime Militia. In total: three sea forces, each the world's largest numerically, that total over 700 ships even by conservative accounting. Powering all China's seapower buildup, unprecedented in recent history, is the world's largest shipbuilding industry. By funding facilities and training, employing, and rotating workers, Chinese commercial shipbuilding subsidizes and supports military shipbuilding efforts. This is the culmination of a decades-long effort to pursue disciplined, evolving maritime strategy according to a strict hierarchy of priorities. In doing so, Beijing has gone from playing a bad hand relatively well to a good hand extremely well. This tsunami of Chinese shipbuilding has tremendous potential implications for the PRC's effort to coercively envelop Taiwan, resolve other sovereignty disputes in its favor, carve out the region as zone of exceptionalism to international rules and norms, and project Beijing's power and influence around the world. More broadly still, it offers modern history's sole example of a "land" power successfully becoming a "sea" power and sustaining that status over time.

The last six centuries have seen law- and commerce- promoting sea powers develop an open global maritime order. Continental authoritarian empires, most recently the Soviet Union, periodically went to sea to challenge this process but ultimately could not afford to sustain the effort. Now China is combining authoritarianism and economic dynamism in a new way. Much is at stake, including some of the most fundamental issues that people have come to take for granted. The sources excerpted and linked below offer insights into the PRC military shipbuilding powering this sea change. Among them, the most comprehensive work published to date is the Naval War College China Maritime Studies Institute (CMSI)-Naval Institute Press (NIP) volume *Chinese Naval Shipbuilding*.

To further chart a course of understanding, the following sources offer specific information on the fleets that Beijing is fielding:

- The CMSI-NIP volume *China Goes to Sea* traces the Middle Kingdom's historic maritime transformation.
- Admiral Mike McDevitt's new book, *China as a Twenty-First-Century Naval Power*, surveys Beijing's unique attributes and position at sea.
- *Advantage at Sea*, the new U.S. Maritime Strategy, offers unprecedented insights on China's sea forces, the challenge they pose, and the need for American countermeasures.

- Modern Chinese Maritime Forces offers a quarterly-updated order of battle detailing all three PRC sea forces with numbers, specifications, and line drawings.
- Ron O'Rourke's Congressional Research Service report on China Naval Modernization details China's first sea force.
- The Ryan Martinson Bookshelf and O'Rourke's report on U.S.-China Strategic Competition in South and East China Seas details China's second sea force.
- The Maritime Militia Bookshelf compiles key information and analysis on China's third sea force.

For more details, please visit <https://www.andrewerickson.com/2021/02/the-chinese-naval-shipbuilding-bookshelf/>.

Dr. Andrew S. Erickson is a professor of strategy in the U.S. Naval War College (NWC)'s China Maritime Studies Institute (CMSI). Erickson is currently a Visiting Scholar in full-time residence at Harvard University's John King Fairbank Center for Chinese Studies, where he has been an Associate in Research since 2008. He is also an Executive Committee member of Israel's Haifa Maritime Center and a life member of the Council on Foreign Relations.

Source: maritime-executive.com; 11 February 2021

SHIPPING, PORTS AND OCEAN ECONOMY

MASK MANDATE FEDERALIZED, EXTENDED ON WATERWAYS

- David Murray

In his first weeks in office, the administration of President Joe Biden hit the ground running, issuing a flurry of executive orders that outpaced those issued by President Donald Trump in his first days. One of those orders, 13998, mandated the wearing of masks on all “public maritime vessels, including ferries” to prevent the further spread of COVID-19. It was quickly followed by an order from the Centers for Disease Control and Prevention, “Requirement for Persons to Wear Masks while On Conveyances and on Transportation Hubs.”

On February 1, the Coast Guard issued Marine Safety Information Bulletin (MSIB) 02-21, “COVID-19 Safety Requirements in the Maritime Transportation System.” The MSIB, signed by Rear Adm. Richard V. Timme, Coast Guard assistant commandant for prevention policy, requires “conveyance operators” to use “best efforts” to require that “any person ensure that any person on the conveyance wears a mask when boarding, disembarking and for the duration of travel.” Operators are required to monitor compliance with mask-wearing, and to remove anyone not complying at the earliest opportunity. The MSIB states, “Vessels that have not implemented the mask requirement may be issued a Captain of the Port order directing the vessel’s movement and operations; repeated failure to impose the mask mandate could result in civil penalties and/or criminal action.” Questions about the MSIB may be sent to the Coast Guard Office of Commercial Vessel Compliance at wearamask@uscg.mil. Since the advent of COVID-19, towing vessels have instituted and operated stringent safety procedures. Basing procedures on guidance from the CDC, they have put in place sanitization and mask-wearing policies and procedures, and quarantined employees exposed to COVID-19. In a February 4 email, the American Waterways Operators told members, “[T]he Coast Guard has reaffirmed to us the agency’s intent to enforce the CDC order in a reasonable and risk-based way to achieve the policy goal of reducing COVID-19 transmission risks while recognizing that there are situations in which mask-wearing is impracticable or unnecessary. We encourage you to review your company’s policies and procedures for mask-wearing to ensure that they effectively mitigate any COVID-19 transmission risks specific to your company’s operations that you have identified.” Del Wilkins, president of Illinois Marine Towing Inc. and vice

chairman of AWO, testified February 9 before the House Subcommittee on Coast Guard and Maritime Transportation on the state of the industry.

“From the beginning of the pandemic,” he said, “the overriding priority of our industry was taking the necessary steps to protect mariners from COVID-19 while keeping vessels in service to protect the continuity of the national supply chain that these mariners support. Industry best practices, based on guidelines issued by the Centers for Disease Control and Prevention (CDC) and the U.S. Coast Guard, were quickly put in place and served as the foundation of our resilience. However, as a result of the heightened prevalence of COVID in the general population, towing companies are seeing increased incidences of exposure and infection off the job, which keeps mariners and other front-line maritime transportation workers from reporting to work. We are working hard to avoid disruption to regular vessel operations that affect the marine transportation system and the Americans that rely on it, but there’s no question that the task is more challenging than it has been at any point since the pandemic began.”

Vaccine Priority

Wilkins proposed that mariners, as recognized essential workers, be given priority for COVID-19 vaccines equivalent to that assigned to health care workers. He urged the CDC to provide clear direction to states, which control the distribution of vaccines, on giving maritime workers priority. “To be clear, we’re not asking to cut the line,” Wilkins said. “We’re asking to work with you and the administration to ensure the timely and efficient immunization of a relatively small segment of the country’s frontline essential workforce that has an outsize impact on our economy and security.”

Source: [The Waterways Journal Weekly](#); 12 February 2021

WORLD’S FIRST ‘CARBON-NEUTRAL OIL’ SHIPPED TO INDIA

- Sam Chambers

Oxy Low Carbon Ventures (OLCV), a division of Occidental, has provided details of what it claims is the world’s first shipment of carbon-neutral. On January 28, 2m barrels of oil was delivered by Pantheon’s Sea Pearl VLCC to Reliance Industries in India. This transaction, which was arranged in conjunction with Macquarie, is believed to be the energy industry’s first major petroleum shipment for which greenhouse gas (GHG) emissions associated with the entire crude lifecycle, well head through combustion of end products, have been offset.

“This transaction is a first step in the creation of a new market for climate-differentiated crude oil,” OLCV stated in a release. It also serves as a bridge to the development of a further differentiated petroleum product, net-zero oil, which Occidental intends to eventually produce through the capture and sequestration of atmospheric CO₂ via industrial-scale direct air capture (DAC) facilities and geological sequestration. The oil was produced in the US Permian Basin by Occidental and

delivered to Reliance in India. Macquarie arranged and structured the bundled offset supply and retirement. The offsets were sourced from a variety of projects verified under the Verra Verified Carbon Standard meeting eligibility criteria for the UN's International Civil Aviation Organization's Carbon Offsetting and Reduction Scheme for International Aviation (CORSA). The volume of offsets applied against the cargo are sufficient to cover the expected GHG emissions from the entire crude lifecycle including oil extraction, transport, storage, shipping, refining, subsequent use, and combustion.

