



MAKING WAVES

A maritime news brief covering:

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

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CONTENTS

MARITIME SECURITY	3
RUSSIA'S NUCLEAR-POWERED ICEBREAKER IS A STEP TOWARD MILITARY DOMINATION	3
AMID MEDITERRANEAN TENSIONS, RETIRED TURKISH ADMIRAL GRABS THE SPOTLIGHT TOUTING SUPREMACY AT SEA	4
SOUTHEAST ASIA: A NEW STRATEGIC NEXUS FOR JAPAN'S MARITIME STRATEGY	7
DUTERTE GETS RARE PRAISE FOR RAISING SEA FEUD RULING AT UN.....	16
MARITIME FORCES.....	18
FRENCH SHIPYARD KERSHIP HAS COMPLETED HULL AND SUPERSTRUCTURE OF SECOND OPV FOR ARGENTINE NAVY	18
US DEFENCE SECRETARY CALLS PM, DISCUSSES MILITARY COOPERATION. 19	
FIGHTER PILOT SHORTAGE PUTS US NAVY IN A QUANDARY	19
US NAVY OFFICIALLY CHRISTENS NEWEST VIRGINIA CLASS SUBMARINE ...	20
SHIPPING, PORTS AND OCEAN ECONOMY.....	22
FIRE-HIT INDIAN OIL-CHARTERED TANKER OWNER TO PAY \$1.8 MILLION TO SRI LANKA.....	22
ARE SMALL SCALE PLANTS THE FUTURE FOR LNG?	23
FIRST DIRECT CARGO FERRY SERVICE BETWEEN INDIA, MALDIVES FLAGGED OFF	24
FOR CARNIVAL CRUISE LINES, 1920 'DEATH ON THE HIGH SEAS ACT' CURBS CORONAVIRUS DAMAGES.....	25
MARINE ENVIRONMENT	27
CHINA'S COMMITMENT TO BECOME CARBON NEUTRAL BY 2060, EXPLAINED	27
SCIENTISTS MADE A SUPER-ENZYME THAT ABSOLUTELY RAVAGES PLASTIC BOTTLES.....	31
WASTE COLLECTING FLOATING JETTY LAUNCHED IN NORWAY	32
TAIWAN TO CREATE REGISTRATION SYSTEM TO FIGHT 'GHOST' FISHING GEAR.....	33
GEOPOLITICS	34

“WE ARE NOT ABLE TO PAY”: KENYAN MPs URGE RENEGOTIATION OF CHINESE RAIL DEBT.....	34
US EMBASSY IN TURKEY SAYS IT “DOES NOT SIDE IN MARITIME BOUNDARY DISPUTES” DESPITE SIDING IN SOUTH CHINA SEA	35
INDIA, US "CAN SHAPE INDO-PACIFIC ORDER FOR BETTER FUTURE": JOE BIDEN	36
SUGA, MERKEL AGREE OVER INDO-PACIFIC VISION.....	37
ACKNOWLEDGEMENTS.....	38

MARITIME SECURITY

RUSSIA'S NUCLEAR-POWERED ICEBREAKER IS A STEP TOWARD MILITARY DOMINATION

- Kyle Mizokami

Russia's newest icebreaker, the nuclear-powered Arktika, is headed to its new homeport in St. Petersburg, Russia. The ship, painted in the colors of the Russian state flag, will operate north of the Arctic Circle in anticipation of a year-round shipping route across the icy far north. Arktika is part of Moscow's emerging policy of exploiting a warming arctic region—and protecting its stake in the region from competitors. Arktika is the first of a new class of nuclear-powered icebreakers. Construction began at the Baltic Shipyards in St. Petersburg in 2012 with a scheduled launch in 2017, but delays pushed the completion back to 2020. This past February, a short circuit damaged one of the ship's three 300-ton electric motors, disabling one of the three propellers. Russian authorities ordered the ship to continue, however, and the ship is currently moving on just two propellers. The ship is 567 feet long and 112 feet wide, and displaces 33,500 tons in the water. The relatively low length-to-beam ratio and a very high superstructure make for a stout-looking ship. Two RITM-200 nuclear reactors provide a total of 175 megawatts of power. By comparison, the USS Gerald R. Ford, America's newest aircraft carrier, displaces 100,000 tons and is powered by nuclear reactors that generate 100 megawatts.

Icebreakers are often thought of as ships that literally ram their way through ice, pushing forward until it cracks from horizontal pressure. In reality, icebreakers do their job by bearing down on ice, using their strong hulls to crack ice from above. Arktika can smash through nearly 10 vertical feet of sea ice, using its reinforced steel double hull to bring her weight down on particularly thick sheets of ice. Icebreakers are particularly important to Russia, the only country in the world with more than 2 million citizens living above the Arctic Circle. The ships are vital to many Russian towns and cities, crushing a path through winter ice for other ships to bring heating oil and other goods. Icebreakers can also rescue other ships trapped in encroaching ice. In 2019, Russian President Vladimir Putin announced the country would ultimately have a fleet of 13 icebreakers, the majority of them nuclear-powered. And then there's the other reason icebreakers are important: global warming. The loss of arctic ice to warming oceans is making sailing from East Asia to Europe via the Arctic Ocean increasingly viable, with the first commercial ship making the trip in 2018. Ships traveling the Northern Sea Route would spend 40 percent fewer days at sea than ships sailing to the same destination via the Suez Canal, making it a compelling (but colder) alternative. Russia's northern border lies parallel to the Northern Sea Route, giving the country the unique opportunity to facilitate passage—for a fee, of course. Icebreakers like Arktika could also allow Russia to militarily dominate the Northern Sea Route, smashing a route for Russian warships and transports full of Russian

Marines. Warming temperatures will mean other countries, such as Canada and the U.S., will likely move to unlock natural resources previously trapped under sheets of sea ice, and Russia will be in a position to threaten oil, gas, and mineral exploration and exploitation. Arktika also has implications outside the arctic arena: Convoys traveling the northern route could move troops and equipment from East to West (and vice versa) relatively quickly, with their transit covered by permanent Arctic military outposts. Russia is building two sister ships to Arktika: Ural and Sibr. They'll cement Russia's position as an icebreaking superpower. Meanwhile the U.S. operates just one heavy icebreaker, Polar Star, with plans to build three more from 2023 on.

Source: popularmechanics.com; 24 September 2020

AMID MEDITERRANEAN TENSIONS, RETIRED TURKISH ADMIRAL GRABS THE SPOTLIGHT TOUTING SUPREMACY AT SEA

- Kareem Fahim

ISTANBUL — After a career at sea and eight years of retirement, Cem Gurdeniz, a 62-year-old Turkish admiral, has suddenly found himself in the limelight here, touting an expansive, nationalist vision of Turkish power projected far into the contested waters off his country's shores. Gurdeniz developed the maritime doctrine, called Blue Homeland, more than a decade ago because he was disturbed by what he said was the government's reluctance to secure Turkey's rights. His vision has gained popularity at a volatile moment as Turkey and Greece square off in the eastern Mediterranean, leading to fears of a war within NATO.

Blue Homeland's aims are spelled out on a map showing Turkey's land mass surrounded by a wide buffer of nearly 180,000 squares miles of sea stretching beyond the Greek islands off Turkey's west coast. The concept — once narrowly associated with left-wing nationalists — is now regularly cited by Turkish officials, including President Recep Tayyip Erdogan, when talking about maritime disputes. Blue Homeland has energized Turks who feel the country has been unjustly denied its rightful claims to the sea, given its long coastline, and has confirmed for adversaries fears of resurgent Turkish expansionism. "We cannot neglect the seas again. We cannot be pushed away from the geopolitics of the Mediterranean, the civilization of the Mediterranean," Gurdeniz said in an interview in an Istanbul cafe overlooking the Bosphorus and, in the distance, the Black Sea. Rival claims by Turkey and Greece over sovereignty in the island-dotted seas that separate them have set off a squall, marked by taunts, denunciations, rival maps and aggressive deployment of warplanes and ships. In the last few months, tensions have centered on the Oruc Reis, a Turkish seismic research vessel that has been exploring for oil and gas deposits in contested waters while escorted by Turkish naval ships and stalked by Greek frigates. Greek and Turkish naval ships collided in mid-August, heightening concerns of a wider conflagration.

The conflict has cleaved the region into feuding camps, pitting Turkey and Libya against an alliance led by Greece, Cyprus, the United Arab Emirates and Egypt. France has sided with Greece, and the United States finds itself stuck between its NATO allies. Increasingly bellicose attitudes toward Europe among elements of Turkey's political establishment have proved fertile ground for promoters of Blue Homeland. "Just as our nation achieved victory in its fight for independence despite poverty and deprivation, it will never hesitate to thwart the desires and moves for a Sèvres in Blue Homeland today as well," Erdogan said in a speech last month, referring to the Treaty of Sèvres, which divided up the Ottoman Empire among European powers. Turkey's Defense Ministry has referred to Gurdeniz's vision — Mavi Vatan in Turkish — as its "covenant." The admiral has become a frequent guest on television talk shows. Blue Homeland has seeped into the culture as well, featuring, for instance, in a recent radio commercial for a Turkish solar panel company. There is "significant evidence that suggests that Gurdeniz's views have had a profound impact," Ryan Gingeras, a professor at the Naval Postgraduate School in Monterey, Calif., wrote in a June essay about Blue Homeland that noted its widespread use in the Turkish political establishment and among other former senior naval officers.

