



MAKING WAVES

A maritime news brief covering:

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

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MARITIME SECURITY

HOW RUSSIAN SPY SUBMARINES CAN INTERFERE WITH UNDERSEA INTERNET CABLES

- H I Sutton

America and the West's dependency on undersea internet cables could be a strategic vulnerability. It is the consequence of both geography and the rise of the international digital economy. Russia, by comparison, doesn't rely on the cables as much, and it has a substantial fleet of spy submarines designed to operate on them. Russia's ability to meddle with undersea cables has raised concerns on many occasions in recent years. Let's look at which Russian Navy submarines may be involved and how they operate, based on previous incidents which are only now being spoken about.

During the Cold War the focus was military communication cables and sonar arrays laid on the sea floor. But today the 'seabed warfare' arena has been expanded to include the internet cables which crisscross the oceans. Around 99% of our transoceanic data traffic flows through undersea cables, including financial transactions, email, social media and of course military communications. Aaron Amick, a sonar expert who runs the Sub Brief channel on YouTube and Patreon has shared his firsthand experience of their modus operandi. Amick served aboard U.S. Navy submarines shadowing Russian subs operating over NATO cables off the Norwegian coast in the early 1990s. Note that this was after the end of the Cold War.

The first thing that the West may know of a Russian operation against the cables is the arrival of an Akula Class nuclear-powered attack submarine in the area. These can be very stealthy so they may not be detected. This is the over-watch patrol and will circle the target area to create a perimeter defense against snooping NATO submarines. To reach the cable on the sea floor the Russians have unique nuclear-powered deep diving mini-submarines. These are known by the Russian term AGS, but in layperson's terms they are a type of spy submarine. The most famous example is Losharik, which suffered a fatal accident on July 1, 2019. The AGS have skids to sit on the seabed and manipulator arms to work on the cables. They can lay taps (even on fiber optic cables), make inspections or cut the cables in hard to fix places. But the AGS minisubs cannot get to the target area on their own. They are carried by a massive host submarine. Russia currently has two, the most modern being BS-64 Podmoskovye, which is an enlarged Delta-IV class ballistic missile submarine. She carries the minisub instead of the missiles. And Russia is starting trials of a newer and larger host submarine, the Belgorod. The host submarine will patrol in a star-shaped pattern above the minisub, keeping frequent voice contact with it. The minisub might be down there for days or maybe a week at a time, before rising to dock under the belly of the host submarine.

Amick observed the operations in the early 1990s when the mini-sub was a type called the Paltus. It was carried to the target cable by a modified 'Yankee class' ballistic missile submarine which had its missile section replaced. The nuclear-powered attack submarine providing the over-watch patrol was most often a 'Victor-III class' boat. Two Paltus and one Victor-III remain in service but they have been superseded by newer types.

The new types may increase the length of time operations take place, and potentially they may improve the stealthiness of the operation, making it harder to detect. Additionally, back when Amick observed the operations the host submarine was unarmed. The latest BS-64 and future Belgorod both appear to be armed. This may eliminate the need for an attack submarine providing over-watch. Protection of civilian as well as military cables is seen with growing importance in NATO. Traditionally, the *raison d'etre* of a navy is to maintain control of the Sea Lines of Communication (SLOCs). Until now this has meant shipping routes. But in a recent talk at The International Institute for Strategic Studies (IISS), then Commander of U.S. Naval Forces in Europe-Africa Admiral James Foggo extended this to include submarine cables. It is a logical evolution, bringing SLOC up to date. Internet cables get snagged by ship anchors on a relatively regular basis, but this tends to happen in shallow waters where repairs are relatively fast. With deep-diving spy submarines Russia can operate at depths of at least 3,000 feet. The U.S. now has the Cable Ship Security Program (CSSP), which allows the Navy to stipend commercial vessels to make emergency repairs. But this only covers two ships, which may not be enough in the event of a serious attack, or even accidental damage. Naturally there is no hard evidence in the public domain that Russia is currently conducting operations against Western undersea cables. But it is undeniable that Russia continues to invest massively in the capability to do so.

Source: [forbes.com](https://www.forbes.com); 19 August 2020

CONFIDENT OF NAVY'S PREPAREDNESS TO MEET ANY SECURITY CHALLENGE: RAJNATH SINGH

- PTI

New Delhi: The Indian Navy has effectively carried out mission-based deployment to protect maritime interests by positioning ships and aircraft at major and sensitive locations, Defence Minister Rajnath Singh said on Wednesday, amid a tense border row with China. In an address to top naval commanders at the inaugural session of a three-day conference, Mr Singh also complimented the force for protecting the nation's maritime interests and expressed confidence in its preparedness to meet any challenge through a "proactive response" in deploying its ships and aircraft, the Navy said in a statement.

The conclave is aimed at carrying out a comprehensive review of the evolving regional maritime security matrix as well as the overall implications of the border row with China in eastern Ladakh. The Indian Navy has deployed a range of its frontline warships and submarines in the Indian Ocean region to send a clear message to China following the escalation of the border dispute in eastern Ladakh. "I applaud the Indian Navy for their role in protecting the maritime interests of the nation. I have full confidence in the Navy's preparedness to meet any challenge through a proactive response in deploying its ships and aircraft," the defence minister tweeted.

All possible security challenges that the country may face, including from China, in the Indian Ocean Region were discussed at the conclave, people familiar with the issue said. "The Indian Navy has effectively carried out mission-based deployment to protect maritime interests by deploying naval ships and aircraft at major and sensitive locations," Mr Singh said, adding it has helped increase maritime domain awareness and in extending rapid humanitarian aid and relief. The Indian Navy started rolling out its mission-based plan in June 2017 that involved deploying mission-ready ships and aircraft along critical sea lanes of communications with an aim to effectively counter China's growing presence in the Indian Ocean region.

Rajnath Singh said it is inspired by Prime Minister Narendra Modi's vision of SAGAR (Security and Growth for All in the Region). He also highlighted the creation of the post of Chief of Defence Staff and Department of Military Affairs/MoD (DMA) as major milestones in bringing more synergy among the three services, especially in training, procurement and jointness in operations. The defence minister said that accepting the challenges arising out of the COVID-19 pandemic in the current financial year, the Indian Navy has continued to make progress in operational, administrative and modernisation efforts. Notwithstanding these fiscal challenges, the government has invoked the Emergency Powers to meet the emergent requirements of the services, he added. The key focus of the conclave included reviewing the Indian Navy's operational readiness as well as issues relating to India's security interests in the Indo-Pacific, officials said.

The Indian Ocean, considered the backyard of the Indian Navy, is critical to the country's strategic interests. Over the years, the region has witnessed an increasing Chinese presence. China has constructed the deep-sea Gwadar Port in southern Pakistan and a naval base in Djibouti in the Horn of Africa. In the last few weeks, the Navy has significantly expanded its deployment in the Indian Ocean Region, positioning a plethora of warships and submarines following the Galwan Valley clash with Chinese troops in eastern Ladakh in which 20 Indian Army personnel were killed. The Chinese side had also suffered casualties but it is yet to give out the details. According to an American intelligence report, the number of casualties on the Chinese side was 35.

In his address to the naval commanders, the defence minister also congratulated the Navy for carrying out 'Operation Samudra Setu' which repatriated around 4,000 Indians stranded in a number of countries, including Iran and Maldives, due to the coronavirus pandemic. "I congratulate the @indiannavy on the conduct of the biggest ever evacuation operation 'Operation Samudra Setu', which has contributed extensively to the national interest," the defence minister said in another tweet. Mr Singh also complimented the Navy for being at the "forefront" of the indigenisation

process for defence platforms. At the conference, the naval commanders will also deliberate on ensuring tri-services synergy as well as functional reorganisation within the Navy to improve efficiency, the Navy said in a statement on Tuesday.

Source: ndtv.com; 19 August 2020

THE US B-2 SPIRIT STEALTH BOMBER'S SNAP ARRIVAL IN THE INDIAN OCEAN: A HYPOTHETICAL ANALYSES ON ITS IMPLICATIONS IN CASE OF A INDIA-CHINA BORDER WAR

- Dr Anil Kumar Lal

(Near Parity Exists Between The Indian Land Forces And The PLA, When Operating in the Himalayas. Similarly, Indian Air Force Has An Edge Over The PLAAF When Operating in Tibet. In Addition, the PLAAN is also outmanoeuvred in the IOR due to allied operations in conjunction with Indian Navy. Moreover, With the US 'B2 Spirit' Bomber's snap Entry in the Indo-Pacific War Zone Will Be a Game Changer to Offset Any Asymmetry with China. In Fact, B2 Spirit's Early Application in the India-China Border war Can Degrade/Destroy PLAAF Airfields Supporting the PLA Land Operations as well as destroy PLA Rocket Forces and Missile Bases Unhindered without Interference by China)

PART-1

Three US B-2 Spirit Stealth Bombers(part of US Global Strike Command) have arrived at Diego Garcia naval facility in the Indian Ocean on 11th August 2020(This is in addition to the already deployed six USAF B-52Hs in early 2020).This snap deployment is to support Pacific Air Forces' Bomber Task Force missions all across the Middle East or the South China sea or any other area of the conflict in Asia. This obviously includes the present India-China border war scenario. The employment of this long range-deep penetration-stealth Bomber is obviously a game changer and a strategic checkmate in any war zone to offset any asymmetry. These assets when integrated with Fighter Squadron F-22 Raptors and operationally synergised with Stealth Drones can destroy and devastate the war waging capacity of any enemy side. The 29-hour sortie from the U.S. Homeland and its deployment enables long-range strike options anytime and anywhere in support of INDOPACOM strategic objectives far away from the mainland. Diego Garcia is equipped to accommodate B-2s and it features four climate-controlled clamshell hangars for the stealth bombers. Historically, the base has been used as a hub from which to mount long-range bomber missions into the Middle East and Central Asia. Yet its location means bomber crews must fly extremely long-endurance missions to reach these areas, well over 10 hours to reach Afghanistan or may be towards Ladakh/Tibet for example as shown on the map.