Occidental was the first US-based international energy company to announce an ambition to achieve net-zero GHG emissions associated with the use of its products by 2050. In 2019, OLCV made an investment in Carbon Engineering's Direct Air Capture (DAC) technology and announced plans, through its development company 1PointFive, to proceed with engineering the world's largest DAC and sequestration plant. OLCV expects net-zero oil from DAC to be available to customers in 2024.

Source: [splash 247.com](https://www.splash247.com); 02 February 2021

THALGO SPONSORS PIONEERING OCEAN-CLEANING SHIP POWERED BY RENEWABLE ENERGY

- Megan Whitby

French marine skincare brand Thalgo has announced a partnership with The SeaCleaners, a sustainability organisation passionate about combatting ocean pollution and reducing plastic waste. SeaCleaners is in the process of realising a revolutionary ship called the Manta, designed to collect, compact and recycle marine pollution with a minimal environmental footprint. Manta will become the first seagoing vessel capable of collecting and treating a constant flow of plastic macro-waste floating on the ocean surface, via a pioneering onboard factory. Thanks to the support of a host of sponsors including Thalgo, ship construction will begin in 2022 and be completed in 2024. Founded in 2016, SeaCleaners is the brain-child of Franco-Swiss explorer and environmentally active sailor, Yvan Bourgnon. Bourgnon is passionate about protecting the oceans and states that SeaCleaners' aim "is to fight on both land and sea through corrective preventive missions" to minimise marine plastic pollution. The 55-metre ship will be energy self-sufficient and fuelled by a combination of hydropower and solar and wind energy. Bourgnon explained that when there's not enough sun or wind, fuel will even be generated by pyrolysis – the process of converting plastic waste into energy.

In 2021, SeaCleaners also plans to launch two small-sized collector boats will be tested for use in shallow waters in either a calm port and river area or coastal waters. Thalgo's collaboration with SeaCleaners exemplifies its dedication to creating responsible blue beauty products, all while protecting the sea and its precious biodiversity. Marian

Harvey, Thalgo's UK MD, said: "Thalgo was born of the oceans and has always been involved in protecting the environment and the ocean depths – we're so excited to announce this exciting partnership." As part of the new commitment, Thalgo will extend support to drive SeaCleaners wider three-fold sustainability action plan, including The Manta. This strategy involves both companies working together to conduct vast waste collection operations on marine coastlines, river shores, beaches and riverbanks, and actively raise awareness of plastic pollution via campaigns and educational toolkits.

Source: spabusiness.com; 11 February 2021

INDIA'S DEEP OCEAN MISSION: PUTTING MONEY IN THE TRENCHES

- Sulagna Chattopadhyay

With the highest priority being accorded to a manned mission plummeting to 6,000-m below the uncharted depths of the Indian Ocean, India's Deep Ocean Mission unequivocally seems well on its way to glory. A Rs 4,000 crore allocation over a five year period, as outlined in the FY22 Budget, would certainly help innovate better, doing away with the technological roadblocks that are holding back the nation's brave hearts waiting to dive down. India's Deep Ocean Mission is of course more than just an underwater manned mission. As outlined in Report 332 of Parliamentary S&T Standing Committee (March-2020), the Deep Ocean Mission framework entails the inclusion of six broad components. The first outlines the development of technologies for underwater vehicles and robotics to assist deep-sea mining. Some of the major resources ocean floors offer are polymetallic nodules, cobalt-rich manganese crust, hydrothermal deposits and gas hydrates. Of these, only gas hydrates are found in India's exclusive economic zone (EEZ) in mineable quantities in the order of ~950 trillion cubic m. The second involves ocean climate advisories that envisage to determine the extent ocean-atmosphere coupling influence the climate of the sub-continent. With the unprecedented warming of the oceanic waters, nuanced research and data management are required. At present, oceanic data is managed by the Indian National Centre for Ocean Information Services (INCOIS) through its Digital Ocean and allied frameworks. The third component includes research on deep-sea biodiversity, an area of work that has made little headway till now. The list of Deep Ocean Mission activities continues with deep ocean survey and exploration, energy and freshwater from the ocean, with the establishment of an advanced marine biology station at Goa completing the spectrum of envisaged exploits.

To ensconce three humans in a 4.1 m diameter titanium sphere with a comfortable air pressure of 1 atmosphere (atm) amidst 600 atm oceanic waters, India will now need to earnestly ready itself. The manned expedition Samudrayan is a collaborative project across institutes-the pressure capsule of Matsya 6000 being developed by Indian Space Research Organisation (ISRO) and the intricate workings of the vehicle by National Institute of Ocean Technology (NIOT). Likely to be certified by Norway's DNV-GL, Matsya's deepwater trials are to commence in 2024. This project's success

would catapult India into the ranks of US, Russia, France, Japan, and China. The budgetary outlay for the Deep Ocean Mission, pending for almost half a decade, finding sudden credence above many other critical concerns in the current context, perhaps does not bear any relation to China's successful dive of 10,000 m into the Mariana Trench in the winter of 2020. The rising crescendo of China's deep-sea manned expedition, the first of which was successfully commissioned way back in 2012, seems to be just a mere coincidence. The Chennai-based NIOT in just three years since its establishment in 1993, devised a remotely operable deepwater crawler to test mine the seafloor at a depth of 410 m off the coast of India. The crawler was to explore 75,000 sq km seafloor allocated in the Central Indian Ocean Basin (CIOB) by the International Sea Bed Authority (ISA), the United Nations in 1987 for polymetallic nodules. Consequent decades saw the addition of a collector, crusher and a flexible riser to pump polymetallic nodules to the surface-tested at a depth of 3,400 m in the Bay of Bengal as late as 2019.

Although the crawler is yet to access the 5,50m seafloor in the CIOB in an indeterminate timeframe, being abandoned on-site a couple of times due to volatile sea conditions, there are to NIOT's credit two remotely operable vehicles that have seen operational success. The first is the soil tester, the deepest ever Indian probe that additionally managed to relay photographs of the CIOB seafloor, and second is the Rosub 6000. The latter completed its field trials in the depths of CIOB way back in 2010 and helped collect samples of the polymetallic nodule and hydrothermal sulphides, apart from gas hydrates off India's EEZ. The allocation of Rs 4,000 crore against the required Rs 6,687.5 crore, for the Deep Ocean Mission that was outlined by the ministry of earth sciences (MoES) last year is a welcome addition to up India's research needs. Downsizing two elements of the Mission, the Ocean Thermal Energy Conversion (OTEC) component, and the ocean climate advisory unit, the budgetary requirement for the Mission was honed to address the technological aspects of deep-sea mining. Although the mission entails a sizeable enhancement of MoES's profile, its intended need in this hour raises a few questions.

MoES's argument that India is falling behind in ocean research and that countries such as the US and Japan are not very forthcoming in sharing their technology rouses India's drive to better science. However, unconfirmed reports point towards the thwarting of Russia's lowest technology transfer bid about five years ago. For about Rs 350 crore the Russians were willing to share the know-how to enable manned missions, learning from which would have not only saved India time but also its precious resources. Robotics and crawler deployment in the CIOB can help build India's technical capacity to commercially mine polymetallic nodules in the future. With the CIOB being granted for exploration for an initial 15 year period, followed by a five-year extension ending in 2022 it is likely that once ISA's comprehensive draft exploitation regulations are formalised, India may get an opportunity to even mine the region. While there may be a long pause before ISA issues a mining license to India, the more readily available gas hydrates within the Krishna-Godavari basin under the Bay of Bengal, capable of making India energy secure, seem to have been largely relegated to the background.

Scientists cite technological hurdles in gas hydrate extractions with their beds lying about 200 m below the seabed, not to mention that they see little role for themselves

in a fuel-driven discourse. In fact, MoES has been distancing itself from the gas hydrate programme for over a decade now, evident from the closure of the DST-MOES Indo-Russian gas hydrate centre way back in 2013 at NIOT. Although Russia (Lake Baikal region) and Japan (Nankai Trough seabed) have been able to generate fuel from the gas hydrate, India National Gas Hydrate Programme, under the Directorate General of Hydrocarbons (DGH) is still at a nascent exploratory stage with only a fair degree of mapping to its credit. Despite an extensive deposit of gas hydrates in the Krishna-Godavari basin, the resource remains unlinked to the Deep Ocean Mission. Amidst this technology-driven Mission framework for prioritising mineral exploration through manned and unmanned robotics, stands the anomaly of establishing an advanced marine biology station at Goa. Reportedly located in ONGC's Cabo De Rama campus, the centre has even forged a collaboration with Centre national de la recherche scientifique (CNRS) France. The first three-year phase of the Mission starting 2021 outlines the need to prepare a repository for deep-sea fauna DNA among five other activities. This dilution is baffling and mandates further review. It is perhaps also important to explore why the Deep Ocean Mission has not addressed the need for satellite deployment for India's data buoys placed in international waters to study ocean parameters for climate studies. As of now these buoys are uplinked to foreign satellites, such as the Advanced Research and Global Observation Satellite (ARGOS), Inmarsat and Iridium, and suffer data compatibility issues with buoys located in the Indian waters and uplinked to ISRO's INSAT.