A clear sign of the doctrine's influence was a maritime agreement Turkey struck with one of Libya's two warring governments last year that seeks to extend Turkish jurisdiction far into the Mediterranean, south of Crete. Kyriakos Mitsotakis, Greece's prime minister, writing this month in several European newspapers, called Turkey's agreement with Libya "illegal" and cited a litany of provocative actions carried out by Erdogan, including hydrocarbon exploration in disputed waters. "Turkey's rhetoric is from a bygone age," Mitsotakis wrote. "It talks about enemies, martyrs, struggle, and a willingness to pay any price." A recent announcement by the Trump administration that it would conduct military training with Cyprus, Greece's ally, angered Ankara. In the last few days, the United States has taken the unusual step of denouncing a rival map that has been used to justify claims by Greece and Cyprus to broad swaths of the sea — a move intended to assuage Turkish fears. "The United States does not regard this document as having legal significance," David M. Satterfield, the U.S. ambassador to Turkey, said during a meeting with journalists Tuesday, referring to the Seville Map commissioned more than a decade ago by the European Union. "This cannot be resolved by declarations, nor can it be resolved by production of maps or other documents," he said. On Tuesday, in what seemed like a breakthrough, Turkey and Greece agreed to start a new round of negotiations "in the near future" over their contested maritime claims, Greece's Foreign Ministry said in a statement. But in advance of any talks, Turkey and Greece have staked out "maximalist positions," according to Sinem Adar, an associate at the Center for Applied Turkey Studies in Berlin. "Reaching a compromise will be a hard and long path if it ever happens," she said.

Arguments over maritime claims have brought the two countries close to blows before, including in 1996, when the United States stepped in to defuse a conflict over a 10-acre uninhabited island. The stakes are higher now, because of the scramble for oil and gas deposits in the contested waters around Cyprus. The disputes will be solved only when Ankara and Athens show a willingness to compromise, analysts say, but so far, the two governments have been unable to even agree on the ground rules, with Turkey rejecting definitions laid out in the U.N. Convention on the Law of the Sea, which it

has never ratified, and Greece saying its claims — including to expansive jurisdiction around its many islands — apply to Turkey as a matter of settled international law. Before Blue Homeland was widely adopted by Turkish politicians, it was seen as reflecting the worldview of nationalists who oppose Ankara's orientation toward NATO, the United States and the E.U. and favor closer ties with Russia and China. Gurdeniz — who studied at the Naval Postgraduate School, worked at NATO and collaborated extensively with U.S. naval officers — said he agreed with those views but is not a “zealous” nationalist. He called himself a “Kemalist,” referring to the secular ideology of Mustafa Kemal Atatürk, the founder of modern Turkey, and distancing himself from Erdogan's Islamist-based policies. But he added: “I don't get involved in the daily politics of Turkey.” Gurdeniz joined the Turkish navy in 1972 as a 14-year-old cadet, became an officer seven years later and was promoted to admiral in 2004. He came up with the concept of Blue Homeland while working in the navy's policy and planning office in 2006, drawing inspiration for the phrase from his late mother, who was a “maritime poet,” he said. In the interview, Gurdeniz laid out his doctrine's lineage, a history of grievances stretching back to the Ottoman era that he said showed how Turkey had missed opportunities to exert its maritime claims or been unfairly hemmed in by foreign powers. A turning point, he said, was Turkey's 1974 invasion of Cyprus and the division of that country between the Greek Cypriot south and the Turkish Cypriot north. Only Turkey recognizes the northern government. “Turkey changed the map,” he said, referring to the invasion as “one of the biggest achievements in military history.” In 2011, Gurdeniz was among hundreds who were arrested in a purge of nationalist officers and convicted of plotting to overthrow Erdogan's Justice and Development Party. He said he promoted his ideas about naval power at his trial and later, as he served 3½ years in prison, in a column he wrote every Sunday for a newspaper affiliated with Vatan, a Turkish nationalist party.

But it was not until after a coup attempt against Erdogan's government in 2016 that the concept of Blue Homeland really took off, Adar said, as Erdogan formed a political alliance with nationalists and embarked on a more aggressive foreign policy that has seen Turkish armed forces engaged in conflicts from northern Iraq to Libya. She said Turkey's ruling circles had concluded after the coup attempt that “Turkey is under threat. The global order is changing. We can't trust our Western partners. We have to help ourselves.” It is unclear, however, how long Blue Homeland will remain popular. A recent poll by the Turkish research group Metropoll showed the Turkish public overwhelmingly opposed to a military conflict in the eastern Mediterranean, Adar said. Among Turkey's ruling elites, a central disagreement has been whether to emphasize diplomacy with Greece or continue to lean on military power. Another point of divergence is Turkey's relationship with Egypt, with some — including Gurdeniz — arguing Turkey should mend fences with Egypt's military-backed government, which is an adversary in the current crisis but some view as a natural ally. Ultimately, the question for Gurdeniz is how to resist adversaries that want to see Turkey “landlocked.” At stake, he said, is Turkey's defense, its security, its access to resources and its welfare. “Even happiness,” he said.

Source: [washingtonpost.com](https://www.washingtonpost.com); 27 September 2020

SOUTHEAST ASIA: A NEW STRATEGIC NEXUS FOR JAPAN'S MARITIME STRATEGY

- John Bradford

Japan's maritime strategy is fundamentally focused on partnering with its United States ally to ensure that the Indo-Pacific sea lanes critical to its security are safe and secure. Most of the activities by its two maritime security services, the Japan Maritime Self Defense Force (JMSDF) and Japan Coast Guard (JCG), are focused on Japan's near seas and seek to deter aggressive actions by the People's Republic of China (PRC), North Korea, and Russia while enabling good governance of the Japanese EEZ. Japan also deploys its forces to locations along those sea lanes, such as the Gulf of Aden and Strait of Hormuz, where Japanese shipping is under significant and direct threat. Equally critical to the strategy are the Japanese activities aimed at the relatively more safe and secure, yet still vulnerable sea lanes that pass through and near Southeast Asia. This includes enclosed seas such as the South China Sea, Java Sea, and Bay of Bengal as well as critical chokepoints such as the Straits of Malacca, Singapore, Sunda, and Lombok. Much of this effort draws on Japan's economic strength and Japan has been heavily invested in developing infrastructure and safety capacity alongside this region's coastal states for more than 50 years. For the last 20 years the Japan Coast Guard has also been engaged with developing the coastal states' maritime law enforcement capacity. In the last decade, the Japanese Ministry of Defense has become involved. It has started new capacity-building projects with regional navies and the JMSDF has been increasingly conducting military operations in the regional waters. With all branches of Japan state power now investing in Southeast Asian maritime security, this region is cementing as a new nexus in Japan's maritime strategy. The scope, strategic intent, and likely future development of Japan's maritime security activities in Southeast Asia merits closer examination.

Japan's Maritime Strategy

Japan's well-established maritime security strategy can be broadly separated into two geographic segments, one pertaining to Japan's home waters and the other to Indo-Pacific sea lanes. In its near seas, Japan faces significant security pressures from the north, west, and south. Aggressive contemporary military postures, territorial disputes, and war legacy issues create security concerns and constrains cooperation between Japan and its neighbors Russia, China, and the Koreans. In the maritime space, the competition with the PRC is the most strained. The concentric rings of Japanese and PRC coast guard and naval forces persistently contest sovereignty, probe reactions, and seek to assert control over the waters surrounding the Senkaku (Diaoyu in Mandarin) islands.¹ This situation demands significant fleet resources while the remainder of the East China Seas provides a long front for patrol and surveillance. The ballistic missile threat from North Korea and Japan's support for the enforcement of United Nations Security Council sanctions against that state also keep the fleet busy. Above the waters approaching Japan, the Japan Air Self Defense Force (JASDF) regularly scrambles fighters in response to PRC and Russian flight operations. Given this increasingly severe situation, protecting Japan's rights and executing its national responsibilities in the sea and airspace associated with the nation under UNCLOS have

occupied the bulk of Japan's security resources. Although pressured in home waters, the government of Japan has long understood that its national security equally relies on the safe transit of goods along critical sea lanes. As measured in calories, Japan is reliant on imports for more than 60 percent of its food.² Japan is also 99.7 percent, 97.5 percent, and 99.3 percent dependent on imports for crude oil, liquified natural gas (LNG), and coal, respectively. Together, these three commodities provide more than 85 percent of Japan's energy. The LNG sources are well-diversified, but 88 percent of the crude oil comes from the Middle East, and Australia is the main supplier of coal.³ Thus, most of Japan's energy passes along Southeast Asian sea lanes. This energy fuels Japan's status as the world's fourth largest exporter of products. Over \$700 billion of goods leave Japan, about 99 percent of those by ship.⁴