B-2 Spirit is a heavy strategic Bomber and has an endurance of 40 hours of flying. It has an ordinance of 40,000-70,000 pounds with precision-guided bombs, including nuclear warheads. Because of its stealth capabilities, it carries no defensive armaments. However, if necessary they can be escorted by F-22 Raptor Fighter aircrafts. The B-2 Spirit is a low observable, strategic, long-range, heavy bomber capable of penetrating sophisticated and dense air-defence shields. It is capable of all-altitude attack missions up to 50,000ft, with a range of more than 6,000 nm unrefuelled and over 10,000nm with one refuelling, giving it the ability to fly to any point in the world within hours. The B-2 bomber can also carry the AGM-129 advanced cruise missile, which is a strategic cruise missile with a range estimated at up to 1,500 miles. Up to 16 satellite-guided, JDAM (joint direct attack munitions) missiles can be carried. The aircraft is fitted with the joint standoff weapon (JSOW), joint air-to-surface standoff missiles (JASSM) and the wind-compensated munitions dispenser (WCMD) and can carry up to 80x 115kg small diameter bombs (SDB). It has also been fitted with a massive ordnance penetrator (MOP) weapon. The MOP is GPS-guided, contains 2,400kg (5,300lb) of explosive and is designed to penetrate hardened, deeply buried targets. A generic weapons interface system (GWIS) has been fitted as part of the block 30 upgrade. The GWIS is an integrated digital software package, which allows the B-2 to carry different mixes of stand-off weapons and direct attack munitions on a single sortie, enabling the aircraft to attack up to four different types of targets on a single mission and has the capability to attack moving targets, using precision-guided weapons such as the small diameter bomb II. The efficacy of the B2 Spirit is further enhanced through an integrated surveillance and intelligence grid created to feed the Bomber. Even the US, Low Earth Orbit (LEO) satellites with an altitude of 2,000 km (1,200 mi) or less (approximately one-third of the radius of Earth), or with at least 11.25 periods per day (an orbital period of 128 minutes or less) and an eccentricity less than 0.25, can be interfaced with the B2 to enable a wider swathe of available targets. There is also the Drone RQ-170 Sentinel, which can be in supporting role. The B2 Spirit first entered combat operations over Kandahar, Afghanistan in 2009. The high-altitude drone was dubbed the "Beast of Kandahar," and was even responsible for coordinating the entire Osama Bin Laden operations. It's believed to operate at high altitudes in contested airspace, providing streaming video to commanders elsewhere in the region, offering over watch to troops on the ground, and potentially even serving as a communications relay for troops and command elements with its broad skill set and low-observability. The applicability of the combination of these three assets for Information domination and management can be an allied support to India and cause the battle to shift in India's favour. In addition, because of S-400 Air Defence Missiles (36 launchers held by China but are without spares, and thus it cannot be operationalized). Russia in any case has suspended further supply to China. (Obviously this is with an eye to help India, who is Russia's 'Privileged and Special strategic ally' and an age old friend). Therefore, there is nothing that can stop the B-2 Spirit in causing devastation of the strategic targets (which look like blobs) on ground. There will be about 24-32 strategic targets in the Western Theatre Command. These could be the centralised PLA Rocket Forces, artillery/rockets regiment deployed with front troops, armour concentration, Headquarters of Army Group and other Formations, Communication choke points

and Airfields. It will take just two days for the stealth B2 spirit to have a turnaround of three hours from the Diego- base to Tibet and back. In a day there will be approximately nine missions per day each carrying a pay load amounting to some 630,000 pounds (or 285.763 tonnes is carried internally) of all ordinance/ bombs. Ceiling of B2 Spirit bomber is 50,000 feet, whereas even J-20 has only a ceiling of 20,000 feet and thus falls short to interfere in its operations. Now let us see the hypothetical employment of B2 Spirit in an India-China war scenario. On the first day all the airfields and important rocket forces will be destroyed, that will be about nine blobs. The remaining assets, about 24 blobs will be destroyed on the second day, as these assets will be just sitting ducks. In addition, the strikes of the B-52 bombers (also based at Diego Garcia) will also do follow up action after the first strike by the B2 spirits. Therefore, in a situation where war starts and if India suffers heavy losses then obviously the retaliation will be massive through allied support as already explained (The US-India strategic Partnership/India Enhanced Cooperation Act 2019, which gives the same status to India as to Japan/Australia. In addition, the pending US bill for treating India as a NATO ally would provide niche technology to India to offset any asymmetry). The above-mentioned analogy of the B2 Spirit's capability needs to be hypothetically reviewed against the backdrop of a real war contingency in which PLA troops are deployed in battle Formations and thus their locations are marked after which they are all vulnerable to the B2 Spirit Stealth Bomber. Same is discussed in Part-2.

PART 2

The existing India-China standoff can be triggered into a war at any time. Let us therefore analyse the predicted trajectory of the battle and especially the deployment of PLA strategic assets in such a scenario and how these assets will look when viewed from a higher platform of 'near earth space'.(They will look more like blobs). As we are aware of the changed PLA warfare strategy based more on Informationalised based 'Network Centric Warfare'. The first phase would be the troop's deployments and a continuous Information domination campaign; the second phase would be the Fire for Effect by PLA PGMs on the already digitised locations of Indian strategic assets. (The current deployments on both the sides would be known with accurate Grid References due to such a long standoff).This phase would result in massive fire barrages of artillery, rockets, drones, missiles and the air power battle. The last phase would be the capture of ground by physical mopping up followed by termination of the battle. A quick look of the PLA combat potential vis-à-vis India needs to be revisited to derive the combat parity between the two nations, when operating in Tibet. Let us see the total availability of the PLA at the National Level. Out of 75 Manoeuvre Divisions equivalent(many now converted into motorised/mechanised Brigade/Division Formations as part of military reforms) an orbat of about 20 Divisions equivalent or about 200,000-230,000 combat elements would be/are available after catering for the Russian and the hot Taiwan and the East/ South China front. The new joint Western Theatre Command of China is estimated to hold around 100,000-120,000 combat troops (Motorised and mechanised Divisions and Brigades), principally divided into the 13th, 21st and 47th Group Armies. Because of on-going unrest in Tibet and Xinjiang, a special PLA Army-directed Military District (MD) has been created for each of these regions. In Tibet, about 45,000-50,000 troops are estimated with all the supporting elements. This is in comparison to the Indian deployments of

approximately 18-20 Mountain divisions along the LAC after mobilisation (as per varied press reports). Invariably all these deployments would have already been registered digitally. Thus as a 'First Shot' the PLA are in a position to carry out a joint fire strike campaign with long-range precision strike of rockets, missiles and PLAAF. The objective of PLA would be to destroy important Indian targets, paralyze the operational system of systems (integrated force grouping), weaken the will to resist and destroy war potential, and create conditions for phase 3 of operations. The Chinese leadership could conclude that conducting precision strikes against key Indian targets was preferable to conducting difficult offensive ground operations where the defender has an advantage. Even if China does a 'Fire for Effect' engagement with Drones/PGMs with more success than India's counter bombardment, it does not really create any great tactical advantage to China, for exploitation and assault as he will still lack the combat superiority for attack (Normally in mountains the combat ratio is 1:3. However, in High Altitude Mountains it is preferable for the attacker to have 1: 6 superiority). Therefore, this adverse Chinese combat differential power matrix remains as a constraint for any offensive into India. On the other hand, India today has the capacity for an offensive to outmanoeuvre the PLA ingress both at tactical and operational levels as per existing deployments. However, China has the capacity and resource to mobilise an equal number of divisions/brigades from other military regions in rapid time due to vast infrastructure, unless a new threat precipitates in any of the other fronts. Therefore, China is constrained to maintain a 'Standoff-Equilibrium'. Of course, India has the will and capacity to retake the 'Galwan Heights' or the 'Finger 4 Spurline', provided the allies apply pressure at the already identified pressure points (could be at the South China sea or towards Taiwan).

The Chinese PLAAF also suffers from a numerical disparity to the IAF in the border region. The Raffles are already deployed and can operate with the B2 Spirit in tandem after a little coordination. China also uses eight airbases and airfields relevant to India strike missions, although a majority are civilian airports that can be commandeered in wartime. Other comparative weaknesses permeate the PLAAF's posture against India. The high altitude of Chinese air bases in Tibet and Xinjiang, plus the generally difficult geographic and weather conditions of the region, means that Chinese fighters are limited to carrying around half their design payload and fuel. In-flight refuelling would be required for PLAAF forces to maximize their strike capacity. The most significant PLAAF forward air bases and airfields near Indian border areas are located at Hotan, Lhasa/Gonggar, Ngari-Gunsa, and Xigaze, are all vulnerable to a dedicated Indian offensive through the B2 Spirit Stealth Bomber. As per reports in the media, the Ngari-Gunsa and Xigaze airfields reportedly have no hardened shelters or blast pens for their aircraft, which sit in the open. Lhasa/Gonggar has recently developed hardened shelters but are able to protect only up to 36 aircraft, while at Hotan some shelters have been built. An Indian early initiative to incapacitate these four/five bases—and achieve air superiority over them—would compel China to rely more upon aircraft from its rear-area bases, exacerbating its limited fuel and payload problems. The employment of B2 Spirit Stealth Bomber to destroy these air bases as discussed in the first wave of their attacks will automatically create a favourable air situation for India. Therefore, rightly, the B2 Spirit is called a game changer. After destruction of the forward PLAAF bases, the B2 Spirit will move undetected and unload the most lethal and precision guided munitions on the PLA fire bases composed of PLA Rocket

Forces new howitzer, including artillery brigades (that uses the “electromagnetic catapult” technology to hit targets beyond 200 kms). All these assets including long-range missiles would be the target of the B2 Spirit. Thus collectively within 2/3 days the PLA/PLAAF combat potential would be seriously degraded especially when there is no opposition to the operations of the B2 spirit. A similar fate will be met by the PLAAN in the IOR, where allied forces (QUAD) would be operating in a contingency of war. This means that the U.S. B2 Spirit Stealth Bomber, if used as part of our allied operations can be a ‘Game Changer’ to offset the asymmetry with China and thus enable global peace and harmony

Source: timesofindia.com; 19 August 2020

NAVY COMMANDERS BEGIN 3-DAY CONCLAVE, REVIEW MARITIME SECURITY SCENARIO

NEW DELHI: Top commanders of the Indian Navy on Wednesday began an in-depth review of the evolving regional maritime security architecture as well as the border row with China in eastern Ladakh on the first day of a three-day conclave, officials said. Defence Minister Rajnath Singh attended the inaugural session of the conclave. The key focus of the conclave included reviewing the Indian Navy’s operational readiness as well as issues relating to India’s security interests in the Indo-Pacific, a region where China has been rapidly expanding its military presence, the officials said.

All possible security challenges that the country may face, including from China in the Indian Ocean Region, were discussed at the conclave, people familiar with the meet said. The Indian Navy has deployed a range of its frontline warships and submarines in the Indian Ocean Region to send a clear message to China following escalation of the border dispute. “The conference assumes greater significance in the backdrop of recent events on our northern borders, coupled with the unprecedented challenges posed by COVID-19,” the Indian Navy said in a statement on Tuesday.

The naval commanders would also deliberate on ensuring tri-services synergy as well as functional reorganisation within the Navy to improve efficiency, it said, adding the conference would also discuss the larger security imperatives in the Indo-Pacific. The Indian Ocean, considered the backyard of the Indian Navy, is critical to India’s strategic interests. Over the years, the region has witnessed increasing Chinese presence. China has constructed the deep-sea Gwadar Port in southern Pakistan and a naval base in Djibouti in the Horn of Africa.