In a paper published by NIOT scientists, crewed underwater vehicles are envisaged to make oceans habitable, with the immediate spin-off of enabling tourism and ocean literacy. An Atlantis-Varuna ocean residency is enigmatic no doubt, but whether it will lead to realtime industry and employment generating activities beyond research, remains in question. Finally, all the Deep Ocean Mission seems to offer is an amplification of all its former activities with the formal onboarding of Defence Research and Development Organisation (DRDO), Department of Biotechnology (DBT), Indian Space Research Organisation (ISRO), Council for Scientific and Industrial Research (CSIR). Pivoted through NIOT, the showstopper of the Mission is likely to be the Matsya 6000, provided the fund flow remains smooth.

Author is President, SaGHAA, a think tank working on Polar issues

Source: [Financial Express](#); 08 February 2021

MARINE ENVIRONMENT

UTTARAKHAND TRAGEDY | CLIMATE CHANGE AND ITS IMPERATIVES FOR ENERGY SECURITY

- Shresth Tayal

On February 7, Uttarakhand faced a flash flood impacting the life and infrastructure of the state. The immediate cause for the flooding is considered to be the breakage of a glacier or a glacier lake bursting in the upper catchment of the Himalayas. A scientific investigation will be required to understand the cause of such an event; however, the role of global warming-induced climate change and environmental degradation is the major precursor in occurrence as well as increase in frequency of such events. The rate of warming of the Himalayan region is reported to be higher than the global average and the temperature is projected to increase further in the range of 1-3°C by mid-century. The Indian Meteorological Department (IMD), based on data from 1951 to 2010, has reported an increase in warming over the central and eastern parts of the Himalayas.

Almost 7.7 percent of global glacierised area is present in South Asia supporting close to 10 percent of the global population by providing water during the lean season through snow and ice melt. According to the Geological Survey of India, there are 9,575 glaciers in the Indian Himalayas distributed among the three river basins – Indus, Ganga and Brahmaputra. However, more than 90 percent of Indian glaciers are small to very small in size – being smaller than 5 km in length and smaller than 5 sqkm in area. Most of them are smaller than 1 sq km. Only a few glaciers such as Siachen, Gangotri and Zemu are bigger than 10 sq km. The Intergovernmental Panel on Climate Change (IPCC), in its 2014 report, mentioned that while smaller glaciers are more vulnerable to impacts of climate change and are bound to disappear, larger glaciers will continue to hold ice but will be shrinking for the next few decades even if the temperature stabilises in the near future. The Himalayan glaciers are also vulnerable due to their geographical setting. These glaciers are located close to the tropics at low latitudes, on the southern facing slopes of the Himalayas and so there is a natural build-up of high heat content in this region.

Thus, the occurrences of flash floods are bound to increase in the near future because of the rise in temperature over the Himalayas, the higher sensitivity of smaller glaciers, and other geographical factors. These flash floods had catastrophic effects on the hydropower dams being constructed in the region and have fuelled the debate about the construction of such projects in the Himalayas. While 81 percent of the total hydropower potential in India is existing in the rivers flowing from Himalayan glaciers, only 29 percent of this potential has either been developed or is under

construction. Once developed to its full potential, an additional 80,000 MW will be available to the country. Considering the significance of hydropower projects for the local economy, as well as the country's energy security, a decision for stopping the development of dams in the region may not be easy. Also, tourism is the backbone of economy in the Himalayan states, and the influx of tourists as well as the construction of related infrastructure may not be stopped. Hence, it is necessary to find alternative pathways which may ensure sustainable development, along with the ecological balance of the region.

The Way Forward

Lakes associated with the melting and retreat of glaciers has been considered to be possessing significant hazard potential, owing to the sudden breach of natural embankments of these lakes. The flood potential of these lakes could have significant impact on the infrastructure downstream. It is necessary to develop a vulnerability map of the Himalayas, similar to the seismic zonation map of the country, and categorise different river valleys based on the degree of vulnerability to such disasters. Subsequently, zone-specific strategies need to be adopted for better adaptation of communities, as well as infrastructure. The cost required for such a study would be much less than the expenditure incurred in relief and rehabilitation expenditure incurred subsequent to such a tragedy.

Further, an environmental impact assessment (EIA) is a pre-requisite for the clearance of hydro-power projects from the government. But, the EIA conducted by the hydropower companies are mainly focussed on the likely impacts due to the installation of the dam on the downstream communities. These projects should also make a comprehensive assessment of the impacts due to climate and vulnerability to glaciers upstream. This is important for the projects located in the Himalayas. Natural calamities cannot be controlled, but we can better adapt our communities, our constructions, and our resources balancing the economic growth with environmental conservation.

Source: moneycontrol.com; 12 February 2021

RECOMMENDATIONS FOR REGIONAL ACTION TO COMBAT MARINE PLASTIC POLLUTION

- Institute for Advanced Sustainability Studies e.V. (IASS)

Millions of tons of plastic waste find their way into the ocean every year. A team of researchers from the Institute for Advanced Sustainability Studies (IASS) in Potsdam has investigated the role of regional ocean governance in the fight against marine plastic pollution, highlighting why regional marine governance should be further strengthened as negotiations for a new global agreement continue. In recent years, images of whales and sea turtles starving to death after ingesting plastic waste or becoming entangled in so-called ghost nets have led to a growing awareness of the crisis of marine plastic pollution. The total number of plastic bags, fishing equipment, disposable bottles and other plastic items currently in the ocean is unknown. However,

studies show that plastic waste has become ubiquitous, from the Arctic to the Antarctic, from the surface to the bottom of the deep sea. It comes in all shapes and sizes—from vast fishing nets to tiny particles of microplastic.

Various agreements have been reached at the national, regional and global levels to tackle the issue. However, these measures have failed to effectively address the challenges around marine plastic pollution, write the authors of the new report published by the IASS—"Stronger together: The role of regional instruments in strengthening global governance of marine plastic pollution." More comprehensive measures and systemic changes are urgently needed to reduce and prevent marine plastic pollution. The issue is all the more urgent as the amount of plastic manufactured globally is expected to double in the next ten to fifteen years.

The challenges

According to the report, the key challenges for the further development of existing initiatives to combat plastic waste in marine regions such as the Baltic Sea, the Pacific or the Caribbean include:

1) a great variation in the level of implementation of measures to address plastic pollution, 2) large differences in the monitoring and assessment of relevant data, 3) deficits in the implementation of multi-stakeholder approaches, and 4) a widespread lack of engagement with the private sector.

Improving private sector engagement and data collection

According to the report, private sector engagement is crucial to reducing the flow of plastic waste into the sea. The authors recommend that regional working groups be established to foster cooperation. "Working groups would provide a forum for organizations that are committed to marine conservation to engage with private companies and discuss how the discharge of plastic waste into the sea can be prevented by, for example, using alternative materials in manufacturing or improving waste management systems," says IASS researcher and lead author Nicole Wienrich. Measures should be tailored towards establishing a circular economy with a waste hierarchy based on the principle of "Reduce, Reuse, Recycle." A global agreement could establish common goals and minimum standards.

The report also highlights the need to improve data collection around marine plastic pollution. Various organizations maintain records on the extent of plastic waste flows into the ocean. "The lack of common standards and methods for data collection makes it difficult to draw comparisons across data sets and reduces their utility," explains IASS researcher Laura Weiland, who contributed to the study. Regular and long-term monitoring would be necessary to detect differences in the nature and volume of plastic waste flows. Only then could organizations determine whether measures are successful and have the desired effect. A global agreement to address the issue of marine plastic pollution could establish a common framework for data collection and assessment.