Japan's strategy to ensure the safety and security of its critical sea lanes rests on three elements: capitalizing on its alliance with the United States, deploying forces to most critical threat locations, and strengthening positive relations with increasingly capable partners along the sea routes. In recent years, Japanese maritime strategy has cleanly nested under national campaigns to focus Japan's foreign policy in the Indo-Pacific band that stretches along its sea lanes to Europe and Africa. Shortly after Prime Minister Shinzo Abe first assumed office in 2006, Foreign Minister Taro Aso announced the Arc of Freedom and Prosperity.⁵ This foreign policy complemented Japan's existing priorities involving managing relations with immediate neighbors and strengthening the U.S. alliance with an additional emphasis on promoting democracy and increased capability with an arc of partner nations stretching from northern Europe, through the Middle East, past the Indian subcontinent, and across Southeast Asia.⁶ Notably, this arc aligned geographically with Japan's main trade routes minus those across the Pacific Ocean that were already secure thanks to the U.S. alliance. Abe is also credited as the first global leader to highlight the Indo-Pacific geopolitical concept when he gave a 2007 address to the Indian Parliament entitled, "Confluence of the Two Seas."⁷ The next two Prime Ministers, both also from the Liberal Democratic Party (LDP), continued with this prioritization. When the Democratic Party of Japan (DPJ) led the government from 2009-2012, Prime Ministers Hatoyama, Kan, and Noda used different branding but sustained this foreign policy approach toward the coastal states of South and Southeast Asia.⁸ Immediately after returning to power in 2012, Abe published an essay titled "Asia's Democratic Security Diamond." This essay opened with: "Peace, stability, and freedom of navigation in the Pacific Ocean are inseparable from peace, stability, and freedom of navigation in the Indian Ocean. Japan, as one of the oldest sea-faring democracies in Asia, should play a greater role – alongside Australia, India, and the U.S. – in preserving the common good in both regions." Southeast Asia was clearly at the heart of the diamond and it is now the central nexus of the Free and Open Indo-Pacific vision announced in 2016.¹⁰

Japan's Maritime Forces: Operations Near Home and Far Abroad

Japan's 1945 constitution states that "sea, and air forces, as well as other war potential, will never be maintained." Imperial Japanese Navy veterans were re-employed by the Maritime Safety Agency (MSA), a civilian law enforcement body established in 1948 that was also tasked with clearing the approximately 100,000 sea mines laid around Japan during World War II. As the Cold War progressed, the United States forged an

alliance with Japan and encouraged the development of Japanese defense forces. In 1952 the first U.S.-Japan security treaty was ratified and the Maritime Guard Forces, equipped with former U.S. frigates and landing craft, were established under the MSA. In 1954, this body was detached from the MSA, redesignated as the maritime component of the new Self Defense Force (SDF), and its units were quietly dispatched to support mine countermeasure operations around the Korean Peninsula. In 1960, the current U.S.-Japan Security Treaty came into force obligating U.S. forces based in Japan to provide for the defense of Japan and the security of the region. As the Cold War progressed, the JMSDF became more capable and began working hand-in-glove with the U.S. Navy (USN) to contain Soviet units operating from Pacific ports. After the Cold War, JMSDF capability continued to grow and the United States encouraged Japan to expand the geographic scope of JMSDF operations. The MSA remained a civilian force responsible for law enforcement and maintaining the safety of Japanese waters, and its name was officially revised in English to Japan Coast Guard (JCG) in April 2000.

In the years after the Cold War, the JMSDF has been dispatched on a series of mission to enhance security around the western terminus of its Indo-Pacific sea lanes. These dispatches have all been made in coordination with the U.S. and all but one responded to immediate threats to Japanese shipping. The first JMSDF operation beyond Northeast Asia was the 1991 deployment of vessels to support the clearance of sea mines from the Arabian Sea in the wake of the First Gulf War. 10 years later, it sent a force to provide logistics support to the U.S.-led invasion of Afghanistan. In 2009, the new DPJ government ended the Afghanistan support mission, but established a new anti-piracy mission in the Gulf of Aden thereby continuing the persistent presence of Japanese maritime forces in the Western Indian Ocean. Initially, the JMSDF units and their JCG augments provided anti-piracy escorts and conducted maritime surveillance without being a part of any coalition, but they coordinated closely with the United States and eventually joined the U.S.-sponsored CTF 151. In 2015 and 2020, Japan commanded CTF 151. In 2020, Japan dispatched an additional maritime force to gather intelligence and protect its ships in the approaches to the Strait of Hormuz. The government of Japan has made clear that these forces were not a part of the U.S. Operation Sentinel to guard shipping against Iranian provocations. However, it should be noted that the dispatch was made after a U.S. request, so may represent a compromise within the alliance. It can be safely assumed that the operations, including the P-3 flights originating from a Djibouti runway Japan shares with American forces, are coordinated with the U.S. 5th Fleet in a manner reminiscent to that of the initial anti-piracy deployments in 2009.

Japanese Civil Activities to Strengthen Southeast Asian Maritime Safety and Security

The sea lanes between Japan's home waters and the dangerous sea space around the Middle East stretch for more than 5000 nautical miles. For the most part, these sea lanes pass by coastal states capable of providing the governance needed to ensure safety that is sufficient for the free flow of commerce. However, the coastal states vary widely in terms of maritime capacity, the sea lanes are far from hazard free, and Japanese business and government leaders worry about the possibility that disruptive events could quickly create a crisis. The hazards that concern Japan include the

navigation challenges associated with densely trafficked chokepoints, environmental challenges such as extreme weather and oil spills, piracy, terrorism, and war risks. For the last five decades Japan has become increasingly involved in addressing these challenges by supporting coastal state capacity-building projects as a core element of its maritime security strategy.

Japan began these efforts in the late 1960s with an initial focus on assisting coastal state efforts to improve navigational safety in Southeast Asian waterways. The key milestone marking the start of these activities was the founding of the Malacca Strait Council (MSC) in 1969. This Tokyo-based organization coordinated efforts of the privately-funded Nippon Foundation with those of the Japan International Cooperation Agency (JICA), Japanese Transportation Ministry, and JCG. Projects included the installation and maintenance of navigation aids, the removal of shipwrecks, the provision of oil skimming vessels, the donation of a buoy tender to Malaysia, and dredging work. In the 1970s the Japanese foundations and government agencies expanded their capacity-building activities to include waterways and coastal states beyond the Straits of Malacca and Singapore. These projects neatly aligned with Japan's other Overseas Development Assistance (ODA) activities in Southeast Asia that similarly aimed to build capacity that strengthen the region's trust in Japan and develop relationships that would help drive Japan's economic success. When, in 1975, the grounding of the Japanese tanker Showa Maru created a massive oil spill in the Singapore Strait, Japan swiftly recognized the potential for environmental catastrophes to interrupt commerce and added environmental protection to their capacity-building portfolio.¹² Under the 1977 Fukuda Doctrine, this ODA was decoupled from political objectives and Japan pledged that it would not assume a military role in Southeast Asia. When, in 1981, Prime Minister Zenko Suzuki responded to U.S. demands for Japan to assume greater burdens within the alliance by announcing the JMSDF would begin defending sea lanes up to 1000 nautical miles from Japan, it was no coincidence that the distance reached only the Bashi Channel and not into the South China Sea. Indeed, Japan remained quite concerned about memories of war and Southeast Asia sensitivities. In the early and mid-1990s, Japan took advantage of its improved standing in the region to take initial steps to become involved in Southeast Asia's maritime security. For example, a subsidiary of the Nippon Foundation provided most of the seed money for the International Maritime Bureau Piracy Report Centre established in Kuala Lumpur in 1992, and the Japanese shipping industry covered significant portions of its operating costs.¹⁴ During the 1990s the JMSDF also conducted some leadership engagements under the auspices of the Western Pacific Naval Symposium and held its first navy-to-navy staff talks with Southeast Asian partners in 1997. The rise of regional piracy rates in the wake of the 1997 Asian Monetary Crisis catalyzed an expansion of Japan's capacity-building efforts to include maritime law enforcement.¹⁶ Prime Minister Keizo Obuchi kickstarted this expansion at the December 1999 ASEAN +3 summit when he sought international cooperative actions against piracy by proposing the establishment of a regional "Coast Guard body," the strengthening of state support for shipping companies, and improvement of regional coordination.¹⁷ Soon Japan was offering equipment and training, and pressing for joint patrols.¹⁸ After a series of Japanese fact-finding delegations visited the region and Tokyo-hosted several large conferences, the Japan's ambitions were scaled back, but the expanded involvement in Southeast Asian

maritime law enforcement nonetheless came quickly. In 2000 the JCG began establishing permanent overseas positions for officers to support regional coast guards (starting with the nascent Philippine Coast Guard), and in 2001 the JCG began exercising with regional coast guards (starting with the Philippines and Thailand). In 2006 Japanese diplomatic efforts culminated in the creation of the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP).

A notable aspect of Japan's support for Southeast Asia's maritime security has been transfer of patrol boats to regional maritime law enforcement agencies. These transfers have included used converted fishing vessels, retired Japanese patrol boats, and new construction vessels. They have been provided by private Japanese foundations, through government facilitated loans, and as direct assistance. An early example were the transfers to Indonesia and the Philippines made in the mid-2000s. As these vessels were armored, the transfers were governed by Japan's Three Principals on Arms Exports and the receiving partners could only use them for law enforcement operations, to include anti-piracy and counterterrorism.²⁰ Relaxations of the Three Principals in 2011 and 2014 have streamlined the policy process and in recent years Japan has expanded its programs to provide patrol vessels. To date, coast guard and maritime law enforcement agencies in Cambodia, Indonesia, Malaysia, Pulau, the Philippines, Sri Lanka, and Vietnam have received patrol vessels from Japan.