In the last few weeks, the Navy has significantly expanded its deployment in the Indian Ocean Region, positioning a plethora of warships and submarines following the Galwan Valley clash with Chinese troops in eastern Ladakh in which 20 Indian Army personnel were killed. The Chinese side also suffered casualties but it is yet to give out the details. According to an American intelligence report, the number of casualties on the Chinese side was 35. (AGENCIES)

Source: [dailyclestia.com](https://www.dailyclestia.com); 19 August 2020

SOMALI PIRATES RELEASE LAST THREE HOSTAGES AS ARMED MEN ATTACK PANAMA- FLAGGED SHIP

- Sam LaGrone Abdiqani Hassan, Katharine Houreld

BOSASO, Somalia/NAIROBI, Kenya (Reuters) - Somali pirates have released three Iranian hostages held for five years, a maritime security official said on Thursday, as conflicting reports emerged whether another ship had been seized after a three-year hiatus in hijackings.

The three Iranians are the last of the crew of the Iranian fishing vessel FV Siraj, which was captured by pirates on March 22, 2015. "This marks the end of an era of Somali piracy and the pain and suffering of Somalia's forgotten hostages," said John Steed, the coordinator of the Hostage Support Programme, a volunteer organisation based in Nairobi begun to help rescue crews abandoned by their employers. The release was meant to mark the end of an era for Somalia's pirates, who held over 2,300 crew between 2010 and 2019.

But instead, six armed men hijacked the Panama-flagged Aegean II late Wednesday after it had engine problems, a regional governor in Somalia told Reuters. Musse Salah, the governor of Gardafu in the semi-autonomous northern region of Puntland, said the ship was travelling from the United Arab Emirates to Mogadishu port when pirates attacked it, in what would be the first successful hijacking since 2017. There were 20 crew onboard, said a resident in contact with the men who had seized the ship. A regional security official said the men appeared to have links to a local militia that functioned as a police unit in the Bari region. The official asked not to be named as he was not authorised to speak to the media.

POLICE, PIRATES, OR BOTH?

Jay Bahadur, a Somali piracy expert who was previously head of a United Nations group of experts enforcing an arms embargo on Somalia, said that being a pirate and a member of the Somali police had not historically been mutually exclusive. He said it appeared that a group of men wearing police uniforms had boarded the ship, robbed the crew and taken the weapons of a private security team on board. The man reported to be the ringleader of the attack on the Aegean II had repeated phone contact with another pirate who was part of a group that carried out Somalia's last hijacking in 2017, he added. The contact happened in the months prior to the 2017 hijacking. "If it was indeed the police, it bears resemblance to one of the earliest Somali piracy incidents, when members of the Puntland coast guard hijacked the boat they were supposed to be guarding," he said.

Satellite tracking data showed the ship appeared to have rounded the Horn of Africa and was going south past the Somali port of Hafun before suddenly turning sharply to the north and docking in Bereeda. Pictures sent to Reuters from Bereeda showed the

Aegean II, a small tanker that carries chemical or crude products. The European Union Naval Force, known as EU Navfor, was checking on the incident, said a source in their Somalia Joint Operation Centre. At the height of their power in 2011, Somali pirates launched 237 attacks off the coast of the country, the International Maritime Bureau says, and held hundreds hostage. The number of attacks later tumbled as shipping firms implemented better security protocols, including posting look-outs, sailing further away from Somalia, and hiring private security. International warships operating as part of a coalition also prevented several attacks.

Somalia has been riven by civil war since 1991 and is controlled by a patchwork of local militias, pockets of federal forces, African Union peacekeepers and Islamist insurgents. The Horn of Africa nation has also been intermittently plagued by pirates.

Source: [reuters.com](https://www.reuters.com); 20 August 2020

MARITIME FORCES

HAL HELICOPTER NOT FOR US — INDIAN NAVY DOESN'T WANT PSU TO BE PART OF \$3 BN CHOPPER DEAL

- Snehesh Alex Philip

New Delhi: The Indian Navy remains adamant against the inclusion of government-owned Hindustan Aeronautics Limited (HAL) in the \$3 billion (Rs 22,500 crore approximately) deal for Naval Utility Helicopters (NUH), asserting that the company's product do not meet the force's requirements. This had been conveyed to the defence ministry by the Navy time and again, sources in the defence and security establishment told ThePrint.

"HAL's NUH is not for us. The blade folding takes excessive time and the size of the folded bladed is bigger than what is required. In times of rescue missions or quick surveillance, the time taken on the blades is a disability," a Navy source said. ThePrint had on 30 May reported that the project could become the first challenge for the Narendra Modi-led government under its new 'atma nirbhar Bharat (self-reliant India)' initiative in the defence sector. The NUH is being pursued under a strategic partnership model focused on the Indian private industry meeting manufacturing needs through tie-ups with foreign vendors. "The entire aim of the strategic partnership is to help the creation of a defence hub in the country from the private sector. NUH programme is like the Maruti car programme which will lead to creation of a private helicopter manufacturing and servicing ecosystem," the Navy source quoted above said. Another source said that an assessment carried out by the Navy has found that ALHs does not meet the force's requirements.

Private players also objected to HAL's possible inclusion

The Navy has been desperate to replace its Chetak of 1960s vintage with NUH. The NUHs are to be utilised for multiple roles, including search and rescue, casualty evacuation and low-intensity maritime operations, besides torpedo drops. The Navy had received eight responses to the expression of interest (EOI) issued in February last year, as part of its plan to purchase 111 helicopters for Rs 21,738 crore. HAL had submitted two bids — one by itself and another through a joint venture with Russian Helicopters to produce the Kamov chopper.

It is to note that private players have also objected to the possible inclusion of HAL in the NUH programme in May last year. Private firms that have responded to the request for information (RFI) are Mahindra Defence Systems, Tata Aerospace, Reliance, Adani, Bharat Forge and Coimbatore-based Lakshmi Machine Works. As part of a re-evaluation in May this year, the defence ministry had asked the contenders about the

export potential of the NUH programme and also raised the prospect of HAL being given a chance to be a part of it. The private sector players had then written back to the ministry saying HAL should be kept out. Speaking to ThePrint in May, Wing Commander (retd) Unni Pillai, who is the executive director (CTP-RW) at HAL, had said, “There are two bolts there. You remove one and it can be folded. It takes about six minutes to fold on the LUH (Light Utility Helicopter). On the ALH, we are planning to incorporate the same which we would be able to do at the same time.”

However, Navy officials have said the time taken is too long and such bolts are risky.

Source: theprint.in; 17 August 2020

RUSSIAN NAVY KIROV-CLASS CRUISER ADMIRAL NAKHIMOV BACK IN THE WATER

- Xavier Vavasseur

Sevmash CEO Mikhail Budnichenko, acting Arkhangelsk regional Governor Alexander Tsybulsky, Commander of Belomorskaya naval base Rear Admiral Konstantin Kabantsov supervised the operation. The cruiser had large units and hull constructions replaced and new insulation and cables installed. 3D modeling was used in the overhaul. The warship will now have life-support systems, radio-technical equipment, power supplies, missile and artillery arms replaced. The Admiral Nakhimov will have new tactical characteristics and will reinforce the surface fleet of the Russian Navy.

The Defense Ministry said Navy Commander-in-Chief Admiral Nikolai Yevmenov chaired a meeting on the overhaul and upgrade of the cruiser and called to closely interact with the United Shipbuilding Corporation and strictly observe the overhaul schedule. The Admiral Nakhimov Orlan-class cruiser was laid on May 17, 1983 by the Baltic Shipyard and floated on April 25, 1986. It joined the Navy on December 30, 1988 as the Kalinin. The cruiser was renamed in 1992. Sevmash has been overhauling the warship since 1999. The upgrade has actually begun in 2013. The cruiser will be armed with Kalibr and Onix missiles and Tsirkon in future.

Source: navalnews.com; 20 August 2020

CHINESE SHIPYARD LAUNCHES 1ST TYPE 054 A/P FRIGATE FOR PAKISTAN NAVY

- Xavier Vavasseur

Pakistan signed a first contract for the delivery two Type 054 A/P frigates in 2017. An additional contract for two more ships was announced in June 2018. The keel laying for the second vessel took place in March this year. Steel cutting for the final two ships

took place in November last year. All four units are set to be built in China and delivered to the customer by 2021.

The Type 054A is a multi-role frigate and is recognized as the backbone of the People's Liberation Army Navy (PLAN) fleet of surface combatants with 30 vessels in commission. They have a length of 134 meters, a beam of 16 meters for a displacement of 4,000 tons. They have a crew complement of 165 sailors and are fitted with:

- a H/PJ-26 76mm main gun
- 8 C803 anti-ship missiles
- 32x VLS cells for HQ-16 surface to air missiles
- 2x Type 730 30mm CIWS
- 2x Triple Torpedo launchers

According to the Pakistan Navy, the Type-054 A/P ships are state of the art frigates equipped with modern surface, subsurface and anti air weapons and sensors. Once constructed, these ships will be the most technologically advanced platforms of Pakistan Navy which will strengthen its capability to meet future challenges and maintain peace, stability & power equilibrium in the Indian Ocean Region. The Pakistan Navy is currently undertaking an important renewal of its fleet, with the procurement of several modern platforms: In addition to these frigates from China, Pakistan will also commission new corvettes from Turkey and OPV from the Netherlands. It is also modernizing its submarine force.

For the record, the same shipyard located near Shanghai recently built two Type 075 LHDs for the Chinese Navy (PLAN) and a third one is rumored to be on the way. Hudong-Zhonghua is also currently building a Type 071E LPD for Thailand.

Source: navalnews.com; 22 August 2020

CHINA TO LAUNCH 4 OCEAN-OBSERVATION SATELLITES IN 2 YEARS

- Xinhua

China will launch four ocean-observation satellites within the coming 16 months, according to China Youth Daily. Two will be launched in September and November this year, and the other two will be sent into space in 2021, the newspaper quoted director of the National Ocean Satellite Application Center Jiang Xingwei as saying. As of August, China has independently developed and launched seven Haiyang satellites, named after the Chinese word for "ocean" and given the "HY" designation for short. The country launched its first ocean-monitoring satellite, the HY-1A, on May 15, 2002, and sent HY-1D into orbit in June this year.

The space-based remote-sensing technology has been used in fields such as marine environmental resources survey, marine disaster prevention and alleviation, marine economy, marine ecology and maritime security, according to a sub-forum of the World Marine Science and Technology Conference. The HY-2A and HY-2B satellites

can monitor typhoons in the northwest Pacific region and capture information on all the typhoons throughout the year, providing support for typhoon forecasting during the flood season.

Source: globaltimes.cn; 19 August 2020

SHIPPING, PORTS AND OCEAN ECONOMY

HOW CHINA'S EXPANDING FISHING FLEET IS DEPLETING THE WORLD'S OCEANS

- Ian Urbina

For years, no one knew why dozens of battered wooden “ghost boats” — often along with corpses of North Korean fishermen whose starved bodies were reduced to skeletons — were routinely washing ashore along the coast of Japan.