Innovative methods should be used to collect data on marine plastic pollution. Citizen science projects involving local populations could also help to collect the necessary data. In addition, drones, unmanned aircraft and satellite images could all be used to

simplify data collection and provide insights on waste volumes on remote areas such as the high seas.

Regional initiatives complement future global agreement

Regional organizations provide a vital opportunity to address the issue of marine plastic pollution at the ecosystem level. They can also facilitate the development and implementation of solutions that are tailored to address the challenges, needs and characteristic features of different regions and affected countries. They also create opportunities to exceed the standards set by a new global agreement with ambitious regional agreements which can inspire further action around the world. As negotiations for a global agreement continue, the team of authors recommends that regional cooperation to prevent marine plastic pollution be strengthened further—not least because these negotiations could well continue for several years. "We can't wait that long and simply accept the status quo—this problem is too big and too urgent," says Sebastian Unger, Research Group Leader at the IASS.

Source: phys.org; 11 February 2021

AGGRESSIVE CANCER IN SEA LIONS LINKED TO OCEAN POLLUTION AND HERPESVIRUS PRECURSOR, IMPLICATIONS FOR HUMAN HEALTH

California sea lions (*Zalophus californianus*) are experiencing high rates of urogenital carcinoma (UGC) cancer incidences from the combined effect of toxic “legacy” pesticides like DDT and the viral infection Otarine herpesvirus-1 (OthV1), according to a new study published in *Frontiers in Marine Science*. Previous research documents the role herpesvirus infection, genotype, and organochlorine pesticides play in sea lion cancer development. However, synergism (collaboration) between viral infection and toxic chemical exposure increases cancer development odds. Pollution of the oceans with toxic chemicals lacks adequate regulation, is widespread and only getting worse. More than 80 percent of ocean pollution comes from land-based, anthropological activities. A recent study published in *Annals of Public Health* finds toxic chemicals from pesticides, heavy metals, plastics, and other sources readily contaminate the ocean, especially near coastal regions where chemical inputs occur in higher concentrations.

Globally, pollution has major disease implications, causing the deaths of over nine million people annually. Therefore, it is essential to understand the co-effects of ocean pollution and diseases to protect human health. Authors of the study state, “This study has implications for human health, as virally associated cancer occurs in humans, and likelihood of cancer development could similarly be increased by exposure to environmental contaminants. Efforts to prevent ecosystem contamination with persistent organic pollutants must be improved to protect both wildlife and human health.” Scientists in this study assessed cancer incidences among 394 California sea

lions for 20 years. Using a stepwise regression model, scientists find herpesvirus condition, exposure to contaminants, and blubber depth aid in UGC cancer development, but not the genotype. The risk of developing UGC is nearly 44 times higher in sea lions with herpesvirus infections. Furthermore, UGC risk increases 1.48-fold per every unit of contaminant concentration within blubber.

The oceans are essential to human health and well-being, feeding billions, supporting millions of jobs, and support medicinal materials. However, environmental contaminants like pesticides have on profound impact on the ecosystem. Pesticides expose terrestrial and marine organisms to toxic compounds known to have harmful biological consequences. A 2014 study finds a 45 percent decline in invertebrate species and a steep decline in various marine bird species from water contamination. Additionally, coastal and offshore aquaculture (farming of aquatic organisms) presents a new, looming threat to marine health. Namely, the use of antibiotics and pesticides on local marine ecosystems (i.e., insecticides to control sea lice in farmed salmon) results in coastal habitat loss and genetic and health risks to wild marine populations. Marine species biodiversity is already rapidly declining due to overfishing, global warming, pathogens, and pollution. This biodiversity loss may result in changes in marine and terrestrial ecosystem function and reduce ecosystem services.

Like marine invertebrates and birds, many marine mammals demonstrate signs of chemical poisonings, especially from persistent organic pollutants (POPs) like DDT and polychlorinated biphenyls (PCBs). Studies find dolphins can harbor high concentrations of organochlorine compounds in their brain tissue. However, POPs are not the only chemicals that contaminate marine mammal species. A recent study finds bottlenose dolphins and pygmy sperm whales along the eastern seaboard contain high levels of triclosan, BPA, and low levels of atrazine. All three chemicals display endocrine (hormonal) disrupting properties in a range of animals, including mammals, even at infinitesimally low levels. A 2018 study finds detectable levels of toxic industrial byproducts like “inert” ingredients from pesticide products in bottlenose dolphins inhabiting the Gulf of Mexico. Furthermore, there is growing concern over organophosphorus compounds in flame retardants and pesticides. According to a 2018 study, marine mammals may lack the functioning of a gene that helps terrestrial animals break down certain toxic chemicals. Therefore, manatees, dolphins, and other mammals may display heightened sensitivity to pesticides, particularly neurotoxic organophosphates.

This California-based study finds cancer incidents among sea lions are the highest of all mammals, including humans, with UGC emerging in 18 to 23 percent of California sea lions. Cancer is rare in wild animals. Therefore, it is essential to recognize the drivers of disease progression and fruition. California sea lions inhabit coastal areas prone to more frequent pollution inputs. The Los Angeles coast was a dumping ground for persistent chemicals like DDT, boasting an astounding half a million barrels of DDT waste on the ocean floor. Although officials designated coastal Superfund sites—a federally designated area of hazardous waste—for DDT dumping, some DDT waste disposers took shortcuts by unloading barrels near the coast or puncturing floating barrels. DDT is a stable chemical, taking generations to breakdown, and readily bioaccumulating in sediment and marine organism tissues. Many scientists blame the

leaking of DDT into the surrounding waters on the increase in mysterious diseases among marine species. Since humans and sea lions live in similar habitats, using the same contaminated waters for swimming and acquiring food, the prevalence of cancer has implications for human health.

The impact of chemical contamination on sea lion health, notably in conjunction with disease susceptibility, highlights the need to identify ocean pollution sources to establish regulations that mitigate adverse effects. Although now-banned DDT is an ever-persistent ocean pollution issue, other forms of ocean pollution are not as stark as direct chemical contamination. In the report, “Human Health and Ocean Pollution,” scientists find indirect chemical contamination from microplastics and runoff, in addition to the synergy among climate effects and ocean pollution, all threaten marine species’ health and ecosystem function. Microplastics can leach toxic additives into the water and absorb other toxins within the water, poisoning organisms that encounter these substances via ingestion or dermal absorption. Many of these additives have endocrine-disrupting impacts, causing reproductive and neurological dysfunction spanning generations. Pesticide runoff from agriculture or manufacturing plants—due to rain or improper wastewater disposal—can deplete global fish populations as chemicals bioaccumulate up the food chain. Furthermore, this nutrient-rich runoff can increase the frequency and severity of harmful algal blooms known to have neurotoxic effects on humans and animals. However, most concerning is the threat of antimicrobial resistance and bacterial pollution. Sea surface warming from global warming and pollution are beginning to trigger poleward migration of hazardous foodborne pathogens such as *Vibrio vulnificus*, responsible for 95 percent of seafood-related deaths in the United States. According to the ocean pollution report, global chemical manufacturing is on the rise, and researchers expect manufacturing to double by 2045. However, health and environmental protections from chemical pollution and waste disposal are often insufficient, particularly in low- and middle-income countries where over 60 percent of modern chemical production resides. Since all oceans connect, and oceanic biogeochemical cycling allows substances to transverse ocean basins, these toxic chemicals will eventually spread throughout the marine environment. Overall, authors of California sea lion study conclude, “Protecting the planet is a global concern and our collective responsibility. World leaders who recognize the gravity of ocean pollution, acknowledge its growing dangers, engage civil society, and take bold, evidence-based action to stop pollution at source will be essential for preventing ocean pollution and safeguarding our own health.”

Chemical contamination is ubiquitous in terrestrial and marine environments. Therefore, mammals and other animals can act as sentinel species for chemical contamination, detecting risk to humans by exhibiting signs of environmental threat sooner than humans in the same environment. Unless more is done to address chemical pollution, humans will also continue to see similar declines in general health, fitness, and well-being. Furthermore, climate crisis implications like melting glaciers present a new concern over the high levels of chemical concentrations in the oceans from DDT, its metabolites, and other persistent organic pollutants, including PCBs and PBDEs trapped in ice. To protect the nation’s and world’s waterways and reduce the number of pesticides that make their way into drinking water, toxic pesticide use must end. Replacing pesticides with organic, non-toxic alternatives is crucial for safeguarding public health, particularly communities vulnerable to pesticide toxicity.