Japan Self Defense Force Operations in Southeast Asia

Civilian arms of Japan's foreign policy apparatus have been investing in strengthening the safety and security of Southeast Asian sea lanes for more than 50 years. In contrast, the JMSDF was essentially absent in Southeast Asia until a bit over a decade ago. That is not to say it was completely missing. Its annual training cruise invariably made some goodwill port visits in the region, ships and aircraft paused to enjoy liberty and build relations while enroute to and returning home from missions in the Western Indian Ocean, it was involved in Western Pacific Naval Symposium (WPNS) activities, and it provided transportation support to peacekeeping operations in Cambodia and Timor Leste.²¹ However, these activities were irregular, generally small in scale, and did not involve strengthening the capabilities of neither the JMSDF nor their partners. In the most recent 10 or so years, a period that scholar Andrew Oros marks as corresponding to a Japanese "security renaissance" when a broad political consensus developed in favor of expanding Japan's direct involvement in international security affairs, the JMSDF began deploying forces specifically to influence the security situation in Southeast Asian waters. The earliest JMSDF ship deployments aimed specifically to impact the Southeast Asian maritime security situation were in alignment with multilateral efforts and frameworks. In December 2004, SDF ships and aircraft were among the international forces that responded to the Indian Ocean tsunami.²³ In 2005, the JMSDF participated in the inaugural WPNS at-sea exercise that was hosted by the Republic of Singapore Navy, and the Japan Ground Self Defense Force (JGSDF) officers participated in the tsunami relief workshop and high-level staff exercise portions of the U.S.-Thai exercise Cobra Gold.²⁴ Since then, maritime exercises sponsored by multilateral organizations such as WPNS, ARF, and ADMM+ have become more frequent and the JMSDF has consistently participated, often sending the

largest contingents.²⁵ While significant from a defense diplomacy perspective, these multinational maritime exercises were often quite simple and were aimed more at confidence-building than strengthening operational capacity. Many focused on disaster response rather than more traditional security concerns.

Japan's National Defense Program Guidelines (NDPG) of 2010 was the first major Japanese policy document to state that the SDF would begin conducting capacity building missions with foreign militaries. The first operation of this new policy was the 2010 deployment of a JMSDF ship to conduct capacity-building activities in Vietnam and Cambodia as a part of the U.S. Pacific Partnership campaign. Since then, JMSDF ships have participated in Pacific Partnership annually, only missing 2011 when they were occupied with supporting domestic disaster response operations in the wake of the tsunami and earthquake. In 2012, Japan executed its first bilateral capacity-building activity in Southeast Asia, an underwater medicine seminar held with the Vietnam Navy. The second bilateral event was a February 2013 oceanography-focused seminar held at the Indonesian Navy Maritime Operations Center in Jakarta. Since then, Japan has conducted similar bilateral capacity-building activities with another eight partner nations. Of these 10 partners, all but Mongolia are South China Sea or Bay of Bengal coastal states.²⁷ In December 2013, Japan's first ever National Security Strategy explained the strategic intent behind these activities: "Japan will provide assistance to those coastal states alongside the sea lanes of communication and other states in enhancing their maritime law enforcement capabilities, and strengthen cooperation with partners on the sea lanes who share strategic interests with Japan."²⁸ In November 2016, Japanese Defense Minister Tomomi Inada delivered the Vientiane Vision at the second ASEAN-Japan Defence Ministers' Informal Meeting. Meant to be a major defense policy statement, the Vientiane Vision outlined Japan's priority for defense cooperation with the ASEAN states as centering on the principles of international law, especially in the field of maritime and air space; promoting maritime security through the building of intelligence, surveillance and reconnaissance (ISR) and search and rescue (SAR) capacities, and capability growth in other security fields.

In the last decade, the JMSDF has also expanded its naval operations in the South China Sea. Unlike the multilateral exercises and capacity-building activities previously mentioned, these activities appear to be more focused on developing JMSDF options to conduct high-end naval operations around that body of water. In that sense, the activities clearly go well beyond the militarization and geographic limitations described four decades ago in the Fukuda and Suzuki Doctrines. Since the government of Japan does not publish the locations of its ships and submarines, it is unclear exactly when these deployments began. One of the earliest activities reported by the Japanese government was a June 2011 trilateral JMSDF-USN-Royal Australian Navy (RAN) exercise in the South China Sea. Since then, reports of JMSDF exercises with other extra-regional navies in the South China Sea have become increasingly frequent. However, JMSDF operational presence in the South China Sea may date back even further. After the Japanese government reported a September 2018 unilateral ASW exercise in the South China Sea, Prime Minister Abe explained, "Japan has been performing submarine exercises in the South China Sea since 15 years ago [sic]. We did so last year and the year before that."³⁰ The apparent emphasis on ASW may reflect concerns that PRC submarines could interdict Japanese shipping. Some

analysts, including some retired JMSDF admirals, argue that the JMSDF is also readying itself to be able to counter a potential PRC ballistic missile submarine bastion in those waters.³¹ Either concern would help explain the JMSDF's emphasis on its partnerships with the Philippines and Vietnam, the nations that straddle the north section of the South China Sea, and flank the important PRC submarine base on Hainan Island.

The JMSDF's relationship with the Philippine Navy is the most developed of its Southeast Asia partnerships. SDF officers began observing the annual U.S.-Philippines Balikatan exercise in 2012 and involvement increased such that the 'observing' delegation of 2018 included two destroyers and a submarine. The Philippines also hosted a JMSDF P-3 for a maritime patrol exchange that took place simultaneously with the U.S.-Philippines exercise CARAT 2015. Japanese P-3s have since visited for several additional cooperative events, and in May 2018 the JMSDF deployed a P-1 to the Philippines for a training event. Notably, before this mission, P-1s had only been deployed overseas for airshows and for a brief counter-piracy mission flying from Djibouti. In 2016, Japan's training submarine Oyashio visited Subic Bay alongside two JMSDF destroyers and the crews took part in confidence-building activities with Filipino counterparts. This was the first JMSDF submarine port call to the Philippines in 15 years, but since that event JMSDF submarines have been frequent visitors to Subic Bay. In October 2018, the JGSDF's nascent Amphibious Rapid Deployment Brigade (ARDB) landed amphibious assault vehicles from a USN ship onto the Philippine shores during the U.S. and Philippine exercise Kamandag. This was the first overseas deployment of the ARDB, a unit created, at least in part, to conduct defensive operations against potential foreign state aggression around Japan's outlying islands. It was also the first deployment of Japanese armored vehicles to Southeast Asia since World War II. Although Japanese spokesmen emphasized that the training was focused on disaster response, other elements of the U.S.-Philippine joint military exercise suggest that it was structured in such a way to also have military applications. The Philippines is also the first, and, thus far, only, nation to acquire Japanese defense equipment. 2014 policy reforms allowed Tokyo to approve defense exports to partner militaries, and in 2017 two used JMSDF TC-90 training aircraft were delivered directly from the SDF to the Armed Forces of the Philippines (AFP) where they were redesignated as C-90s for work as maritime patrol aircraft. Three additional TC-90s were transferred in 2018. Although offering a significant boost to the Philippine ability to develop maritime domain awareness, this new capacity offers limited military value. The C-90s are incapable of carrying weapons and do not incorporate the sort of electronic information collection and sharing system required for effective military surveillance and targeting missions. There are reports that Japan is interested in transferring P-3C aircraft, an ASW-focused aircraft capable of carrying a wide array of weapons and electronic systems, to Southeast Asian partners, but contacts in those countries have explained to the author that their preference for lower life-cycle costs would likely result in acquiring newly constructed European options.

In August 2020, Japan's Mitsubishi Electric Corporation concluded a contract with the Philippines' Department of National Defense to support four air defense radars. For the Philippines, the three FPS-3 fixed radar units and one TPS-P14 mobile radar will provide it considerable new capability to detect and track missiles and aircraft. For Japan, this transfer breaks new ground in that it is the first transfers of newly-built

Japanese-made defense equipment to any nation since the end of World War II. In contrast to past transfers of unarmed patrol boats and aircraft, this is the first Japanese transfer of equipment that will enable much more significant contributions to creating the kill-chains need to counter serious military threats.

Japan has also been prioritizing the development of its defense relations with Vietnam. Japan's first JMSDF capacity-building activity in the region was the previously mentioned 2010 dispatch of JS Kunisaki to Qui Nhon, Vietnam under the Pacific Partnership umbrella. While focused on medical treatment activities and cultural exchanges, the visit included the use of amphibious vehicles landing on a Vietnamese beach.³⁶ The next year, Vietnam hosted the first SDF capacity-building activities in Southeast Asia that were not facilitated as part of a U.S. or multilateral event. Since then the relationship has continued to grow, though it has not yet reached a level such that it includes bilateral defense exercises or operations. In April 2016, two Japanese destroyers made the country's first-post war port call at Cam Ranh Bay. In 2018, JS Kuroshio became the first-ever JMSDF submarine to visit Vietnam. Interactions ashore included courtesy calls and cultural exchanges.³⁷ In 2019, JS Izumo (the helicopter carrier now slated for refit to carry F-35B fighters) and an escort visited Cam Ranh Bay and conducted goodwill exercises with a Vietnam Navy corvette.³⁸ This decade of engagements is clearly creating a valuable partnership. In April 2020, Vietnam agreed to provide refueling services to a JMSDF P-3 returning home from a Djibouti deployment when other nations declined due to their COVID-19 precautions. The aircraft then developed mechanical issues preventing its departure. Vietnam hosted the crew for nearly two months and facilitated special arrangement or the entry of technicians and parts during the height of the pandemic.