A recent investigation I did for NBC News, based on new satellite data, has revealed, however, what marine researchers now say is the most likely explanation: China is sending a previously invisible armada of industrial boats to illegally fish in North Korean waters, forcing out smaller North Korean boats and leading to a decline in once-abundant squid stocks of more than 70 percent. The North Korean fishermen washing up in Japan apparently ventured too far from shore in a vain search for squid and perished. The Chinese vessels — more than 700 of them last year — appear to be in violation of United Nations sanctions that prohibit foreign fishing in North Korean waters. The sanctions, imposed in 2017 in response to the country's nuclear tests, were aimed at punishing North Korea by not allowing it to sell fishing rights in its waters in exchange for valuable foreign currency. The new revelations cast new light on the dire lack of governance of the world's oceans and raise thorny questions about the consequences of China's ever-expanding role at sea and how it is connected to the nation's geopolitical aspirations.

Estimates of the total size of China's global fishing fleet vary widely. By some calculations, China has anywhere from 200,000 to 800,000 fishing boats, accounting for nearly half of the world's fishing activity. The Chinese government says its distant-water fishing fleet, or those vessels that travel far from China's coast, numbers roughly 2,600, but other research, such as this study by the Overseas Development Institute (ODI), puts this number closer to 17,000, with many of these ships being invisible like those that satellite data discovered in North Korean waters. By comparison, the United States' distant water fishing fleet has fewer than 300 vessels. China is not only the world's biggest seafood exporter, the country's population also accounts for more than a third of all fish consumption worldwide. Having depleted the seas close to home, the Chinese fishing fleet has been sailing farther afield in recent years to exploit the waters of other countries, including those in West Africa and Latin America, where enforcement tends to be weaker as local governments lack the resources or inclination to police their waters. Most Chinese distant-water ships are so large that they scoop

up as many fish in one week as local boats from Senegal or Mexico might catch in a year. Many of the Chinese ships combing Latin American waters target forage fish, which are ground into fishmeal, a protein-rich pelletized supplement fed to aquaculture fish. The Chinese fleet has also focused on shrimp and now endangered totoaba fish, which are much prized in Asia for the alleged medicinal properties of their bladders, which can sell for between \$1,400 and \$4,000 each.

Nowhere at sea is China more dominant than in squid fishing, as the country's fleet accounts for 50 to 70 percent of the squid caught in international waters, effectively controlling the global supply of the popular seafood. At least half of the squid landed by Chinese fishermen pulled from the high seas is exported to Europe, north Asia and the United States.

To catch squid, the Chinese typically use trawling nets stretched between two vessels, a practice widely criticized by conservationists because it results in a lot of fish inadvertently and wastefully killed. Critics also accuse China of keeping high-quality squid for domestic consumption and exporting lower-quality products at higher prices. In addition, critics say, China overwhelms vessels from other countries in major squid breeding grounds and is in a position to influence international negotiations about conservation and distribution of global squid resources for its own interests. China's global fishing fleet did not grow into a modern behemoth on its own. The government has robustly subsidized the industry, spending billions of yuan annually. Chinese boats can travel so far partly because of a tenfold increase in diesel fuel subsidies between 2006 and 2011 (Beijing stopped releasing statistics after 2011, according to a Greenpeace study). For over a decade, the Chinese government has helped pay to construct bigger, more advanced steel-hulled trawlers, even sending medical ships to fishing grounds to enable the fleet to stay at sea longer. The Chinese government supports the squid fleet in particular by providing it with an informational forecast of where to find the most lucrative squid stocks, using data gleaned from satellites and research vessels. On its own, distant-water squid fishing is a money-losing business, according to research by Enric Sala, founder and leader of the National Geographic Society's Pristine Seas project. The sale price of squid typically does not come close to covering the cost of the fuel required to catch the fish, Sala found.

Still, China is hardly the worst offender when it comes to such subsidies, which conservationists say, along with over-capacity of fishing vessels and illegal fishing, is a major reason that the oceans are rapidly running out of fish. The countries that provide the largest subsidies to their high-seas fishing fleets are Japan (20 percent of the global subsidies) and Spain (14 percent), followed by China, South Korea, and the U.S., according to Sala's research. More recently, the Chinese government has stopped calling for an expansion of its distant-water fishing fleet and released a five-year plan in 2017 that restricts the total number of offshore fishing vessels to under 3,000 by 2021. Daniel Pauly, a marine biologist and principal investigator for The Sea Around Us Project at The University of British Columbia, said he believes that the Chinese government is serious in wanting to restrict its distant-water fleet. "Whether they can enforce the planned restrictions onto their fleet is another question," he added. Other attempts to rein in China's fishing fleet, however, have been slow. Imposing reforms and policing them is difficult partly because laws are lax, much of the workforce on

vessels is illiterate, many ships are unlicensed or lack unique names or the identifying numbers needed for tracking, and the country's fishery research institutions often refuse to standardize or share information domestically or abroad.

Still, more than seafood is at stake in the present size and ambition of China's fishing fleet. Against the backdrop of China's larger geo-political aspirations, the country's commercial fishermen often serve as de-facto paramilitary personnel whose activities the Chinese government can frame as private actions. Under a civilian guise, this ostensibly private armada helps assert territorial domination, especially pushing back fishermen or governments that challenge China's sovereignty claims that encompass nearly all of the South China Sea.

"What China is doing is putting both hands behind its back and using its big belly to push you out, to dare you to hit first," said Huang Jing, former director of the Center on Asia and Globalization at the Lee Kuan Yew School of Public Policy in Singapore. Chinese fishing boats are notoriously aggressive and often shadowed, even on the high seas or in other countries' national waters, by armed Chinese Coast Guard vessels. While reporting at sea, my photographer and I filmed 10 illegal Chinese squid ships crossing into North Korean waters. Our reporting team was forced to divert its course to avoid a dangerous collision after one of the Chinese fishing captains suddenly swerved toward the team's boat, coming within 10 meters, likely intending to ward off the boat. China has sought to extend its maritime reach through more traditional means, too. The government has, for example, expanded its naval force faster than any other country, with at least three fleets of naval ships believed to be under construction, while also dispatching at least a dozen advanced research vessels that prospect for minerals, oil, and other natural resources. But the more aggressive and ubiquitous blue-water presence globally is China's fishing fleet. These vessels are routinely cast by Western military analysts as a vanguard "civilian militia" that functions as "a nonuniformed, unprofessional force without proper training and outside of the frameworks of international maritime law, the military rules of engagement, or the multilateral mechanisms set up to prevent unsafe incidents at sea," as Greg Poling wrote recently in *Foreign Policy*.

Nowhere is China's fishing fleet more omnipresent than in the South China Sea, which is among the most hotly contested regions in the world, with competing historical, territorial and even moral claims from China, Vietnam, Philippines, Malaysia, Brunei, Taiwan, and Indonesia. Aside from fishing rights, the interests in these waters stem from a tangled morass of national pride, lucrative subsea oil and gas deposits, and a political desire for control over a region through which a third of the world's maritime trade flows.

In the South China Sea, the Spratly islands have attracted most attention as the Chinese government has built artificial islands on reefs and shoals in these waters, militarizing them with aircraft strips, harbors, and radar facilities. Chinese fishing boats bolster the effort by swarming the zone, crowding and intimidating potential competitors, as they did in 2018, suddenly dispatching more than 90 fishing ships to drop anchor within several miles of Philippines-held Thitu Island immediately after the Philippine government began modest upgrades on the island's infrastructure. In justifying its rights over the region, Beijing usually makes a so-called "nine-dash line" argument, which relies on maps of historic fishing grounds that feature a line made of

nine dashes encompassing most of the South China Sea as belonging to China. Partly because China ignores most of the criticism, and partly because China is economically and otherwise dominant on the global stage, there is a tendency in Western media to lay blame on China for many of the same actions of which the U.S. and Europe have been guilty — in the past or presently. And while defining what is true or fair in the South China Sea may be no easier than it has proven to be in places like the Middle East, most legal scholars and historians say the nine-dash line argument has no basis under international law, and it was found to be invalid in a 2016 international court ruling.

Clashes over fishing grounds involving the Chinese are not limited to the South China Sea. Japan and China are at odds over the Senkaku Islands, known in Chinese as the Diaoyu or “fishing” islands. Elsewhere, an Argentine Coast Guard vessel fired a warning shot to halt a Chinese ship’s escape to international waters in March, 2016. When the Chinese ship, the Lu Yan Yuan Yu, responded by trying to ram the Argentine vessel, the Coast Guard ship capsized the fishing vessel. Some of the Chinese crew escaped by swimming out to other Chinese vessels, while others were rescued by the Coast Guard. From the waters of North Korea to Mexico to Indonesia, incursions by Chinese fishing ships are becoming more frequent, brazen and aggressive. It hardly takes a great feat of imagination to picture how a seemingly civilian clash could rapidly escalate into a bigger military conflict. Such confrontations also raise humanitarian concerns about fishermen becoming collateral damage, and environmental questions about the government policies accelerating ocean depletion. But above all, the reach and repercussions of China’s at-sea ambitions highlight anew that the real price of fish is rarely what appears on the menu.

This article was produced in collaboration between The Outlaw Ocean Project and Yale Environment 360.

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Source: e360.yale.edu; 17 August 2020

NEW MEGA-CONTAINERSHIP ARRIVALS RISK UPSETTING THE BALANCE ON BOX TRADES

- Mike Wackett

Despite the containership orderbook at an historic low, the top carriers have a backlog of 86 ships of over 10,000 teu stemmed for delivery over the next two to three years. The orders were placed before the pandemic stunted global growth, but with considerable uncertainty over the speed of a recovery against the recessionary background, the deployment of 1.47 million teu of capacity on the newbuild ULCVs

could prove challenging. And Alphaliner notes that the outstanding orders are “unequally spread among the three big alliances”.

“The two carriers with the largest orders, CMA CGM and Evergreen, belong to the Ocean Alliance, which already has a market share of 39.5% on the transpacific and 38.7% on the Asia-Europe trade,” said the consultant. Along with Cosco (OOCL) the alliance has 57 ships under construction with a total capacity of 1m teu.

THE Alliance members Hapag-Lloyd, ONE, Yang Ming and HMM have 24 ships on order, with a capacity of 349,000 teu, while 2M partners Maersk and MSC have five 23,650 teu vessels still to be delivered, all ordered by the latter. Alphaliner says the deployment of 57 extra ships within the Ocean Alliance network will be “a challenging task in times of expected low growth demand”. To mitigate the influx of new tonnage it said CMA CGM and Cosco (OOCL) had the option of returning around 15 8,000-10,000 teu chartered-in vessels by the end of next year. But, it added, the redelivery prospects for Evergreen were “marginal”, given the length of the Taiwanese carrier’s charters. “The 2M is in a much more comfortable position, with Maersk having no outstanding orders and MSC having only five ‘megamax 24’ ships under construction,” said Alphaliner.