Learn more about the hazards pesticides pose to wildlife and what you can do through Beyond Pesticides' wildlife program page.

All unattributed positions and opinions in this piece are those of Beyond Pesticides.

Source: [The Conversation, Frontiers in Marine Science, Annals of Public Health](#); 11 February 2021

HOW MICROPLASTICS IN THE SOIL CONTRIBUTE TO ENVIRONMENTAL POLLUTION

- Incheon National University

Plastic, with its unabated global production, is a major and persistent contributor to environmental pollution. In fact, the accumulation of plastic debris in our environment is only expected to increase in the future. "Microplastics" (MP)—plastic debris <5 mm in size—are particularly problematic in this regard, owing to how easily they can be ingested by marine organisms and eventually find their way to humans. But, it is not just the marine environment that contains MP debris. Studies on agricultural soil have revealed that MPs adversely affect not only the soil quality but also the physiology of soil organisms and, in turn, the interaction between soil and plants. Still, because most studies on MPs have focused on marine environments, it is not clear how abundant MPs are in different types of soils based on the agricultural practice (a source of MP) employed. Moreover, it remains to be determined whether only external sources of MP (sewage, wastewater, and runoff water due to rain) are responsible for the soil pollution.

Scientists from Incheon National University, Korea, headed by Prof. Seung-Kyu Kim, now explore these questions in their latest study published in *Journal of Hazardous Materials*. "Most studies on MPs have focused on the marine environment, but substantial amounts of MPs can be generated in the agricultural environment via weathering and fragmentation of plastic products used in agricultural practices. We hoped to find out the amount of MPs in Korean agricultural soils and how they change according to different agricultural practices and environmental conditions," says Prof. Kim. For their study, the scientists examined four soil types corresponding to different agricultural practices: soils from outside and inside a greenhouse (GS-out and GS-in, respectively), mulching (MS), and rice field soil (RS). Of these, the former three samples represented the use of polyethylene film, while the RS sample represented little to no use of plastic. To minimize the effect of non-agricultural sources of MP, scientists collected the samples from rural farmlands during the dry season. They only considered MPs in the size range of 0.1-5 and classified them as per their shapes: fragment (uneven), sheet (thin an even), spherule (round), and fiber (thread-like).

As expected, scientists found the highest average MP abundance in GS-in and GS-out (GS-in > GS-out), but surprisingly, they found the lowest MP content in MS rather

than RS. Further, they found that among the different shapes of MPs, fragments dominated GS-in; fibers, GS-out and MS; and sheets, RS. Interestingly, all soils except GS-in had a major contribution from sheets, which hinted towards potential internal sources of fragment-type MPs within greenhouses. Scientists also observed an interesting trend regarding MP size distribution in the soil samples. They found that, unlike GS-out, MS, and RS (which showed MP abundance only for a range of sizes), GS-in showed an increasing abundance for progressively smaller sizes. They attributed this to the absence of "environmental fate effect," causing the removal of MPs by surface-runoff, infiltration, and wind in the GS-in samples. Prof. Kim explains, "Contrary to previous studies which stress on MPs originating mostly from external sources, our study reveals that MPs in agricultural soil can come from external as well as internal sources, and that their concentration and sizes can be strongly affected by environmental conditions,"

These findings can contribute to an enhanced understanding of the role of agricultural environment as an MP source. Hopefully, assessing potential risks of MPs in agricultural soils and establishing efficient management strategies can help us to reduce the threat from MPs.

Source: phys.org; 12 February 2021

BANKS' LATEST GREEN BATTLE: PLASTICS POLLUTION

- Laura Alix

Banks have felt pressure in recent years from investors and environmental groups to curtail their financing of fossil fuel exploration. Now some of those groups are urging lenders to reexamine their relationship with the plastics industry. Banks' financing of the largest actors in the plastics supply chain — without any sustainability criteria attached — makes them partly responsible for the tons of water bottles and other packaging cluttering the globe, an environmental coalition charged in a January report. The group, called Portfolio Earth, named Bank of America, Citigroup and JPMorgan as the three largest financiers of plastic in the world.

"By indiscriminately funding actors in the plastics supply chain, banks have failed to acknowledge their role in enabling global plastic pollution," the coalition wrote. "They have fallen far behind other [corporate] actors that contribute to the plastic pollution crisis." The publication of the paper, "Bankrolling Plastic," is a sign that banks are being pulled into another raging societal debate over the environment and other matters. And it raises questions about how many more issues will follow, how many causes banks can and should be held accountable for, and whether there is any way for them to get ahead of these controversies. "Climate change is still one of the top issues, but now banks are supposed to look at plastic footprints and forestry footprints," said Alexandra Mihailescu Cichon, executive vice president at RepRisk, a data science firm specializing in environmental, social and governance issues in banking. "It's hard to know where to shift your focus." Two hundred sixty-five global banks provided more

than \$1.7 trillion in financing — either through loans or by underwriting stock and bond issuances — to key players in the plastics industry between January 2015 and September 2020, according to the Portfolio Earth report. The customers were 40 companies that either make, or use for their products, the bulk of the world’s single-use plastic packaging. More than 80% of the financing came from 20 companies. Three of the banks on that list — BofA, Citi and HSBC — were contacted for this story and didn’t respond or declined to make an executive available for interview.

Environmental activists and some ESG-minded investors say that there’s a strong argument for banks to consider plastic pollution a crisis on par with climate change. “It’s an easy one to say that plastic deserves attention because the arguments are financial, environmental and social,” said Jonas Kron, chief advocacy officer of the socially responsible investment firm Trillium Asset Management. Plastic waste has accumulated in virtually every corner of the world, largely thanks to single-use packaging of consumer goods. It kills marine birds and animals, and a garbage patch in the Pacific Ocean has now grown to a surface area twice the size of Texas. Microplastics have made their way into the food supply, too. While consumers are increasingly concerned about plastic pollution, they also have few options to avoid or recycle it. Less than 9%, or about 3 million tons, of plastic waste generated in 2018 was actually recycled, while 27 million tons wound up in landfills, according to the Environmental Protection Agency. That plastic will take hundreds of years or longer to decompose on its own, and in the meantime it carries serious financial costs for businesses and societies. Governments pay a lot of money to clean it up. Landfills can be expensive to maintain, and they require space that could otherwise be put to more productive use. Plastics pollution can hurt revenue for businesses like fisheries or tourism companies, and it can bring down real estate values in coastal communities.

A 2019 study by Deloitte estimated the direct and indirect costs of marine plastic pollution likely totaled between \$6 billion and \$19 billion across 87 coastal countries in 2018. “It’s a serious problem, particularly in oceans,” said Robin Smale, director of Vivid Economics, a London-based consulting firm. Smale, who audited the Portfolio Earth paper, said that banks’ financing of plastic pollution does give them some ownership of the problem. “If you’re going to tackle that, then you have to address the financial systems’ role in that and not just work at the corporate level or with governments or regulation,” he said. But how many single issues can the banking industry reasonably be expected to address, particularly at a time when banks are already turning away from other sensitive industries, like oil-and-gas exploration, gun manufacturers or private prisons? The answer to that question depends somewhat on a concept called materiality, or how much a given company’s stakeholders care about that company acting on a particular issue. Right now, expectations are fairly low for the banking sector to act on plastic. Outside of the Portfolio Earth report, there’s been little pressure to get involved. When the subject of plastic does come in conversation, investment managers say it’s usually within the context of broader concerns about the ocean and biodiversity.

“Within the banking industry, I really haven’t heard any discussion at all about plastics,” said Mark Fitzgibbon, an analyst at Piper Sandler. However, the next few proxy seasons could offer a preview of what’s to come for banks and other public companies. The nonprofit group As You Sow filed shareholder proposals with 10 major

consumer goods companies, including Target, Walmart and PepsiCo, calling on the firms to reduce their use of plastic packaging. Regulation of single-use plastics could ultimately put more pressure on the banking sector if it makes virgin plastic more expensive for its corporate clients to manufacture. In a research note issued in December, Moody's Investors Service predicted demand for single-use plastics would fall over the next decade, citing the potential for regulation and greater demand for recycled plastics. "There is self-interest for companies to solve this problem," Kron said. "If they don't then governments may tell them how the problem needs to be solved." ESG experts say there's a fundamental problem with asking how many single environmental issues bankers can be expected to address — largely because the question assumes these issues can be neatly sorted into distinct categories. In other words, plastic pollution isn't an entirely separate issue from climate change — particularly since the majority of virgin plastic is sourced from fossil fuels. Still, bankers could gain an advantage by getting a handle on these issues now.