Annual deployments of large helicopter carriers such as Izumo for a multi-month deployment to Southeast Asia and the Indian Ocean provide excellent encapsulations of the varied nature of new JMSDF activities in the region. In 2016, during the first of these deployments, JS Ise was the largest ship at the multinational exercise Komodo hosted by Indonesia. Ise then transited to the South China Sea with a cadre of midshipmen from WPNS navies onboard for training while conducting a trilateral passing exercise with RAN and USN ships.⁴⁰ After a goodwill visit to Manila, Ise was then the largest ship involved in the May 2016 ADMM+ Maritime Security/Counter-Terrorism Field Training Exercise that began in Brunei and concluded in Singapore. The following year, the largest ship in the JMSDF fleet, JS Izumo, made a similar deployment to Southeast Asia that included a maritime security training program for officers from ASEAN navies while the ships were in the South China Sea; hosting Philippine President Rodrigo Duterte during a port visit to Manila; calling in Sri Lanka; and completed two days of exercises with ships from Australia, Canada, and the U.S. that included cross-deck exchanges and live-fire events.⁴¹ Similar deployments in 2018 (JS Kaga) and 2019 (JS Izumo) similarly blended unilateral operations in the South China Sea, exercises with the U.S. and other extra-regional navies, support for multilateral maritime security programs, and bilateral relationship-building with regional partners.

Conclusion: Future Trajectories for Japan's Involvement in Southeast Asian Maritime Security

The blended nature of the JMSDF capital ship deployments to Southeast Asian waters reflects its multifaceted maritime goals in the region. Japan is expanding on its decades of capacity-building initiatives in the region to include military dimensions. These activities are aimed at creating strengthened relationships with increasingly capable coastal states along Japan's Indo-Pacific sea lanes. These naval activities are in some ways a simple progression of Japan's longstanding policy to support the development of maritime capacity. However, this expansion reflects a loosening of Japan's domestic policy constraints and the increased comfort that Southeast Asian partners have with hosting Japanese forces. The PRC's increasing capabilities and assertive maritime behavior have hastened this trajectory given Japan's heavy reliance on South China Sea sea lanes and Japan's concerns that China's campaign to assert sovereignty in the South China Sea is strongly linked to its campaign against Japan in the East China Sea. Japan's overarching strategic goal to promote the sustained safety and security of the critical Southeast Asian sea lanes has remained essentially unchanged for more than 50 years. However, Japan has incrementally expanded the range of regional security challenges that it directly addresses and agencies that it mobilizes to assist in this effort. For the last decade or so, these agencies have included the Ministry of Defense and the JMSDF. The JMSDF now regularly deploys to the South China Sea and has a record of conducting high-end warfare exercises with the U.S. and other extra-regional navies in that contested body of water. It makes major contributions to multilateral exercises in the region and has been conducting bilateral capacity-building activities with regional navies. The activities should be expected to continue to expand with the primary limiting factors being the availability of ships and other fleet resources.

To date, the bilateral engagements in Southeast Asia have been almost entirely restrained to goodwill activities, and modest projects focused on building regional partners' constabulary capacities. However, we can expect to see Japan become more involved in assisting regional states with the military defense capabilities. The deal to send newly built and modern air defense radars to the Philippines sets an important precedent in this regard. Continued PRC maritime aggression will be an important driver, but Japan will remain concerned by other maritime threats and increasingly seek to diversify its defense relations away from reliance on the U.S. Although Prime Minister Abe has been an important figure driving Japan's defense engagement in Southeast Asia, his departure is unlikely to cause major adjustments to this trajectory. The domestic policymaking constraints that previously inhibited these sort of defense activities have been dismantled and there is a broad political consensus advocating for more Japanese direct involvement in regional security affairs. Most of the LDP candidates to succeed Abe as Prime Minister played a direct role in developing and implementing these policies. Others, such as former Defense Minister Shigeru Ishiba, hold similar views. Even the opposition party seems comfortable with expanding SDF operations in Southeast Asia. This is not an area where they have resisted, it was on their watch that ships were first sent to Southeast Asia for disaster response and then under the Pacific Partnership umbrella. The developments are proceeding in general alignment with a Japanese effort to foster stronger multilateral security networks and new bilateral partnerships in the face of a shift in relative power and influence that is unfavorable to its ally, the United States. With the Ministry of Defense and SDF joining the other Japanese agencies as direct participants in Southeast Asian maritime

security, Southeast Asia has clearly become a new nexus in Japan's maritime strategy. It is important for Southeast Asian states to realize that as Japan's self-restraint relaxes, they will face bigger decisions regarding the nature and scope of the defense relations they desire with Japan.

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Source: cimsec.org; 21 September 2020

DUTERTE GETS RARE PRAISE FOR RAISING SEA FEUD RULING AT UN

- Jim Gomez

MANILA, Philippines — The Philippine president got rare praises Wednesday from his key critics for invoking before the United Nations a 2016 arbitration ruling that invalidated China's vast territorial claims in the South China Sea, in a surprise move that will likely pique Beijing. President Rodrigo Duterte made one of his strongest defenses of the Philippine victory in the arbitration case in his first address before the annual U.N. General Assembly where world leaders spoke mostly in prerecorded videos due to the pandemic. China has long refused to bring the issue to any international arena.

Duterte, who has nurtured close ties with China since taking office in mid-2016, has long been criticized for refusing to immediately and forcefully demand Chinese compliance with the ruling by a U.N.-backed tribunal. It found China's claims on virtually the entire South China Sea on historical grounds inconsistent with international maritime law. China refused to take part in the arbitration, which was initiated by Duterte's predecessor, and has dismissed the ruling as a "sham." Beijing prefers direct negotiations with each of its rival claimant states and has vehemently refused to have the long-raging disputes internationalized for fears the United States and its allies would find a way to intervene. Duterte welcomed the increasing number of countries that have expressed support for the ruling, which he said stood for "the triumph of reason over rashness, of law over disorder, of amity over ambition." "The award is now part of international law, beyond compromise and beyond the reach of passing governments to dilute, diminish or abandon," Duterte said, without naming China. "We firmly reject attempts to undermine it."

Chinese officials did not immediately issue any reaction.

Albert del Rosario, a former Philippine foreign secretary who brought the disputes with China to international arbitration, said he was heartened by Duterte's move. By underscoring the decision before the annual U.N. gathering of world leaders, Duterte "has acted more faithfully to our constitution, which mandates him and our military

to secure our country's sovereignty and protect our lands and seas," del Rosario said. He urged the Duterte administration to secure the backing of more countries so the ruling could be raised more emphatically in next year's U.N. General Assembly. Antonio Carpio, a retired Philippine Supreme Court justice who helped in the arbitration case, commended Duterte and hoped that "this is the policy that the Duterte administration will implement across all levels" in protecting Philippine maritime rights and seeking international support to enforce the ruling. "Mr. Rodrigo Duterte's 360-degree turn ... is a big victory for international law and Philippine sovereignty against his own defeatist policy on China," former human rights chief Etta Rosales said, adding the president succumbed to pressure for him to uphold international law. Duterte also defended his deadly anti-drug crackdown and played down criticism from human rights advocates in his speech. He has previously harshly criticized the U.N. for raising alarm over his campaign against illegal drugs and threatened to withdraw the Philippines from the world body, which he says his government now values for its role in fighting the global coronavirus pandemic.

Source: startribune.com; 21 September 2020

MARITIME FORCES

FRENCH SHIPYARD KERSHIP HAS COMPLETED HULL AND SUPERSTRUCTURE OF SECOND OPV FOR ARGENTINE NAVY

According to a Tweet released by the Argentine Navy on September 27, 2020, the hull and the superstructure of the second OPV (Offshore Patrol Vessel) ARA Piedrabuena built by the French shipyard naval Group at the Kership Shipyard is completed after 19 months of work. The OPV (Offshore Patrol Vessel) contract for the Argentine Navy was launched on February 14, 2019, Kership was selected to build the three OPVs for the Argentine Navy, a joint company formed by French civil shipbuilder Piriou and Naval shipbuilder Naval Group, previously DCNS. French Company Naval Group has concluded a contract with Argentina to equip its Navy with four Offshore Patrol Vessels OPV 87 including L'Adroit. The ARA Piedrabuena is similar to the ARA Bouchard ex-Adroit of the French Navy built by the French Company Naval Group. The ship was used by the French Navy (Marine Nationale) from 2011 to 2018, demonstrating the relevance and operational value of this new class of Offshore Patrol Vessels in theatres of operations.

In December 2019, the Offshore Patrol Vessel (OPV) L'Adroit has adopted the Argentinian flag and becomes the A.R.A. BOUCHARD. The first of the four OPVs ordered by Argentina. L'Adroit is a Gowind Class offshore patrol vessel (OPV), which was designed and built by DCNS, now Naval Group, for the French Navy to conduct maritime safety and security missions. It has an overall length of 87 m, a beam of 13 m, and a design draught of 3.3 m. The full load displacement of the ship is 1,450 t. It has a crew of 30 sailors and can accommodate up to 30 passengers. It has an endurance of three weeks and a range of 8,000 nautical miles at a maximum speed of

21 kt. The Adroit is armed with one 20mm gun on the foredeck and two 50 cal. machine guns. In addition, L'Adroit is equipped with modern systems for communications, radar surveillance and electronic warfare, integrated into the Polaris® mission management system. This software system merges gathered information to support navigation and allows sharing with other vessels.

Source: navyrecognition.com; 27 September 2020

US DEFENCE SECRETARY CALLS PM, DISCUSSES MILITARY COOPERATION

- Humayun Kabir Bhuiyan

United States Defence Secretary Dr Mark T Esper called Prime Minister Sheikh Hasina and discussed many issues including military cooperation. Prime Minister Hasina is in charge of the country's Defence Ministry. Esper also appreciated Bangladesh's response to the ongoing Covid-19 pandemic. "Secretary of Defense Dr. Mark T. Esper spoke with Bangladesh Prime Minister and Minister of Defense Sheikh Hasina over the phone today on September 11, 2020," said a US Department of Defence statement forwarded by the US embassy in Dhaka.