Indeed, Maersk’s CEO Soren Skou said yesterday the carrier had “no plans” to order any new ships, given the “material uncertainties” and “lack of visibility related to global demand”, and was focused on reducing capital expenditure. Alphaliner said the delivery of the 86 newbuild vessels was “expected to put extra pressure on the Asia to Europe trade, as the biggest ships are expected to be deployed there”. For example, CMA CGM is scheduled to take delivery of nine LNG-powered 23,000 teu vessels from next month, which it will deploy on its FAL1 loop – dubbed the NEU4 string of the Ocean Alliance – which will replace the 16,000-18,000 teu units currently deployed. The arrival of this additional capacity as the industry hits its seasonal slack season will test the resolve of the carriers to continue with their successful blanking programmes. In order to fill the extra slots, and assuming growth remains lethargic, the Ocean Alliance members may decide to try to increase their market share. Maersk’s CEO said yesterday the carrier was not looking to increase its market share, but the top-ranked liner will no doubt want to protect the share of the trades it currently commands.

Source: theloadstar.com; 20 August 2020

HOW THE BIOECONOMY COULD SAVE BOTH NATURE AND JOBS FOLLOWING THE INDIAN OCEAN OIL SPILL IN MAURITIUS

- Nishan Degnarain

The world was shocked when the large, Japanese freighter started leaking toxic Heavy Fuel Oil into the pristine waters of the coral reef lagoon in Mauritius last week. As the

country comes to grips with the magnitude of what it truly means to have such a high volume of highly toxic Heavy Fuel Oil that is as exposed to sunlight, the race is on to identify and save some of the rare species that are in the area of the crash site and spill zone.

Whilst some are prominent, charismatic and well known species, such as the rare Pink Pigeon or one of the famous endangered Geckos or Skinks that Mauritius wildlife is known for, many others may be unremarkable when looked at visually, or even microscopic in nature. However, this may be where some of the real gems may lie amid Mauritius' unique biodiversity. The rapidly emerging field of Synthetic Biology can offer a country like Mauritius both a lifeline to accelerate the discovery of these rare species, as well as provide a springboard, to make the Bioeconomy the centerpiece of a new, sustainable economic growth paradigm that can define the next thirty years of growth.

With the pressures of climate change and loss of biodiversity globally, there is a growing need to disconnect economic growth from environmental footprint. Covid-19 has accelerated this trend, with the EU announcing almost a \$1 trillion coronavirus stimulus package centered around a green recovery. In addition to sustainability, two of the other mega-trends defining the next decade include advances in Artificial Intelligence and the rapidly evolving field of Synthetic Biology. These could all combine to put Mauritius in a very unique position to capitalize on these tailwinds, while it grapples with the worst ecological disaster in its history with the large spill of Heavy Fuel Oil in its coral lagoon.

The true value of Mauritius' unique biodiversity

Traditionally, the motivation to save biodiversity was more for tourism purposes (ecotourism), with no real other economic model. This did not allow biodiversity rich countries like Mauritius to fully value the potential of this incredible richness of nature, beyond species which was visually appealing. Now with rapid advances in Synthetic Biology, scientists are only just beginning to realize the incredible commercial value of some of this unique biodiversity. The synthetic biology revolution is uncovering new uses for novel biology that previous only existed in science fiction movies.

In an article in Health Section, scientist Louis Metzger identifies the medicines, industrial products, and agricultural products that are being sought out and commercialized around the world. He finds that the greatest promise may lie in genomics from the ocean, particularly in tropical climates with start gradient changes, like the edge of coral reefs. As we only just understand the implications of marine genomics, the potential could be huge. Synthetic biology is one of the hottest technology sectors in Silicon Valley right now. A recent McKinsey report estimated the size of this sector could grow to \$4 trillion in the next decade.

As we start to see synthetic biology unicorns emerge, countries who are able to create the right public-private partnerships for collaboration could significantly accelerate the discovery of the next new cancer drug or even Covid-19 treatment from a marine organism found around the reef. These are all multi-billion dollar potential opportunities.

And these have all been put at risk with the oil spill exposing the unique and fragile reefs systems to a highly toxic substance, that will permanently alter the biological profile of the region.

Synthetic Biology to the rescue

One of the critical first steps needed in the face of seeing a catastrophic collapse of biodiversity, is to rapidly sequence what is in the lagoon and surrounding areas before this is lost forever. With the latest advances in Synthetic Biology, such DNA sequencers are not no larger than a cell phone, and can complete a sequence within minutes.

There is an art to preparing a sample and sequencing the DNA (it is not as simple as a barcode scanner at a supermarket), but we are getting close. This means that a country like Mauritius has a unique opportunity to mobilize an army of researchers to collect and sequence samples, placing them into a large digital library. This army who are needed to perform the environmental baseline surveys for protection against the spill, would then become the workforce of the future, trained in the latest technologies in one of the hottest new sectors. Having such data in a large digital library, with a strong public-private partnership, can allow other companies on the cutting edge of synthetic biology to shop through the catalog of interesting species available in each location. As each synthetic biology company is also likely looking for different types of species in a library, this could allow a wide number of collaboration. Given International Laws around the Nagoya Protocol that prohibits the transportation and commercialization of wildlife to other locations without express permission, this forces a strong public private collaboration.

It also helps identify the extent of how many potentially valuable organic compounds exist in the unique environment around Southeast Mauritius and the potential commercial value to the country of having DNA that may have evolved over millions of years in a very unique environment. If having a large library of this genomic data is critical to the competitiveness of the local bio-economy, compared to other countries, then it truly is a race to sequence as many species and habitats are possible, before they are lost forever.

Source: [forbes.com](https://www.forbes.com); 14 August 2020

PROJECT CARGO AND HEAVY LIFTS IN THE COVID-19 ENVIRONMENT

- Andrew Kinsey

The year 2020 has presented a litany of challenges to the safe movement of global project cargo. While heavy lifts and engineered cargo movements always present challenges from a rigging and execution standpoint, we have also faced exceptional challenges on other fronts. These have included cancelled vessel bookings, port facilities as well as prefabrication/modulization yard closures, lack of vessel and facility access as well as travel restrictions. At Allianz Global Corporate & Specialty (AGCS), we have found that focusing on some fundamental project management

principals can greatly assist in helping engineered cargo continue to move safely and efficiently during these challenging times.

Have a plan

The greatest change I have witnessed in my years moving marine cargo is the detail that goes into the planning and execution of an engineered cargo movement. Since my early days at sea aboard an Export Lines C-3, that included hand-drawn colored stow plans and rigging the booms for heavy lifts, a lot has changed. The use of detailed method statements is one of the most important changes that has occurred to help ensure safe cargo movement. The fact that we refer to it as an “Engineered Cargo Movement” goes to the root of the issue. The details of the cargo, lifting appliances, transport and securing are all clearly specified. The utilization of uniform standards for carriage ensure that all design and securing criteria can be accurately reviewed.

The method statement includes the analysis of transportation and handling of the cargo and is an essential risk management tool. It should combine detailed technical data with a thorough understanding of transportation and logistics to form a comprehensive description of how the operations of the entrusted cargo shall be conducted. A method statement is designed to ensure safe transportation operations as well as delivery of the cargo in good condition.

Review the plan

All parties involved in the execution of an Engineered Cargo Movement should have the chance to review and comment on the method statement. During this phase, it is critical that communication protocols and the escalation processes be clearly outlined. It is critical to know whom to contact if changes need approval or damages need to be reported. Given the current changes that are impacting our industry, it is also important to have a plan B in place. There needs to be enough time provided to adequately review a method statement and provide feedback. At AGCS, we require that plans be submitted 10 working days prior to cargo movement at a minimum. This timeline allows adequate time to request clarification or adjustment without leading to delays of cargo movement.

Agree to the plan

Formalized QA checks and signoffs are important to ensure that all parties involved are on the same page and that a planned cargo movement will proceed smoothly. This helps to ensure that no detail is overlooked. In a heavy lift, we are only as strong as our weakest link – both literally and figuratively. Ensuring that all stake holders sign off the method statement prior to execution helps to eliminate potential disruptions.

Execute the plan

One key to successful execution is that we agree to what we are going to do, and we do what we agreed too. While this sounds simple and elementary, it really is one of the key aspects to a successful evolution. We do not walk onboard the day of a lift and start changing things because “this is how we always do it”. The approved method statement outlined the required steps, all parties concerned have reviewed and agreed to them, now it is time to deliver on the plan.

Verify the plan

As part of our Survey Warranty Process, we are on site to witness all cargo movements involving Project Critical Cargo. This is gaining increased importance during the current time as it is essential to be on deck to make sure everyone is on the same page. Given the current issues with delayed crew reliefs as a result of COVID-19, it is important to ensure that vessels are adequately manned. In addition, the current pandemic has brought significant stress to supply chains and have seen instances where late changes to stowage have been necessary. COVID-19 continues to present some significant challenges to achieving in person attendance. At AGCS, we are actively utilizing technology to help us capture lifting and securing details when local conditions are preventing us from attending. This has included over the road heavy hauls as well as barge shipments. While not an ideal situation, remote technology has provided us with a solution that allows cargo to continue to move safely and securely. However, for any of this to happen the lines of communication need to be established beforehand and kept open. The steps outlined above are far more effective when communication, cooperation and collaboration are present. Fostering collaboration at times like these is the real challenge.

In summary

The shipping industry has largely proved resilient to the coronavirus outbreak, keeping the life blood of global trade and essential supplies flowing. A sharp economic downturn and difficult operating conditions, however, present a unique set of challenges. At Allianz, we continue to partner with our assureds to help ensure successful voyages. It is my hope that the insight shared here will help the reader realize success in their ventures as well.

Source: maritimeprofessional.com; 19 August 2020

MARINE ENVIRONMENT

WHY PLASTIC WASTE IS AN IDEAL BUILDING MATERIAL

- Sibeles Cestari

The disposal of plastics is a highly visible global problem – from the highest mountains to the deepest ocean trenches, waste plastic seems inescapable. In natural conditions, plastics are nearly indestructible, and yet they are discarded worldwide on a large scale: the world produces around 359 million tonnes of plastics each year. The environment cannot address their disposal at a speed fast enough to prevent harm to living beings. This has led to a consensus that plastics are an unsustainable material. And yes, plastics are certainly an enormous problem, but they don't necessarily have to be.