Banks would benefit from approaching issues like plastic as one component of a broader focus on environmental risk management, said Lauren Compere, managing director at Boston Common Asset Management, an environmentally conscious investment firm.

"Banks need to have in place a process to identify emerging risk issues and then strategize around how to develop an approach," Compere said. Blaine Townsend, director of sustainable, responsible and impact investing with the investment management firm Bailard, compared the issue of plastic to that of energy lending. It took a long time to get to the point where big banks started to curtail their financing of fossil-fuel exploration. "We're far behind being able to unpack lending in the plastic supply chains to that same extent or that same level," he said. As with other ESG issues, getting a handle on plastic will also entail gathering a lot of data. Similar to the way that banks are now beginning to measure the carbon impact of their lending activities, they can collect data about the companies and industries they bank to better understand how much plastic they're financing, Cichon said. An entire cottage industry, including companies like RepRisk, has grown up around the need for data to help banks measure ESG risks. "These reports are important as conversation starters and shifting the mindset internally at these organizations, but that takes time until it plays out in their policies and financing decisions," Cichon said.

To be sure, banks have made solid progress in recent years on a host of environmental issues. Some have pledged to scale back their financing of new coal plants or certain types of fossil fuel exploration. Others have carved out niches in financing renewable energy, chiefly solar and wind, and still others have sought to cut down on their own water and energy use. To date, plastic has been largely absent from those environmental efforts, although there are a few examples of banks taking small, initial steps on the issue. For example, water bottle filling stations in its headquarters allowed Citigroup to reduce plastic water bottle usage by about 86,000 per month, though it did not otherwise address plastic in its first ESG report issued last April. And the London-based HSBC also served as an adviser and lead manager on a transaction last year in which a German chemical company issued its own plastic waste reduction bond. Among other steps outlined in its report, Portfolio Earth suggested that banks can start to measure and report on the plastic they may be responsible for financing.

They can also pledge to stop financing the production of virgin plastic and make financing to the industry contingent on meeting certain sustainability benchmarks. The lack of progress on plastics is “not necessarily an indictment” of the banking industry, so much as it is an indication that the issue is still in its infancy, Townsend said. “The bar would be low for a hero in financial services around plastic because really, there’s been no leadership in financial services on financing the supply chain of plastic,” he said.

Source: [American Banker](#); 11 February 2021

GEOPOLITICS

REPORT: TRUST IN US SOARS AMONG SOUTHEAST ASIANS, WANES TOWARD CHINA

Southeast Asian professionals are concerned that Beijing could use its financial and military might to threaten their countries' sovereignty, which is why more of them trust the United States over China to work toward world peace, according to a new report by a Singaporean think-tank. Confidence that the U.S. would be a leader in fostering global peace soared this year from the previous one, while fewer professionals throughout the region now trust China on the issue, according to findings of surveys done by the ASEAN Studies Center at the ISEAS – Yusof Ishak Institute. “The region’s trust deficit in China is trending upwards. China is the only major power that has increased its negative ratings from 60.4 percent in 2020 to 63 percent in 2021,” according “The State of Southeast Asia 2021” report. “China’s predominant economic and political influence in the region has created more awe than affection. ... the majority worry that such economic heft, combined with China’s military power, could be used to threaten their country’s interest and sovereignty,” said the report. The think-tank surveyed more than a 1,000 people in the 10 countries that form the Association of Southeast Asian Nations (ASEAN). The United States, by contrast, has “made a surprising turn-around” in positive ratings in 2021 from the year before – 48.3 percent this year compared with 30.3 percent last year. Those Southeast Asians who trust the U.S. said they believed it had the “political will to provide global leadership” and its military power “is an asset for global peace and security.”

“Have the respondents left behind the past four years of dismal engagement with ASEAN under the Trump presidency and turned more bullish as the Biden administration takes over?” said the report, referring to professionals it surveyed from the across the regional bloc between Nov. 18, 2020 and Jan. 10, 2021. “Only time will tell if the region’s renewed trust in the U.S. is misplaced or not.” The report attributes Joe Biden’s ascendancy to the U.S. presidency for why more of those surveyed welcomed Washington’s strategic influence in their countries compared with last year. “This positive view of the U.S. may well be attributed to the anticipation that the Biden administration will elevate American engagement with the region,” the report said. Concurrently, confidence in America as a provider of regional security also rose because professionals believe the new administration in Washington will turn its focus back to Southeast Asia. “Despite Washington’s perceived growing absence and decreasing influence in the region, 55.4 of the respondents still express confidence in the U.S. as a strategic partner and provider of regional security,” the report said. This marked a more than 20-percentage point increase from last year that “can be

attributed to the general optimism that the new Biden administration will pivot back to Southeast Asia.”

Still, more than three-quarters of those surveyed acknowledged that Beijing has by far the most economic impact on Southeast Asia, the report said, noting that most who believe this worry about the superpower’s growing economic influence. Close to half of those surveyed also see China as the region’s most influential political and strategic power, “which engenders considerable anxiety over Beijing’s strategic clout in the region,” the report said. But a majority of respondents (61.5 percent) said they would pick the United States, when asked which of the two rival superpowers they would align themselves with if forced to do so. “China as a choice dropped from 46.4 percent in 2020 to 38.5 percent in 2021 ... despite intensive COVID-19 diplomacy seen in the region,” the report said. The Institute of Southeast Asian Studies (ISEAS) was established as an autonomous organization by an act of the Singapore Parliament in 1968. It was renamed ISEAS – Yusof Ishak Institute in August 2015, after the first president of Singapore, who was elected by parliament.

Reported by BenarNews, an RFA-affiliated online news service.

Source: [Radio Free Asia](#); 11 February 2021

UKRAINE SIDES WITH US OVER CHINESE TAKEOVER OF ENGINE COMPANY

- Emil Filtenborg and Stefan Weichert

The dispute over the ownership of Ukrainian helicopter and jet engine manufacturer Motor Sich seems to have come to an end after Ukraine’s President Volodymyr Zelenskyy sided with the US instead of China. The case, which according to experts has become a political issue between the two superpowers, could cool the otherwise warm relationship between Ukraine and China, and prevent China from advancing its engine technology in helicopters and jet planes. “The US sees China’s influence in Ukraine and the purchase of the company as a threat,” says Nan Tian, a senior researcher at the Arms and Military Expenditure Programme at Stockholm International Peace Research Institute (SIPRI). He tells Euronews: “It is about power politics from the US perspective, and the engines are just one concern. The US wants to stop China from moving too much to the West.”

China circling Motor Sich

Zelenskyy decided to place three-year sanctions on four Chinese companies said to be close to the Chinese leadership, which started to purchase shares in Motor Sich back in 2015. His security service, the SBU, then broke up a meeting between Chinese and Ukrainian investors, claiming ownership of the Ukrainian engine manufacturer this week. “The issue (about ownership of Motor Sich) is not about China. The issue is not even how Motor Sich’s shares were bought under the former President, under Poroshenko. The issue is that we do not have the right to sell a controlling stake in the

management of strategic defence enterprises of Ukraine to any country...during my presidency, this will not be the case,” said Zelenskyy in an interview with HBO. Zelenskyy’s decision came under pressure from the US, which fears the Chinese purchase of Motor Sich would advance its military capabilities. In 2019, then-US National Security Advisor John Bolton visited Ukraine and had several meetings where Motor Sich is said to have been discussed. A few weeks ago, the then US Commerce Secretary Wilbur Ross also classified Skyrizon, the major Chinese investor company in Motor Sich, as prohibited military end-users. “Skyrizon — a Chinese state-owned company — and its push to acquire and indigenise foreign military technologies pose a significant threat to US national security and foreign policy interests,” said Ross, according to the Ukrainian business site UBN. The Ukrainian SBU says that they are blocking the deal because China has a military helicopter production contract with Russia and, therefore, could share the engine technology with Russia, which annexed the Crimean peninsula in 2014 and later supported separatists in war in eastern Ukraine. Skyrizon said in a statement that Ukraine’s “actions are a barbaric robbery and a serious violation of the legal rights and interests of Chinese companies operating abroad, an unprecedented disrespect for the principles and rules of international trade.” Skyrizon is suing Ukraine for \$3.5 billion for cancelling the deal.