"During the call, Secretary Esper commended the Prime Minister for Bangladesh's response to the Covid-19 pandemic and the recent goodwill missions to its neighbors," it said. "The two leaders discussed their shared commitment to a free and open Indo-Pacific that ensures the sovereignty of all nations, and specific bilateral defense priorities including maritime and regional security, global peacekeeping, and initiatives to modernize Bangladesh's military capabilities," said the statement "Both leaders expressed their commitment to continue building closer bilateral defense relations in support of shared values and interests," it said.

Source: dhakatribune.com; 15 September 2020

FIGHTER PILOT SHORTAGE PUTS US NAVY IN A QUANDARY

- Dave Makichuk

It seems a rash of technical and safety problems has left the US Navy's fleet short by about 90 fighter pilots. Fixing the issue is an uphill battle, a top aviator said last week. The Navy has seen a slew of issues, including problems with the oxygen flow to the pilots causing negative and unsafe physiological responses in pilots and trainees, as well as readiness and engine trouble with aircraft, according to a report in Defense News. All of this has extended the time it takes to create a fighter pilot from three to four years, and the issues have created a gap in the number of pilots in the fleet, naval

air training chief Rear Admiral Robert Westendorff said at a virtual Tailhook symposium. “We can’t just snap our fingers and produce those immediately. The time to train of a strike fighter pilot is about three years; due to the bottlenecks we’ve had, it’s getting closer to four years,” Westendorff said. “We’re doing everything we can to get that back down to the three-year mark. But the recovery plan is a three-year plan. And if we stay on track, it should take us about three years.” An issue with the T-45’s engines “dramatically reduced” the availability of the aircraft this year, but the program is getting back on track, Westendorff said.

Additionally, the general shortfall of F/A-18 Super Hornets throughout the fleet has impacted training, but Naval Aviation has been focused on bringing those numbers back up in recent years by fixing jets unable to fly for mechanical reasons. Naval air training has been beset in recent years with controversy over the so-called physiological episodes, the cause of which has been very hard to pin down. The Navy now believes it’s a complex issue involving air flow and air pressure related to the breathing apparatus, and measures have been put in place to mitigate it, USNI News reported in June. For its part, the USAF has already begun to introduce a number of advanced tools including virtual reality (VR) to help train F-35, F-22 and F-15 pilots, National Interest reported. In August, Air Force announced the inauguration of the new Virtual Test and Training Center at Nellis Air Force Base, Nevada — which will house the future of joint-aerial combat training. In addition to speeding up the production of pilots, VR could also help ensure US pilots are getting the realistic combat training that traditional real-world training conditions have been unable to provide. The Marine Corps’ pilot shortage has become so great this earlier this month the service announced that it will give out an aviation bonus of up to US\$210,000 for select pilots who are willing to extend their service commitment by up to six years.

Source: asiatimes.com; 24 September 2020

US NAVY OFFICIALLY CHRISTENS NEWEST VIRGINIA CLASS SUBMARINE

- Stephen Kuper

In its first ceremony celebrating the US Navy’s newest fast-attack submarine in front of a virtual audience, Huntington Ingalls Industries christened pre-commissioning unit Montana (SSN 794) at the company’s Newport News Shipbuilding division. Former secretary of the interior Sally Jewell, the ship’s sponsor, smashed a bottle of sparkling wine across the bow to mark the christening of the submarine that honours the state of Montana. Due to COVID-19 restrictions on the size of public gatherings, the christening ceremony was hosted virtually at Newport News’ Module Outfitting Facility.

Jennifer Boykin, president of Newport News Shipbuilding, said, “Our work doesn’t stop for a pandemic, just as the Navy’s mission never ends. It is our honour, our duty and our calling to keep the wheels of shipbuilding turning, and in doing so, bring

Montana one step closer to her ultimate mission of defending the United States of America.” Boykin also applauded the work and craftsmanship of more than 10,000 shipbuilders from Newport News and its partner, General Dynamics Electric Boat, who continue to assemble Montana. She also acknowledged the support of the supplier base — more than 5,000 companies in all 50 states — that provided parts and materials critical to Montana’s construction. “I am grateful to the shipbuilders and dedicated Navy officers and crew for building and readying Montana for service to our nation and the world. It is a privilege to bless and christen this incredible submarine, and to join the current and future submariners as their shipmates for life,” Jewell said.

The virtual event included pre-taped segments where maid of honor Mariah Gladstone, of the Blackfeet Nation in Montana, recited a Native American blessing and members of the Confederated Salish and Kootenai Tribes, of Flathead Indian Reservation, performed a traditional Native American honour song. Representative Robert Scott, of Virginia; members of the Montana congressional delegation including senators Jon Tester and Steve Daines, as well as Representative Greg Gianforte; and General Dynamics Electric Boat president Kevin Graney also offered pre-recorded remarks celebrating the ship’s milestone. Vice Admiral Richard Snyder, the Navy’s inspector general, also was in attendance. In his keynote address, acting Undersecretary of the Navy Gregory Slavonic said, “Montana will enhance our fleet with next-generation stealth, surveillance and special warfare capabilities. This powerful platform is proof of an ironclad relationship between the Navy and industrial partners who form the backbone of our maritime strength.

“While this submarine has the capacity to project power on the surface and undersea, it’s important to recognise the people in every stage of bringing this ship to life because our people make a difference. Montana is proof of what teamwork of all the people – civilian, contractor and military – can accomplish together.” PCU Montana is the second Navy warship bearing the state’s name. The first USS Montana (ACR-13) was an armoured cruiser built at Newport News Shipbuilding and launched in 1906. During the ceremony, a replica of the bell that sailed on the first Montana was rung. The bell will be formally presented to the crew at the ship’s commissioning, and will be part of the submarine for its entire service life. Captain Mike Delaney, commanding officer of the pre-commissioning unit, said, “While the coronavirus precluded most of the crew’s participation in this ceremony, it in no way diminishes the great accomplishment. I couldn’t be prouder of the way the crew of Montana alongside our shipbuilding partners have adapted to the new normal and focused on responsibly living up to our mission. “This is not all too surprising given the innate resiliency and toughness I’ve seen my whole career in the submarine force. This submarine, like all the individuals who have contributed to getting it to this major milestone, will stand as a reflection of strength through adversity.” Three of Montana’s crew members hail from the state of Montana. Construction of Montana began in 2015 under a teaming agreement with Electric Boat. The submarine achieved pressure hull complete earlier this year, and is about 85per cent complete. Montana is scheduled for delivery to the Navy in late 2021.

Source: defenceconnect.com.au; 23 September 2020

SHIPPING, PORTS AND OCEAN ECONOMY

FIRE-HIT INDIAN OIL-CHARTERED TANKER OWNER TO PAY \$1.8 MILLION TO SRI LANKA

- Bharatha Mallawarachi

Colombo/New Delhi: The owners of the New Diamond supertanker which caught fire with a cargo of two million barrels of oil aboard have agreed to pay 340 million rupees (\$1.84 million) to Sri Lanka for its help in extinguishing the blaze and averting disaster.

The interim claim is for services provided by the Sri Lankan navy, air force, ports authority and Marine Environment Protection Authority (MEPA) after the fire on September 3 until September 15, said Nishara Jayaratne, coordination officer of Sri Lanka's Attorney General. Insurers of the vessel West of England will settle the bill, MEPA Chairperson Dharshani Lahandapura said. The New Diamond, loaded with Kuwaiti oil, is chartered by Indian Oil Corp and is currently 66 nautical miles (122 kilometres) from Batticaloa on Sri Lanka's east coast. MEPA has allowed the release of 20 crew members while one injured sailor is undergoing treatment in a private hospital in Sri Lanka, Lahandapura said.

The captain has not been allowed to leave the country as he is going through legal proceedings, she said. Greece-based Porto Emporios Shipping Inc is the registered owner of the 20-year old Panama-flagged very large crude carrier, Refinitiv data showed. Lahandapura said the interim claim does not include damages for the spill of marine oil. While it did leak fuel, its crude oil cargo remained intact. The ship's managers, New Shipping Ltd, have appointed SMIT Singapore Pte Ltd to lead salvage operations.

Source: [ndtv.com](https://www.ndtv.com); 24 September 2020

ARE SMALL SCALE PLANTS THE FUTURE FOR LNG?

- Paul Chai

Three years ago, Strategy&, the strategy consulting arm of global finance powerhouse PricewaterhouseCoopers (PwC), published a report that proclaimed that small-scale liquefied natural gas (ssLNG) may be “the next big wave.” This small-scale approach to LNG requires far less capital than traditional LNG ventures and enables production at remote locations. The 16-page Strategy& report details why they thought that ssLNG, “a niche but nascent industry that is already profitable and scalable,” was poised to disrupt the energy industry. According to Strategy&, ssLNG “is well placed to meet the growing demand from the shipping and trucking industries for fuels that are more environmentally friendly than oil and diesel. ssLNG also enjoys advantages in addressing off-grid power generation for industrial and residential needs in remote locations.” LNG’s unique selling point as a cleaner fossil fuel makes it a particularly attractive alternative for the ultra-dirty shipping industry. This is a particularly attractive and potentially lucrative market because the shipping industry not only acknowledges that it needs to move away from the heavy bunker fuel that is currently the industry standard, it actually wants to change and is actively seeking cleaner fuel options.