The main issue is not with plastic as a material, but with our linear economic model: goods are produced, consumed, then disposed of. This model assumes endless economic growth and doesn't consider the planet's exhaustible resources. But there are many ways we could set plastics on a different lifecycle – and one that I have been working on is turning disused plastics into a hardy, reliable and sustainable building material. Most people believe that plastics recycling is severely restricted: that only a few types can be recycled at all. This is unsurprising. The proportion of plastics that are recycled is minimal. The UK, for example, uses five million tonnes of plastic each year, and only 370,000 tonnes are recycled each year: that's just 7%. But all polymers are, technologically, 100% recyclable. Some of them have the perfect cradle-to-cradle lifecycle: they can be used again and again to produce the same goods. Some plastics can be reused just as they are by shredding an object into flakes, melting it, and reusing.

Such recycled plastics may have lower mechanical properties compared to virgin plastics, because each time you melt and process a plastic, the polymeric chains degrade. But these properties can be recovered by mixing it to additives or virgin plastic. Examples of successful industrial recycling include PET, or poly(ethylene terephthalate), which is used to make soft drinks bottles, and polystyrene. All of the rest can technically be reprocessed into new materials for different applications. In the final instance, any plastic waste can be shredded and used as filler for asphalt, or be pyrolysed – decomposed through heating – to produce fuel. The Japanese company Blest Corporation already sells a portable machine to convert domestic plastic waste into fuel in a simple, affordable way. The problem is that recycling much of this plastic waste is currently unfeasible and unprofitable. Polymers such as rubbers, elastomers, thermosets and mixed plastic waste are comfortably labelled as “unrecyclable” by the recycling sector. But the amount of these materials all over the world is frighteningly large and keeps on growing. What if this plastic waste could be used to produce something useful to society? Many universities and entrepreneurs are attempting to do this. Most solutions target mixed plastic waste and suggest applications different

from the original ones. For example, several groups have developed building materials made of plastic waste. Plastics are strong, durable, waterproof, lightweight, easy to mould, and recyclable – all key properties for construction materials. So what if all of this plastic waste could be converted into building materials for low-income populations? Existing initiatives are promising, but not yet reproducible on an industrial scale. I study plastic waste with the specific aim of finding interesting ways to remove it from the environment. Since 2009, I have developed a number of building materials made of post-consumer plastics mixed with different waste-stream materials. From agricultural wastes such as sugarcane bagasse – a by-product of the sugar industry in Brazil – and coffee dregs, to concrete waste and construction debris, compounded with recycled plastics, there are many ways to obtain materials to produce bricks, roof tiles, plastic lumber and other useful elements for building. Our team is currently trying to develop a viable building block made of recycled plastics. We have prepared a range of prospective materials using a mix of virgin and recycled plastics – coloured PET bottles, polypropylene, polyethylene – and other local waste-stream materials, such as hemp, sawdust, concrete waste and red mud.

We are currently adjusting the properties of the materials for the rotomoulding process, a plastics moulding technology that is ideal for making large hollow articles. We want to use the maximum amount of recycled plastics in this block. Blocks made of 25% recycled plastics have performed extremely well in mechanical tests. Next we'll try 50%, 75% and 100%. We are also thinking about the aesthetics of the blocks. Blends of recycled mixed-colour plastics usually end up with a grey or black colour. To enable colour, we are preparing blends of virgin or recycled plastics to overlay the main bulk of the block. So perhaps plastics are not necessarily the problem. They can be part of a pathway towards a more sustainable way of living. Using a natural or renewable resource is not necessarily environmentally friendly. The ecological footprint of a polymeric material is smaller than that of natural materials, which have a sizeable demand on arable land, clean water, fertilisers and regeneration time. According to the Global Footprint Network, before the pandemic we were demanding 1.75 times the available resources of the planet. Working with the “unrecyclable” waste and developing plastics alternatives to natural materials may reduce this demand and leave a cleaner and more sustainable planet for the next generations. Building materials made from recycled plastics are not yet widely used in the construction industry – prototypes have mainly been used for demonstrative installations. It will take political will and widespread environmental awareness to encourage more investment into the potential in plastics recycling.

But hopefully the tide is beginning to turn, as a consequence of the increasing pressure from public opinion about the plastic pollution matter. Thanks to the engagement of government and industry with the idea of a circular economy, it seems that there will be an opening in the market – and in people's minds – to welcome plastic initiatives to replace conventional building materials.

Sibele Cestari is a polymeric materials scientist from Brazil, who is currently a research fellow at Queen's University Belfast. This article originally appeared on The Conversation, and is republished under a Creative Commons licence. This is also why this story does not have an estimate for its carbon emissions, as Future Planet stories usually do.

Source: [bbc.com](https://www.bbc.com); 20 August 2020

PLASTIC POLLUTION IN ATLANTIC AT LEAST 10 TIMES WORSE THAN THOUGHT

- Fiona Harvey

More than 10 times as much plastic has been found in the Atlantic ocean than previously estimated to be there, showing the the world's plastic problem is likely to be much greater than realised. New measurements of the top 200m of the Atlantic found between 12 and 21 million tonnes of microscopic particles of three of the most common types of plastic, in about 5% of the ocean. That would indicate a concentration in the Atlantic of about 200 million tonnes of these common plastics. Previous estimates, based on calculations of the amount of mismanaged municipal waste in coastal areas, were that between 17 million and 47 million tonnes of plastic had been released into the Atlantic in total over the 65 years from 1950 to 2015.

Katsiaryna Pabortsava, of the UK's National Oceanography Centre, and lead author of the study, said: "Our key finding is that there is an awful lot of very, very small microplastic particles in the upper Atlantic ocean, much higher than the previous estimate. The amount of plastic has been massively underestimated." She said the discovery should spur policymakers to consider what could be done to stop so much plastic reaching the seas, where it endangered marine life. She added that people still knew too little about the dangers. "Society is very concerned about plastic, for ocean health and human health," Pabortsava said. "We need to answer fundamental questions about the effects of this plastic, and if it harms ocean health. The effects might be serious, but might take a while to kick in at sub-lethal levels." In order for policymakers to stop plastic reaching the oceans – where it stays for decades, breaking up into smaller and smaller particles – they need better understanding of the sources, and how it behaves once in the water. "The sources of plastic in the ocean have not been quantified properly," said Pabortsava. "We really don't know enough about how much plastic is going into the ocean, and where from." The findings, published in the journal *Nature Communications*, followed other research that showed the scourge of plastic in the oceans was likely to be greater and growing faster than had been recognised. Research published in April showed that microplastics were found in greater quantities than ever before on the seabed, in areas suggesting they had been carried to the bottom by strong currents and concentrated in hotspots. A further study in May concluded that the amount of microplastic in the ocean had been underestimated, and that the particles could outnumber zooplankton.

Last month, a major study by the Pew Trusts and others found that the amount of plastic entering the oceans was likely to triple in the next 20 years, on current trends. Jim Palardy, director of conservation science at the Pew Trusts, who was not involved in this week's *Nature* paper, said: "[This] study not only shows that we have a lot to learn about the scale of ocean plastic pollution, but also highlights the need for immediate and sustained action to tackle this urgent issue. Although it may be daunting, ocean plastic pollution is not an insurmountable problem." Action was

urgently needed, he said: “Our recent study found that existing technologies can greatly reduce the amount of ocean plastic – if we make immediate changes. Scientists are poised to learn more about the potential harms to health from microplastic pollution. Earlier this week, researchers reported on a new technique that would allow them to detect the presence of microplastics in human organs. For the latest paper, scientists from the UK’s National Oceanography Centre collected seawater samples at 12 locations along a route across the Atlantic, from Britain to the Falklands, between September and November 2016. They took large volumes of seawater from three depths in the top 200 metres of the ocean, then filtered it and used spectroscopic imaging to detect microparticles of polyethylene, polypropylene and polystyrene, three of the most commonly used plastics, reckoned to make up more than half of global plastic waste.

They found up to 7,000 microparticles of these three plastic types per cubic metre of seawater in the samples. While the findings apply only to the Atlantic, and cannot be extrapolated to the Pacific or other areas, they indicate that our knowledge of the true extent of the plastic problem is incomplete. “Other oceans are also severely under-sampled,” Pabortsava said.

Source: [theguardian.com](https://www.theguardian.com); 20 August 2020

CLIMATE CHANGE: DAMS PLAYED KEY ROLE IN LIMITING SEA LEVEL RISE

- Matt McGrath

The construction of large-scale dams has played a surprising role in limiting rising seas, say scientists. Over the past century, melting glaciers and the thermal expansion of sea water have driven up ocean levels. But this new study finds that dams almost stalled the rising seas in the 1970s because of the amount of water they prevented from entering the oceans. Without them, the annual rate of rise would have been around 12% higher. Measuring how much the seas have risen over the past 100 years or so is a difficult task for scientists.

Researchers found that there was a gap between how much water they knew had gone into the oceans compared to how much those oceans had actually risen by over the past century. In this new work, the authors revisited information about sources and measurements to come up with a new, more accurate estimation. As well as the melting of glaciers and the thermal expansion of the seas from heat energy entering the waters, the researchers found that water storage facilities such as dams and reservoirs had made a significant impact on sea levels throughout the period. There are around 58,000 large dams in the world right now with many of them constructed over the past 60 years. The 1950s to 1970s saw a building boom with several large-scale constructions completed, including the Kariba Dam in Zimbabwe, the Bratsk Dam in Siberia and the Aswan High Dam in Egypt.

When the full impact of these giants came on stream in the 1970s, their ability to block water from going into the sea slowed the ongoing rise in global sea level. "A large part of this dip is because sea level [rise] was almost brought to a halt because of the amount of water stored in dams," said lead author Dr Thomas Frederikse, from Nasa's Jet Propulsion Laboratory in Pasadena, California. "So by building dams, we almost stopped sea level rise for a decade or so." The study finds that overall sea level has risen by approximately 1.56mm per year between 1900 and 2018.

The largest contributors to rising seas over most of the 20th century have been melting glaciers which have responded faster to a warmer world. Over this whole period, the authors believe that sea level would have been around 12% higher without the influence of dams and reservoirs. However, the influence of dams in holding back the waters began to fade in the 1990s. Concerns were growing about the environmental impact of large dams, and the number of projects began to decline. At the same time, the growing influence of climate change spurred an increase in sea levels through increased ice loss from Greenland and greater thermal expansion of the waters as more heat energy went into the oceans. All these factors have seen the rise in sea levels accelerate over the past 30 years and it is now running at 3.35mm per year.

So could a new programme of dam building help save the world from the rising waters? Earlier this year, a team of researchers produced a paper on how Europe might avoid the worst impacts of rising seas by building a huge dam across the North Sea. But Dr Thomas Frederikse doesn't think adding extra barriers would now work. "At the height of the dam building, we were able to slow sea level rise by about 0.8mm per year. "And now we're seeing sea levels rising in the last 10 years by about four millimetres per year." "So it means that you have to build five times the amount of dams that we built in that period to stop the current rate of sea level rise." "I think that's impossible." The better and much cheaper option according to Dr Frederikse is to cut emissions of CO₂, faster and deeper than at present.

The study has been published in the journal Nature.