Changing geopolitical equation

The story about Motor Sich began in 2014 when Russia annexed Crimea and the war between Ukraine, and the Russian-backed separatists broke out in Ukraine's east. Suddenly, Motor Sich was, due to the conflict, unable to sell its engines to Russia and was instead facing economic problems. China was looking to advance its engines for its army combat helicopters and was, therefore, interested in Motor Sich. Ukraine was producing a lot of the military hardware for the Soviet Union during the Cold War and still had appealing technology. Ukraine is still the 12th largest weapons exporter in the world, according to SIPRI, and it all made Ukraine an interesting place for China. Skyrizon, with other investors, secured a majority of the shares around 2017. “Russia was not at all interested in providing the assets and technical support that Ukraine could offer the Chinese. The initiative by the PLA (China's People's Liberation Army) to engage Ukrainian industry goes back to the early 1990s. For the simple reason that it was not in Russia’s interest to provide these capabilities to Beijing,” said a leading Ukraine defence industrial director, according to the Middle East Institute.

History of Chinese procurement in Ukraine

Yuan Jiang, who is a Chinese researcher in the Digital Media Research Centre at the Queensland University of Technology, and Vladimir Legenko, who is a Ukrainian researcher and current chief commercial officer at a Ukrainian company, have examined the Motor Sich case and Chinese military procurement in Ukraine over the years. They conclude that Chinese purchases of Ukrainian military hardware have been going on for many years because the collapse of the Soviet Union severely affected Ukraine and made the country short of revenue and willing to sell military technology. According to their research, China bought an unfinished aircraft carrier in Ukraine back in 1998, which became the Chinese aircraft carrier Liaoning. It is estimated that it saved the Chinese navy 15 years of research. Legenko and Jiang also point to other examples such as the Chinese purchase of the Ukrainian UGT-25000 gas turbine in the 1990s, used in warships, and the Chinese purchase of the Ukrainian D136 aircraft

engine and the AI 222-25 engine - which is now used in the PLA Air Force's JL-10 aircraft. "What is happening in Ukraine is similar to what we have seen with Chinese purchases of Russian military equipment. They want to copy the technology and bring it back to China," says Legenko, "After 30 years of copying technologies in Ukraine, there is not much more left for China to acquire at this point."

How can the US pressure Ukraine?

Legenko says that he is in doubt about whether the Chinese investors have already taken the Motor Sich engine technology. He refers to how the Chinese investors already bought shares in Motor Sich back in 2015, but that it was not revealed until 2017 and that China, therefore, "had two years to do what they want." According to Nan Tian, China has decreased its purchases of foreign military technology and hardware around the world in recent years as the country has caught up militarily and produces its own. The US' recent strategy to stop China might be too late, he says. However, Motor Sich shows that China still might be interested in some foreign companies in some areas - such as the development of its engines.

The US has provided Ukraine with \$1.5 billion in military support from 2014 to 2019 to help it modernise its military, according to the nonpartisan Congressional Research Service. The US plays a crucial role in Ukraine's struggle with Russia, and it could be a reason for Ukraine's position on Motor Sich. However, China has also become a much bigger economic player in Ukraine over the years. According to Ukrainian State Customs Service, China was Ukraine's largest trading partner in 2020 with 11.6 per cent of all trade. The US numbers are much lower. "We need to see the big picture here", says Yuan Jiang. "For Ukraine, it is not about a small military company. It is about its relations with the US. Of course, China is much less involved in Ukraine's politics, or I would like to say China may be reluctant to be involved in Ukraine's politics. This time, Ukraine's political concerns may have overtaken their economic concerns. It seems like they have decided to give them this to make them happy. After all, Ukraine is strongly dependent on American help overall."

What happens next?

Andrey Buzarov, who is a Ukrainian expert with the KyivStratPro analytical group, has a different analysis about what is going on. He does not think US pressure made Ukraine impose recent sanctions against the Chinese investors. While he agrees the US has been pressuring Ukraine for a long time, he believes the reason for the Motor Sich decision is due to the Ukrainian President wanting to send a signal to the new US President Joe Biden that he is on his side. Iuliia Mendel, the press secretary for Zelenskyy's administration, told Euronews that Ukraine has not been under any pressure from the US. Instead, she says the case is a matter of "protecting our state". "Let's look at these things as sensibly as possible," she wrote. "This is a Ukrainian strategic enterprise. It is absolutely logical that such enterprises should retain their significance. Based on this alone, certain action was needed at the state level... Ukraine does not accept pressure from other states, it independently solves both domestic issues and those of international importance. That is why there was no pressure, this is our policy aimed at preserving strategic enterprises."

She also said that "the misunderstanding in the Motor Sich case, which was provoked by the actions of certain people more than three years ago, is being resolved

diplomatically and will not affect the sincere and strong relations between the two countries (China and Ukraine).” Wang Wenbin, a spokesman for China’s Foreign Ministry, commented on the Ukrainian sanctions against the Chinese investors. “We noted relevant reports. China as always opposes unilateral sanctions on Chinese enterprises by foreign governments,” Wenbin said on Monday. “We hope the Ukrainian side will uphold the legal rights and interests of Chinese enterprises and investors.” According to Buzarov, it is likely that the relationship between Ukraine and China will “now be put on ice”. “I think that this will freeze the relationship between Ukraine and China,” says Buzarov, who fears that China now to a larger extent will ally with Russia against Ukraine.

Euronews has asked Skyrizon and Motor Sich for comment.

Source: [Euronews](#); 12 February 2021

'THEY'RE GOING TO EAT OUR LUNCH,' BIDEN WARNS AFTER CALL WITH CHINA'S XI

- Franco Ordoñez and John Ruwitch

After a two-hour phone call with his Chinese counterpart, President Biden made his case for domestic investment in infrastructure, clean energy and other sectors.

Transcript

RACHEL MARTIN, HOST:

For a new president, that first phone call to a foreign leader is a big deal. The topics that are brought up, the tone taken by both participants - all of it can give clues about how the relationship is going to unfold. So what did we learn from President Biden's first call as president to China's leader, Xi Jinping? NPR White House correspondent Franco Ordoñez joins me now. Good morning, Franco.

FRANCO ORDOÑEZ, BYLINE: Good morning, Rachel.

MARTIN: So how'd it go? Not that they'd let you on the call, but...

(LAUGHTER)

ORDOÑEZ: So, you know, we know they talked about some really tough issues. The White House said Biden raised fundamental concerns about, quote, "coercive and unfair economic practices" and human rights abuses; also China's crackdown in Hong Kong and aggression toward Taiwan. But they also talked about things that they could cooperate on, like the pandemic, climate change and nuclear proliferation. That, though, actually has some China hawks worried. I talked to Dan Blumenthal. He was a senior defense official in the George W. Bush administration. And he said there's concern that Biden could go soft on China.

DAN BLUMENTHAL: Well, we've tried that approach for many years. And I think most recently we tried that approach under the late Bush years and under the Obama years. And China doesn't really want to cooperate with us.

ORDOÑEZ: You know, he adds that China uses the United States' eagerness to work on things like the climate together to really just ease pressure on themselves.

MARTIN: So let's talk about economic policy - right? - trade in particular. Former President Donald Trump, of course, made tariffs on China a key part of his trade policy. Is Biden going to change that?

ORDOÑEZ: Well, officials told us last night that the tariffs will stay at least until a review is completed. One official said there was merit in some of the competitive aspects of Trump's policy, but the Biden team takes issue with how Trump went about it, namely the go-it-alone, America-first approach. So what we should expect to see is more working with partners in the region, as well as allies, on China. The challenge, of course, is how to strike the balance between confrontation and cooperation. Here's Evan Medeiros. He worked on China policy at the National Security Council in the Obama administration.