LNG companies would therefore be wise to strike while the iron is hot. “As companies approach the ssLNG market,” Strategy& advises, “they should be prepared to act quickly. In selected applications, such as marine and off-grid power generation, it will be vital for participants to establish first-mover advantage. But they will also need to have the right strategy in place, underpinned by the appropriate capabilities, which include the ability to build partnerships across the LNG chain.” But, as with all burgeoning sectors, there is still major footwork that needs to be done in order to make ssLNG scalable and pragmatic. In a Gas Processing News report called “Small-scale LNG: A reality today may be a game-changer for tomorrow,” LNG insider Srinivasa Pachipulusu also emphasizes the importance of the “LNG chain,” writing that: “ssLNG development is dependent on the development of a complete supply chain. Only a few companies have successfully developed the infrastructure required for a complete supply chain. This supply chain includes natural gas production, gas processing facilities, liquefaction units, export facilities, LNG carriers, import terminals, small-scale LNG transportation, SSLNG remote storage facilities and truck refueling stations.”

Now, three years after these reports were published, it looks like some key energy players were paying attention. In North America especially, ssLNG is booming. Just this week GasWorld published an article which contends that “North America is expected to witness the highest global small-scale liquified natural gas (LNG) capacity additions in the world, expected to contribute to around 37% of the global additions by 2024.” This report is based on data recently released by analytics and consulting firm GlobalData, which revealed that “North America is likely to witness total small-scale LNG liquefaction capacity additions of 7,270 kilo-tonnes per annum (ktpa) by

2024.” The report, as paraphrased by GasWorld, went on to document that “the capacity of planned projects which have received necessary approvals for development accounts for nearly 2,890ktpa, while remaining capacity of 4,380ktpa is expected to come from early stage announced projects.”

“North America is expected to witness the start of operations of 26 new-build small-scale LNG terminals by 2024,” Haseeb Ahmed, Oil and Gas Analysts at GlobalData, was quoted by GasWorld. “Of these, nine are planned terminals and the remaining 17 are announced. Browntown II and Browntown in the US are the largest upcoming small-scale LNG terminals in the region, with a capacity of 2,120ktpa each by 2024.” This bodes well for the United States’ ailing shale and gas sector, which desperately needs to push into new markets and create more demand for their product. If GlobalData is right it’s certainly a silver lining for shale and gas companies who are struggling to get out of the red.

Source: [oilprice.com](https://www.oilprice.com); 24 September 2020

FIRST DIRECT CARGO FERRY SERVICE BETWEEN INDIA, MALDIVES FLAGGED OFF

- Shubhajit Roy

In line with New Delhi’s commitment to Male since June 2019, a direct cargo ferry service between India and Maldives commenced on Monday. This is the first time that a direct cargo shipping line is connecting the two neighbouring countries. The ferry service, which was announced by PM Narendra Modi in June 2019 during his visit to Maldives, was launched in an e-flag-off ceremony jointly by MoS (Independent Charge) Shipping Mansukh Mandaviya and Minister of Transport and Civil Aviation of Maldives Aishath Nahula. Commencement of the service was announced by External Affairs Minister S Jaishankar during his virtual meeting with the Foreign Minister of Maldives Abdulla Shahid on August 13. The service will run twice a month, and will be operated by Shipping Corporation of India. Sources said the ferry will herald direct connectivity for movement of cargo between India and Maldives and thereby boost bilateral trade. Despite geographical proximity, India is only the fourth largest trade partner of Maldives. Maldives imports more from the UAE, China and Singapore. “Direct ferry will reduce transportation cost, provide a timely, short and cost effective means of transportation for goods from India to Maldives and thereby incentivize more trade between the two countries,” a source said. The ferry has a cold storage facility, which will allow more exports from Maldives of tuna fish and other marine food items.

In March-April this year, FICCI’s Kerala State Council conducted a study on the viability of a ferry service between India and Maldives. The study found that for 27 principal import items of Maldives, India’s share of imports is well below their potential. Since Maldives is a 100 per cent import-dependent country, improved connectivity between India and Maldives will help boost bilateral trade and help

economic activity in Maldives, already reeling under the disruption due to Covid-19. The pandemic has drawn the world's attention towards resilient supply chains. In May-June this year, while Maldivian imports had fallen by 50 per cent, India became the second largest exporter to Maldives. "India has, therefore, proven that it can provide supply side security to the Maldives during such uncertain times," the source said.

Source: indianexpress.com; 21 September 2020

FOR CARNIVAL CRUISE LINES, 1920 'DEATH ON THE HIGH SEAS ACT' CURBS CORONAVIRUS DAMAGES

- Christopher Yasiejko

Carnival Corp. is poised to dramatically curb monetary damages for passengers killed by the coronavirus under the latest court decision to side with the company. If a ruling Monday by a Los Angeles federal judge is followed by others, it could offer the cruise line something of a safe harbor under the Death on the High Seas Act. The century-old federal law limits payouts for survivors to "pecuniary" damages such as how much the deceased contributed through wages or housework. One maritime lawyer said that in the case of retirees, who make up a large portion of Carnival's customers, the recovery may amount to little more than burial costs. The subject of the ruling was a 71-year-old man who died in April after allegedly contracting Covid-19 while cruising on the Coral Princess. His family was trying to keep its wrongful-death lawsuit in state court, but the judge said the only way to proceed was under federal law. The ruling comes as Carnival and other major cruise lines including Royal Caribbean Cruises Ltd. are seeking a nod from the U.S. Centers for Disease Control and Prevention to return to sailing after the CDC's "no sail" order expires at the end of the month. The industry, one of the most heavily battered by the virus, is putting in place new rules to entice vacationers back onto its boats, announcing through a trade group this week that it will require Covid-19 tests for guests and crew. Masks will be mandatory whenever social distancing isn't possible. Carnival's Princess Cruise Lines Ltd. declined to comment on pending litigation. Shares in the company were up 2.5% before the start of regular trading in New York, to \$14.77 at 8:04 a.m. Before Wednesday, the stock had declined 72% this year. "Princess Cruises has been sensitive to the difficulties the Covid-19 outbreak has caused to our guests and crew," spokesperson Negin Kamali said in an email. "Our response throughout this process has focused on the well-being of our guests and crew within the parameters dictated to us by the government agencies involved and the evolving medical understanding of this new illness." Princess Cruise Lines already scored a significant victory in another case by convincing a judge that mere exposure to Covid-19 doesn't give passengers grounds to sue for emotional distress. In the case in which the court ruled Monday, the family of Wilson

Maa tried to argue that the federal law didn't apply because he died after returning to shore — not while at sea.

1920 Law

But U.S. District Judge Dale Fischer agreed with Carnival's argument that where he died was irrelevant because the alleged negligence occurred "on the high seas beyond 3 nautical miles from the shore of the United States." "It is clear from the face of the complaint," the judge wrote in Monday's ruling, that the deceased passenger "contracted Covid-19 on the 'high seas.'" Lawyers for Maa's estate didn't immediately respond to a request for comment. "Basically, the question to the widow is, 'What did it cost you to lose your husband?'" said Charles Naylor, a lawyer who specializes in maritime injury and death. "If it didn't cost you anything, we don't owe you a nickel."

Naylor, who in his own practice is not taking on Covid-19 cases, said the 1920 law is "very out of step with modern wrongful-death statutes." Naylor said that if the ruling survives a likely appeal, the vast majority of Covid-19 cases among cruise line passengers will proceed under the 1920 law, "which will strictly limit the damages." In another Los Angeles case over the virus outbreak on the Coral Princess, a North Carolina passenger contends Carnival had detailed knowledge of the threat posed by a contagion, but jeopardized public health when the ship "seeded the shores of California" with infected passengers. That passenger says in her recently filed revised complaint that the Coral Princess has had "significant viral outbreaks at least eight times since 2004." The wrongful-death case is *Maa v. Carnival Corp. & Plc*, 20-cv-6341, U.S. District Court, Central District of California (Los Angeles).

Source: maritime-executive.com; 17 September 2020

MARINE ENVIRONMENT

CHINA'S COMMITMENT TO BECOME CARBON NEUTRAL BY 2060, EXPLAINED

- Lili Pike

Imagine China — the world's top emitter of carbon, which in 2019 released nearly double the emissions of the US — with almost zero coal power plants. Imagine it with zero gasoline-powered cars, and with more than four times the 1,200 gigawatts of solar and wind power capacity installed across the world today. This could become reality by mid-century if China follows through on President Xi Jinping's latest commitment to addressing the climate emergency. At the United Nations General Assembly on September 22, Xi Jinping announced that China will strive to be “carbon neutral” by 2060. “Humankind can no longer afford to ignore the repeated warnings of Nature and go down the beaten path of extracting resources without investing in conservation,” Xi said.

Going carbon neutral means that China would remove the same amount of carbon it's emitting into the atmosphere to achieve net-zero carbon emissions. So, by 2060, China would theoretically only use clean energy sources and capture or offset any remaining emissions. But Chinese officials have yet to define exactly what that would look like. Still, the target puts China more closely in alignment with the European Union, the UK, and other countries that have committed to carbon neutrality by 2050, which the Intergovernmental Panel on Climate Change said is required to prevent over 1.5 degrees Celsius of warming. In the US, some states and cities have moved in this direction, too. For instance, former governor Jerry Brown signed an executive order in 2018 for California to be carbon neutral by 2045. And Michigan's governor made the same commitment Wednesday. Along with the pledge to be carbon neutral by 2060, Xi Jinping also announced that China would submit a stronger set of goals under the Paris agreement and that China would aim to peak carbon emissions before 2030, upping the commitment from “around” 2030.