Source: bbc.com; 19 August 2020

MORE THAN HALF OF WORLD'S OCEANS ALREADY BEING AFFECTED BY CLIMATE CHANGE

- University of Reading

More than 50% of the world's oceans could already be affected by climate change, with this figure rising as high as 80% over the coming decades, a new study has shown. Scientists used climate models and observations in deeper areas of ocean worldwide

to calculate for the first time the point at which changes to temperatures and salt levels—good indicators of the impact of human-induced climate change—would overpower natural variations.

The study, published in *Nature Climate Change*, estimates that 20-55% of the Atlantic, Pacific and Indian oceans now have noticeably different temperatures and salt levels, while this will rise to 40-60% by the middle of the century, and to 55-80% by 2080. It also found the Southern Hemisphere oceans are being affected more rapidly by climate change than the Northern Hemisphere, with changes having been detectable there since as early as the 1980s. Professor Eric Guilyardi, co-author at the University of Reading and LOCEAN-IPSL, Laboratory of Oceanography and Climate in Paris, said: "We have been detecting ocean temperatures change at the surface due to climate change for several decades now, but changes in vast areas of the ocean, particularly deeper parts, are much more challenging to detect."

Yona Silvy, a doctoral student at LOCEAN-IPSL/Sorbonne University, and lead author of the study, said: "We were interested in whether the levels of temperatures and salt were great enough to overcome natural variability in these deeper areas, that is if they had risen or fallen higher than they ever would during the normal peaks and troughs. This affects global ocean circulation, sea level rise and poses a threat to human societies and ecosystems. Previous studies have gauged the impact of climate change on the ocean by looking at surface temperatures, rainfall and sea level rise, but few have looked at the regional effects deeper down in the ocean to get a more complete picture. The effects of climate change are harder to detect in deeper, more insulated parts of the ocean, where heat and salt spread at a slower rate due to weaker mixing processes. It is also difficult in areas that are poorly observed or where natural variability is high. Yona Silvy and her co-authors used model simulations with and without the impact of human activity and an analysis that combines both temperature and ocean salt to detect significant changes and their date of likely detection, also known as "time of emergence". Yet these are regions that will keep the memory of these changes for decades to centuries. Changes detectable above natural variability were calculated to be seen in the Northern Hemisphere oceans between 2010-2030, meaning increases or decreases in temperature and salt levels are likely to have already taken place.

The more rapid and earlier changes seen in the Southern Hemisphere emphasises the importance of the Southern Ocean for global heat and carbon storage as surface waters make their way to the deeper ocean more easily there. However, this part of the world is also particularly poorly observed and sampled, meaning changes are likely to remain undetected for longer. The scientists argue that improved ocean observation and greater investment in ocean modelling is necessary to monitor the extent of the impact of climate change on the world's oceans, and predict more accurately the wider effect this could have on the planet.

Source: [phys.org](https://www.phys.org); 17 August 2020

NASA-LED STUDY REVEALS THE CAUSES OF SEA LEVEL RISE SINCE 1900

- University of Reading

To make better predictions about the future impacts of sea level rise, new techniques are being developed to fill gaps in the historic record of sea level measurements. We know the factors that play a role in sea level rise: Melting glaciers and ice sheets add water to the seas, and warmer temperatures cause water to expand. Other factors are known to slow the rise, such as dams impounding water on the land, stymying its flow into the sea.

When each factor is added together, this estimate should match the sea level that scientists observe. Until now, however, the sea level "budget" has fallen short of the observed sea level rise, leading scientists to question why the budget wouldn't balance. A new study published on Aug.19 seeks to balance this budget. By gaining new insights to historic measurements, scientists can better forecast how each of these factors will affect sea level rise and how this rise will impact us in the future. For example, in its recent flooding report, the National Oceanic and Atmospheric Administration (NOAA) noted a rapid increase in sea level rise-related flooding events along U.S. coasts over the last 20 years, and they are expected to grow in extent, frequency, and depth as sea levels continue to rise.

Factors Driving Our Rising Seas

On reexamining each of the known contributors to sea level rise from 1900 to 2018, the research, led by NASA's Jet Propulsion Laboratory in Southern California, uses improved estimates and applies satellite data to better understand historic measurements. The researchers found that estimates of global sea level variations based on tide-gauge observations had slightly overestimated global sea levels before the 1970s. (Located at coastal stations scattered around the globe, tide gauges are used to measure sea level height.) They also found that mountain glacier meltwater was adding more water to the oceans than previously realized but that the relative contribution of glaciers to sea level rise is slowly decreasing. And they discovered that glacier and Greenland ice sheet mass loss explain the increased rate of sea level rise before 1940.

In addition, the new study found that during the 1970s, when dam construction was at its peak, sea level rise slowed to a crawl. Dams create reservoirs that can impound freshwater that would normally flow straight into the sea. "That was one of the biggest surprises for me," said lead researcher Thomas Frederikse, a postdoctoral fellow at JPL, referring to the peak in global dam projects at that time. "We impounded so much freshwater, humanity nearly brought sea level rise to a halt."

Since the 1990s, however, Greenland and Antarctic ice sheet mass loss and thermal expansion have accelerated sea level rise, while freshwater impoundment has decreased. As our climate continues to warm, the majority of this thermal energy is

absorbed by the oceans, causing the volume of the water to expand. In fact, ice sheet melt and thermal expansion now account for about two-thirds of observed global mean sea level rise. Mountain glacier meltwater currently contributes another 20%, while declining freshwater water storage on land adds the remaining 10%. All told, sea levels have risen on average 1.6 millimeters (0.063 inches) per year between 1900 and 2018. In fact, sea levels are rising at a faster rate than at any time in the 20th century. But previous estimates of the mass of melting ice and thermal expansion of the ocean fell short of explaining this rate, particularly before the era of precise satellite observations of the world's oceans, creating a deficit in the historic sea level budget.

Finding a Balance

In simple terms, the sea level budget should balance if the known factors are accurately estimated and added together. It's a bit like balancing the transactions in your bank account: Added together, all the transactions in your statement should match the total. If they don't, you may have overlooked a transaction or two. The same logic can be applied to the sea level budget: When each factor that affects sea level is added together, this estimate should match the sea level that scientists observe. Until now, however, the sea level budget has fallen short of the observed sea level rise. "That was a problem," said Frederikse. "How could we trust projections of future sea level change without fully understanding what factors are driving the changes that we have seen in the past?" Frederikse led an international team of scientists to develop a state-of-the-art framework that pulls together the advances in each area of study – from sea level models to satellite observations – to improve our understanding of the factors affecting sea level rise for the past 120 years.

The latest satellite observations came from the pair of NASA – German Aerospace Center (DLR) Gravity Recovery and Climate Experiment (GRACE) satellites that operated from 2002-2017, and their successor pair, the NASA – German Research Centre for Geosciences (GFZ) GRACE Follow-On (launched in 2018). Additional data from the series of TOPEX/Jason satellites – a joint effort of NASA and the French space agency Centre National d'Etudes Spatiales – that have operated continuously since 1992 were included in the analysis to enhance tide-gauge data.

"Tide-gauge data was the primary way to measure sea level before 1992, but sea level change isn't uniform around the globe, so there were uncertainties in the historic estimates," said Sönke Dangendorf, an assistant professor of oceanography at Old Dominion University in Norfolk, Virginia, and a coauthor of the study. "Also, measuring each of the factors that contribute to global mean sea levels was very difficult, so it was hard to gain an accurate picture." But over the past two decades, scientists have been "flooded" with satellite data, added Dangendorf, which has helped them precisely track the physical processes that affect sea levels.

For example, GRACE and GRACE-FO measurements have accurately tracked global water mass changes, melting glaciers, ice sheets, and how much water is stored on land. Other satellite observations have tracked how regional ocean salinity changes and thermal expansion affect some parts of the world more than others. Up-and-down movements of Earth's crust influence the regional and global levels of the oceans as

well, so these aspects were included in the team's analysis. "With the GRACE and GRACE-FO data we can effectively back-extrapolate the relationship between these observations and how much sea level rises at a particular place," said Felix Landerer, project scientist at JPL for GRACE-FO and a coauthor of the study. "All observations together give us a pretty accurate idea of what contributed to sea level change since 1900, and by how much."

The study, titled "The Causes of Sea Level Rise Since 1900," was published Aug. 19 in *Nature*. In addition to scientists from JPL and Old Dominion University, the project involved researchers from Caltech, Université Catholique de Louvain in Belgium, University of Siegen in Germany, the National Oceanography Centre in the United Kingdom, Courant Institute in New York, Chinese Academy of Sciences, and Academia Sinica in Taiwan. JPL managed the GRACE mission and manages the GRACE-FO mission for NASA's Earth Science Division of the Science Mission Directorate at NASA Headquarters in Washington. Based on Pasadena, California, Caltech manages JPL for NASA.

Source: [nasa.gov](https://www.nasa.gov); 21 August 2020

GEOPOLITICS

INDIA'S GEOPOLITICAL INTERESTS ARE IN CLOSE ALIGNMENT WITH MODERATE ARAB CENTRE

- C. Raja Mohan

The geopolitical realignment in the Middle East, marked by last week's agreement on the normalisation of relations between the United Arab Emirates and Israel, intersects with the equally significant reorientation of the Subcontinent's relationship with the region. As Pakistan rediscovers its tradition of aligning with non-Arab powers, India must renew its defence of Arab sovereignty.

If India welcomed the decision by Abu Dhabi and Tel Aviv, Pakistan was ambivalent and merely "noted" the move and its foreign office pointed to the "far-reaching" (negative) implications. On the face of it, the difference in the Indian and Pakistani statements can be explained by the fact that Delhi has diplomatic ties with Israel and Islamabad does not. But there is a lot more to this story.

Under Prime Minister Narendra Modi, the engagement with the Arab Gulf has become deeper. The last six years have also coincided with a significant deterioration of Pakistan's relations with the region, especially with the UAE and Saudi Arabia. Pakistan has been angry with UAE's invitation to India to address the Organisation of Islamic Cooperation in early 2019 and the reluctance of Saudi Arabia to convene a meeting to condemn Indian actions in Kashmir last August. Pakistan's foreign minister Shah Mehmood Qureshi threatened earlier this month to convene a meeting of foreign ministers of Islamic nations, outside of the OIC, to attack India's Kashmir policy. As an angry Saudi Arabia called back part of its generous recent loan to Pakistan and threatened to suspend the credit facility for oil purchases, army chief General Qamar Javed Bajwa rushed in to pick up the pieces. He is in Riyadh this week to smooth things over. Some in Pakistan dismiss the remarks as intemperate and attribute it to Qureshi's well-known habit of grandstanding. The problem appears deeper. It might be recalled that Prime Minister Imran Khan was all set to attend last December's meeting of the Islamic leaders called by the then Prime Minister of Malaysia, Mahathir Mohamad and backed by the Turkish President, Recep Tayyip Erdogan. Khan pulled out only at the last minute amidst reported pressure from Saudi Arabia.