EVAN MEDEIROS: Well, it's not easy. Oftentimes, it's difficult to do simultaneously. In other words, you can't confront them over Taiwan or the South China Sea and then turn around the next day and ask them to do more on climate change.

ORDOÑEZ: I'll just add that officials told us last night that they've heard a lot of concerns from allies about Chinese military behavior on Taiwan, in the South China Sea. And the Biden team also has heard concerns about whether the United States will have their back.

MARTIN: Do we know at all how this phone call went down from the Chinese perspective?

ORDOÑEZ: Well, Xi had his last conversation with former President Trump back in March. Their relationship really soured after Trump blamed China for the pandemic. So China's seeking some change, significant change. In a readout of the call with Biden in official Chinese media, Xi was quoted as saying cooperation between the two countries was, quote, "the only correct choice," and he urged the resumption of dialogue. He said the two countries need to, quote, "meet each other halfway" and, quote, "treat each other as equals." He warned that, you know, the issues like Taiwan, Hong Kong and other human rights issues that are of concern to President Biden and the Biden administration were internal matters for China to deal with.

MARTIN: Right. Which has long been their position. OK, so NPR White House correspondent Franco Ordoñez, thank you. We really appreciate your reporting on this phone call.

ORDOÑEZ: Thank you, Rachel.

Transcript provided by NPR, Copyright NPR.

Source: [gpb.org](https://www.gpb.org); 12 February 2021

INDIA, JAPAN COOPERATING IN BANGLADESH, SRI LANKA TO STRENGTHEN QUAD — ENVOY SUZUKI

- Nayanima Basu

New Delhi: The Quad countries — Japan, India, Australia and the US — will continue to work closely together to promote their vision, and are making progress towards their commitment for a greater “strategic convergence”, according to Satoshi Suzuki, Japan’s Ambassador to India. In an interview to ThePrint, Suzuki said India and Japan have also collaborated in other countries like Sri Lanka, Bangladesh, Myanmar and Maldives in order to strengthen the Quad under the Indo-Pacific framework. “The four (Quad) countries will continue to work closely together to achieve this vision by developing quality infrastructure, promoting maritime security, collectively fighting against terrorism, and coordinating in humanitarian assistance/disaster relief, among others,” the ambassador said.

Strategic convergences

In his previous stint as deputy minister for foreign policy, Suzuki was leading the Quad Senior Officials’ Meetings for two years, beginning in 2017. “Strategic convergences were confirmed at those consultations, and a common commitment was formed among the four countries, in the spheres of regional security, counter-terrorism, non-proliferation and maritime cooperation, among others. I am pleased to see the recent progress in materialising this Quad commitment, including India’s hosting of a counter-terrorism table-top exercise,” he added. This comes at a time when reports have emerged that the Quad countries are working out a strategy to formalise the grouping by having their first summit-level meeting. Suzuki said the Malabar naval exercise held last year by the Quad countries is another example of “Tokyo and Delhi working together with other partners to ensure a rules-based maritime order”.

Japan has appointed a liaison officer to the Information Fusion Centre-Indian Ocean Region (IFC-IOR) to contribute towards enhancing the Maritime Domain Awareness capabilities of the region, Suzuki added. He said the Agreement on Reciprocal Provision of Supplies and Services, which was signed in September 2020, will facilitate conducting of joint exercises and further advance the defence partnership. “Defence equipment cooperation is another area that has huge potential. Since the signing of the Agreement Concerning the Transfer of Defence Equipment and Technology in 2015, the two defence authorities have been in intensive discussions on possible areas of cooperation in their joint working group meetings,” he highlighted.

Sri Lanka ECT pact has ‘significant value’

India and Japan are also collaborating in a number of infrastructure development projects in countries like Sri Lanka, where they signed a tripartite agreement to develop an East Container Terminal (ECT) in the Colombo Port. Similar capacity building projects are also being discussed in countries such as Myanmar and Bangladesh. On the ECT project, which has now been cancelled by the Sri Lankan government, Suzuki said: “The governments of Japan, India and Sri Lanka signed a

Memorandum of Cooperation concerning the development of the East Container Terminal of Colombo South Port. We believe this framework for trilateral cooperation has a significant value for all the parties.” Earlier this month, the Rajapaksa government in Sri Lanka cancelled the tripartite agreement, which was signed by its predecessor, and instead, asked New Delhi and Tokyo to develop the West Container Terminal (WCT). The matter is under discussion between the three countries, and an official decision to develop the WCT has not been announced either by India or Japan.

Japan opposes ‘regressive actions’ in Myanmar

Japan and India are also engaged in Myanmar in the repatriation of the Rohingya refugees from Bangladesh, apart from developing infrastructure in the Rakhine state from where the Rohingyas hail. However, with the military coup in Myanmar, the process has slowed down.

Japan called the coup a “regressive” move.

“In Myanmar, Japan and India have been synergising our development efforts to promote education in Rakhine state, but we have grave concerns over the present situation there. Japan has strongly supported the process of democratisation in Myanmar and opposes any regressive actions,” Suzuki said. He added: “While being cognisant of such developments on the ground, I would like to stress the fact that Japan-India cooperation in third countries remains critical, as these efforts embody the visions and values which our two countries support, and are beneficial to the recipient countries, leading to a free, open, and inclusive Indo-Pacific.” Japan and India are also building roads, bridges, rail networks and hospitals in Bangladesh and the Maldives. “These are just a few examples, proving the value of Japan-India collaborations for the region. Of course, these efforts can be affected by the situations emerging in those third countries,” he stressed.

Japan seeks more clarifications on India’s Nuclear Liability Act

According to Suzuki, while the India-Japan civil nuclear deal was finalised in 2017, Tokyo is awaiting “further clarifications” on India’s Nuclear Liability Act. “The civil nuclear agreement, which came into force in 2017, reflects a new level of confidence and strategic partnership between Japan and India. Three working groups have been held to date for advancing bilateral civil nuclear cooperation,” he said. However, he added that in order to concretise this cooperation, “we need to seek further clarifications on India’s Nuclear Liability Act. I believe a similar concern is shared by various suppliers, and needs to be addressed”. This issue was also discussed during the first, and so far only, round of the India-Japan 2+2 ministerial dialogue in December 2019.

‘Bullet train project progressing’

The Mumbai-Ahmedabad High Speed Railway (MAHSR), popularly called the bullet train project, is progressing well. Ambassador Suzuki said: “Technology transfer throughout the process of its construction will have an even bigger impact, because the project will involve very subtle technical handlings, and because we are doing this together.” The 508-km MAHSR project, worth \$12 billion, is using Japanese ‘Shinkansen’ technology. It was officially inaugurated by Prime Minister Narendra

Modi and his Japanese counterpart at the time, Shinzo Abe, in September 2017. The project faced several delays in land acquisition since it was first announced in 2014-15, and also got entangled in a political controversy with the Shiv Sena, whose president Uddhav Thackeray is Maharashtra chief minister, questioning its feasibility. “The Mumbai-Ahmedabad High Speed Railway (MAHSR) is a flagship project symbolising our excellent bilateral relationship. Introducing the bullet train, with a maximum operating speed of 320 km/hr with utmost safety, is a feat in itself... I am pleased that tenders for the important civil packages are going smoothly, to be implemented by Indian companies at a time when economic stimulus is much needed,” Suzuki said.

India would gain by joining RCEP

On the issue of enhancing trading links between India and Japan and within the region, India “would gain” by signing the ASEAN-led Regional Comprehensive Economic Partnership (RCEP), the envoy said. “If India wishes, it can join RCEP in a fast-track approach, as an observer, or participate in relevant meetings even before becoming a member... Japan believes that India would gain by joining RCEP economically, politically and strategically, because RCEP would allow India to be better integrated into the regional value chains,” he said. The RCEP is a trade pact between 10 ASEAN members — Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam — and their five trade partners — Australia, China, Japan, South Korea and New Zealand. India walked out of the RCEP in November 2019.

Source: [The Print](#); 09 February 2021

ACKNOWLEDGEMENTS

‘Making Waves’ is a compilation of maritime news and news analyses drawn from national and international online sources. Drawn directly from original sources, minor editorial amendments are made by specialists on maritime affairs. It is intended for academic research, and not for commercial use. NMF expresses its gratitude to all sources of information, which are cited in this publication.

Cover Designed by Gayathri Rajesh, NMF Intern.