Here is the essence of the emerging contradiction between Saudi Arabia and the UAE on the one hand and Pakistan on the other. Saudis and Emiratis see sharpening existential threats to their kingdoms from both the Sunni Muslim brotherhood backed by Turkey and Shiite Iran's regional expansionism. On the other hand, Imran Khan appears to be dreaming of a new regional alliance with Turkey and Iran. Pakistan is

also betting that a rising China and an assertive Russia will both support this new geopolitical formation as part of their own efforts to oust America from the Middle East.

The idea of such an alliance was publicly articulated by Iran's ambassador to Pakistan earlier this year and found much political resonance in Islamabad. On the face of it, the idea runs counter to Delhi's conventional wisdom that Pakistan and Gulf Arabs are joined at the hip. But the idea of a non-Arab alliance, backed by outside powers, has some lineage in Pakistan's foreign policy. Pakistan enthusiastically embraced the Baghdad Pact that the British stitched together with Iran, Iraq and Turkey in 1955. The Pact had to be renamed CENTO (Central Treaty Organisation) once Iraq, the only Arab member, walked out in 1958. Turkey, Iran and Pakistan formed an economic adjunct to the CENTO called the RCD (Regional Cooperation for Development). Both were wound up in 1979 soon after Iran's Islamic Revolution.

But it was not easy to kill the idea of a non-Arab alliance. Iran, Turkey and Pakistan gathered again to form the Economic Cooperation Organisation (ECO) in 1985 and after the collapse of the Soviet Union, they brought in the newly independent Central Asian Republics.

For Turkey and Iran, the new non-Arab alliance backed by Russia and China is an instrument to advance their role in the Arab world at the expense of the Saudis. Erdogan dreams of restoring the Ottoman domination over the Arab world. The Muslim Brotherhood is its chosen instrument. Iran, which wants to wrest the mantle of Islamic leadership from Saudi Arabia, leverages the Shia population across the Arab states. Both Turkey and Iran now intervene with impunity in the internal affairs of the Arab world. Two other states have joined this Great Game. Malaysia's Mahathir fancied himself as a leader of the Islamic world. Arab Qatar, which is locked in a fraternal fight with the Saudis and the Emiratis, wants to carve out an outsized role for itself in the Middle East.

It is no secret that Russians would like to bring the US down a notch or two in the Middle East. Beijing will be happy to let the Russians, Turks, and Iranians be the anti-American vanguard, while consolidating China's economic influence in the region. But why does Islamabad want to join the alliance against Saudi Arabia and the UAE that have lent so much economic assistance to Pakistan over the decades. Islamabad is probably betting that America is on its way out of the Middle East, and that its all-weather strategic partnership with a rising China would give Pakistan new leverage in the changing Middle East. In the interim, the threat to align with Turkey and Iran serves as an instrument to put pressure on the Saudis and Emiratis. Whatever might be the finesse that General Bajwa might come up with, Delhi must go back to the deepest source of regional policy — unflinching support for Arab sovereignty. That, in turn, expresses itself in five principles.

First, resist the temptation of telling the Arabs what is good for them. Support their efforts to reconcile with non-Arab neighbours, including Israel, Turkey and Iran. Second, oppose foreign interventions in the Arab world. In the past, those came from the West and Israel. Today, most Arabs see the greatest threat to their security from Turkish and Iranian interventions. Third, extend support to Arab economic

integration, intra-Arab political reconciliation and the strengthening of regional institutions.

Fourth, recognise that India's geopolitical interests are in close alignment with those in the moderate Arab Centre — including Egypt, Jordan, Saudi Arabia, the UAE and Oman. Fifth, India can't be passive amidst the unfolding geopolitical realignment in West Asia. Some members of the incipient alliance — Turkey, Malaysia and China — have been the most vocal in challenging India's territorial sovereignty in Kashmir. The Qatar-based Al Jazeera spews more poison against India than Pakistani media outlets. Standing up for Arab sovereignty and opposing the forces of regional destabilisation must be at the very heart of India's new engagement with the Middle East.

This article first appeared in the print edition on August 18, 2020 under the title 'India, Pakistan and Arab sovereignty'. The writer is Director, Institute of South Asian Studies, National University of Singapore and contributing editor on international affairs for The Indian Express.

Source: indianexpress.com; 18 August 2020

QURESHI HEADS TO BEIJING AFTER IMRAN KHAN'S 'PAK FUTURE WITH CHINA' REMARK

- Shishir Gupta

Pakistan foreign minister Makhdoom Shah Mehmood Qureshi is leaving for Beijing for 'strategic level' discussions with his Chinese counterparts on Thursday, days after Prime Minister Imran Khan underscored that Pakistan's future is connected with that of its long-time ally China. Qureshi will be accompanied by a team of diplomats including foreign secretary Sohail Mahmood, people familiar with the development said.

Qureshi is scheduled to meet China's foreign minister and state councillor Wang Yi. On the agenda, according to reports in China and Islamabad, are discussions linked to belt and road projects, bilateral ties and preparations for President Xi Jinping's visit to Pakistan expected later this year. Qureshi is also expected to seek support for Pakistan's stand on Kashmir and discuss the India-China standoff in east Ladakh. PM Imran Khan had underscored the importance of ties with China this week when he, in a television interview, insisted that reports about breakdown in relations with Saudi Arabia were "baseless". On China, PM Khan said, Pakistan was strengthening ties with China. "It should be clear that our future is connected with China... China also needs Pakistan very much," he said. "China is our only friend which has remained politically steadfast with Pakistan during good and bad times," PM Khan had said.

Like when Saudi kingdom signalled its displeasure by demanding that Pakistan return \$ 1 billion out of a \$ 3 billion loan extended by Riyadh in 2018, Pakistan had turned to China. Qureshi's visit to Beijing comes at a time he has been under attack in Islamabad, both from within and without the Imran Khan government, for his broadside at Saudi Arabia for not convening the Organisation of Islamic Conference, or OIC meeting of

foreign ministers on Kashmir. Pakistan army chief General Qamar Javed Bajwa made a quick visit to Saudi Arabia this week in an effort to smooth relations between Islamabad and Riyadh.

Qureshi had threatened to approach other Muslim countries for a conference on Kashmir outside the OIC platform if Saudi Arabia did not play ball, a remark that did not go down well in Riyadh that last year prevailed upon Pakistan at the last minute to absent itself from a joint attempt by Turkey and Malaysia to create a new forum of Islamic countries. Foreign ministers of Malaysia, Turkey, Qatar, Iran, and Indonesia attended this meeting. People familiar with the development in New Delhi said China has been pushing Pakistan to play a lead role in the OIC with support of Turkey and Malaysia. Gen Bajwa, according to diplomats in New Delhi and Riyadh, is learnt to have conveyed Imran Khan's regret at Qureshi's comment and asked Saudi Arabia to agree to a meeting of the smaller group within the OIC, formally called the OIC contact group on Kashmir. From all available indications, Gen Bajwa didn't get far.

Source: [hindustantimes.com](https://www.hindustantimes.com); 20 August 2020

USS HERSHEL 'WOODY' WILLIAMS IN EASTERN MEDITERRANEAN FOR TRAINING AS GREECE-TURKEY TENSIONS CONTINUE

- Megan Eckstein

The Navy's second expeditionary sea base is starting training operations with regional partners off Greece this week, even as the Eastern Mediterranean has been a place of tension between NATO allies in recent weeks.

USS Hershel "Woody" Williams (ESB-4) departed Norfolk, Va., on its maiden deployment on July 27; made its first port visit to Naples, Italy, on Aug. 13 for a routine logistics stop; and then arrived in Souda Bay, Greece, on Aug. 18. The ship is meant to primarily support operations in U.S. Africa Command – operating in the Mediterranean Sea, Gulf of Guinea, Indian Ocean and more – but could also support U.S. European Command or U.S. Central Command if called upon, USNI News has previously reported. "USS Hershel "Woody" Williams arrived in port Souda Bay, Greece, for a scheduled logistics stop, Aug. 18th and got underway this morning to conduct scheduled interoperability training with regional forces. These two events were previously scheduled and are not in a response to any current situation," U.S. 6th Fleet spokesman Cmdr. Kyle Raines told USNI News. "The ship will be an enduring presence in the AFRICOM area of responsibility. While in the region, the ship will support operations with allies and partners in the Mediterranean, and the waters around East, South and West Africa, to include the Gulf of Guinea. This ship is a key element in integration between U.S. Navy and Marine Corps operations, especially Marine aviation and support to amphibious operations. Other operations and training the ship can conduct include support to special operations, command and control, and staging of equipment and other assets as directed," Raines continued.

“By bringing a ship of this scale and capability to the region, we aim to improve maritime security, which provides opportunities and prosperity for all nations.” Whereas operations in the Eastern Mediterranean in recent years might typically focus on searching for Russian submarines or supporting ground operations in Syria or Iraq, Hershel Williams instead finds itself operating in waters where Turkey and Greece are in a standoff, after Turkey and France recently had a spat there as well.

Greece is trying to protect its territorial waters – and natural resources under the seabed – and vowed that “Greece will not accept a violation of its sovereignty and will do whatever is necessary to defend its sovereign rights,” a government spokesman said, according to The Associated Press. Turkey had been readying a survey ship to move into the area south of Greece, arguing that thousands of small islands in the Aegean and Ionian Seas shouldn’t extend Greece’s territorial claims so far and that newly discovered oil, gas and mineral deposits should be shared rather than belong exclusively to Greece. “We want all natural resources in the eastern Mediterranean to be shared fairly,” a Turkish spokesman said, according to AP.

France has boosted its military presence in the area in support of Greece, after having its own disagreement with Turkey in the Eastern Mediterranean in June. A French warship tried to stop and inspect a cargo ship headed to Libya, with the French crew worried it was smuggling arms into Libya in violation of a United Nations embargo, according to a Reuters article. France says its frigate was harassed by three Turkish Navy ships accompanying the cargo ship. Turkey disputes this and says the French frigate was the aggressor. Last week France announced it would send two Rafale fighter jets and frigate FS La Fayette (F710) to the Eastern Mediterranean as part of an increase in military presence to support its NATO ally, Greece – though Turkey, too, is a NATO ally.

Unlike France, which said its military forces were in the region to support Greece, the 6th Fleet statement said Hershel Williams’ presence was unrelated to current events. Turkey has increasingly found itself at odds with its NATO allies in recent years, including its very public fallout from the F-35 Lightning II Joint Strike Fighter program after it purchased a Russian air defense missile system. The Pentagon said it would not allow Turkey to operate both the Russian system and the F-35, and Turkey has since been kicked out of both the F-35 procurement effort as well as the industrial base, with the U.S. and its international partners seeking alternative sources of components that Turkey was meant to supply.

Source: news.usni.org; 20 August 2020

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