Meanwhile, in his UNGA remarks, President Trump defended his decision to withdraw the US from the “one-sided” Paris agreement while criticizing China for “rampant pollution.” Increasingly, China is demonstrating it will use climate as a way to upstage the US, with Xi repeatedly committing to incremental climate action on the international stage in recent years. And the latest climate announcements are also in keeping with China's more assertive role in global governance under Xi's rule — the country has become more active in international institutions long dominated by Western countries and created its own, such as the Asian Infrastructure and Investment Bank. Xi's 2060 pledge “reflects China's resolution to take international responsibility for addressing climate change,” said Li Zheng, executive vice president of Tsinghua University's Institute of Climate Change and Sustainable Development.

Besides the geopolitical motivations, China also has a lot to lose from unmitigated climate change, from catastrophic floods like those this summer in the central Yangtze River Basin to worsening heat waves and sea-level rise, which will have a huge impact on coastal cities like Shanghai by 2050. But transforming such a carbon-intensive economy in the next 40 years is a gargantuan task. “China is still in the process of developing its economy, energy consumption will continue to rise, and China’s energy consumption relies heavily on coal. Achieving carbon neutrality under these circumstances is very difficult,” said Li Zheng. China has yet to publish an official plan for how it would achieve carbon neutrality, but climate researchers have mapped out pathways. The good news: Researchers say it is possible. Some of the key shifts are already underway — toward electric vehicles and renewable energy, for example. But China will be entering uncharted territory when it comes to cleaning up its behemoth steel and cement industries. Let’s break down the biggest steps China will have to take to get to a carbon neutral 2060 and assess whether it is currently heading in the right direction.

What it will take for China to get to net-zero carbon

The Energy Transitions Commission — a global coalition of energy experts and industry members committed to achieving the Paris Agreement targets — published a report in collaboration with the Rocky Mountain Institute last year modeling how China could get to net-zero carbon emissions by 2050. They found that “it is technically and economically possible for China to achieve net-zero emissions by 2050 at a very small economic cost to growth and consumer living standards, and China is well placed to gain technological competitive advantage from the transition to net-zero emissions.” This rosy assessment might leave you wondering why China didn’t embrace carbon neutrality sooner. Some real concerns include the massive social transition as Rust Belt regions move away from coal and steel, the implications for international competitiveness if other countries don’t decarbonize at the same pace, and how the local and national governments will pay for new infrastructure. The study’s scenario doesn’t get into all of these details, and it is just one possible route, but it shows the magnitude of changes that China will have to make in the coming years and the challenges involved.

Let’s start with the power sector. In keeping with the expert consensus on decarbonization, the crux of China’s odyssey is electrifying its economy as much as possible, from switching to electric vehicles to using electricity instead of coal for some industrial production. To get to carbon neutral, China’s current electricity generation will have to more than double to 15,000 terawatt-hours by 2050, RMI projects (all figures in this section are from the report unless otherwise noted). In 2019, almost 70 percent of China’s electricity generation came from thermal sources (90 percent of which is coal power). In the RMI scenario, by 2050 that will drop to just 7 percent, which will be natural gas coupled with carbon capture technology. To replace fossil fuels, China will make wind and solar the center of its power grid — combined they will supply 70 percent of electricity. China already leads the world in wind and solar, but capacity would have to increase nearly 15 fold, and investment would have to double for solar and triple or quadruple for wind. “The difficulty of decarbonizing the power sector is improving the flexibility of the system,” said Chen Ji, a principal at the Rocky Mountain Institute in Beijing who co-authored the report. To back up this

renewable energy grid when the sun isn't shining and the wind isn't blowing, the country would rely on a vast system of batteries and pumped-hydro storage, as well as the remaining thermal capacity, expanded nuclear power, hydropower, and biomass, according to the scenario. Decarbonizing the power grid is just the first step. The country's main consumers of fossil fuel — transportation, buildings, and industry — would also have to be fully transformed, tapping into the new, clean grid. For example, in the scenario, all passenger vehicles and all trains would run on electricity. China already has the world's largest high-speed rail network (which uses electricity); under the scenario, it will increase by 50 percent to 45,000 kilometers of track. China is also the world leader in electric vehicle production, but electric cars only made up 2.5 percent of total sales in 2018 so production will have to scale up dramatically. These changes are monumental alone, but the greatest challenge is decarbonizing heavy-duty transportation and heavy industry, according to Chen. Aviation, shipping, and trucking are very hard to electrify in part because most electric vehicle batteries are currently not designed to supply power over such long distances. Similarly, it is hard to electrify industrial production, as Vox's David Roberts explained earlier this year. To reach the high temperatures required to produce steel and cement, coke — processed high-grade coal — is typically used. Steel production alone is responsible for 15 percent of China's carbon dioxide emissions, so finding alternatives to coal is critical.

But there is another solution for these sectors: hydrogen. "Electrification plus a hydrogen economy will be the technological solution for the energy transition for zero carbon China," said Chen. Hydrogen is a leading contender to replace coke for steel and other industrial production, but it is not cheap, and green hydrogen production is even more expensive, as Roberts explained. To make steel in 2050, the RMI scenario proposes a combination of recycling steel and using hydrogen or coal with carbon capture to produce new steel (the model calls for a 50/50 split between the two methods). The problem is, China is just beginning to explore the use of hydrogen for steel and cement. China has to "start from scratch," according to Chen. There is strong interest in hydrogen, but it is coming from coal companies that want to use their coal to produce hydrogen rather than using renewables to produce the "green hydrogen" needed, he explained.

"In these 'harder-to-abate' sectors, hydrogen is a solution, but there are still major challenges to make hydrogen production green," Chen said. It is dizzying to consider the scale of change required to jumpstart the hydrogen industry to supply China's industrial giants and long-haul trucks — and this is just a snapshot of the full transition that getting to net-zero carbon will require. And even though the scenario may be technically and economically feasible, the seismic shifts in Chinese society also have to be taken into account. For instance, millions of workers in the coal and steel industries would have to transition to new roles. Chen said "the transition is very, very difficult," adding that local governments in coal-rich provinces have been focused on this issue for a while. While tackling carbon emissions alone is a herculean task, Xi's 2060 goal does not mention non-CO₂ greenhouse gases, which accounted for 16 percent of total greenhouse gas emissions in 2014 and also need to be addressed.

Is China on track to reach net-zero carbon by 2060?

How China intends to achieve carbon neutrality will be fleshed out once it lays out an official roadmap, but the immediate need is clear: setting short-term climate goals that align with this new long-term vision. The news over the last few months has provided cause for concern and hope about China's emissions trajectory in the coming years. Even as Xi Jinping announced the 2060 target and called on countries to "achieve a green recovery of the world economy in the post-Covid era," China's emissions over the summer jumped compared to last year, driven by Covid-19 stimulus investment in carbon-intensive infrastructure projects, and an analysis published in Carbon Brief found that key provinces are pouring more investment into fossil fuel projects compared to low-carbon energy projects. Meanwhile, China also raised its renewable energy targets in June after exceeding them, but provinces have approved new coal power projects at their fastest clip since 2015. In his UNGA speech, Xi Jinping did also commit to stronger short-term action, saying China would enhance its targets under the Paris Agreement and strive to peak emissions before 2030, rather than "around 2030," the country's initial commitment. (China's carbon emissions grew 2 percent last year.) Todd Stern, Obama's lead climate negotiator, said on Twitter that a stronger commitment was needed:

The next few months will reveal how serious China is about accelerating its decarbonization. Countries were expected to submit their new round of nationally determined contributions (NDCs) by the end of the year to the UN Framework Convention on Climate Change. The process may be delayed for some nations due to the pandemic, but China may still publish its enhanced NDC in the coming months. In March, China will also publish its next five-year plan, which will set targets for the economy as well as energy and climate change. "Current policies would not indicate that China is on track to meeting this goal," said Angel Hsu, an expert on Chinese climate policy at the University of North Carolina at Chapel Hill, referring to the 2060 pledge, "so it will be interesting to see the energy 14th Five-Year Plan and what targets and policies are included there that could give us an indication for how China may plan to reach this target in the long-term." Hsu said China's announcement may also have ripple effects on other countries as they choose whether to more aggressively tackle climate change, in the absence of US leadership, approaching the next major UN negotiations on climate change (COP 26), which will be held in November 2021.

"For China, who is experiencing economic ramifications of Covid like every other country, to come out and make this kind of bold statement on carbon neutrality could potentially sway the balance of countries who have been taking a 'wait and see' approach to their enhanced ambition climate pledges ahead of COP-26," Hsu said. Here's hoping it does.

Lili Pike is a science, health, and environmental reporting (SHERP) master's student at NYU and a freelance journalist with a focus on China.

Source: [vox.com](https://www.vox.com); 25 September 2020

SCIENTISTS MADE A SUPER-ENZYME THAT ABSOLUTELY RAVAGES PLASTIC BOTTLES

- Caroline Delbert

A newly discovered “super-enzyme” could finally mean effective recycling of plastic bottles and other materials, scientists say. The plastic-eating bacteria can digest plastic six times faster than current methods of chemically breaking it down. Scientists first discovered one enzyme several years ago, and the new “cocktail” replaces a previous version that had less plastic-eating complexity and robustness. In a new paper, a large team that spans the Atlantic delivers its findings as well as its recommendations for how to introduce the enzyme into the plastics supply chain. By combining two enzymes on purpose, laboratory scientists break polyethylene terephthalate (PET) into “intermediate” parts, and then into elementary parts. The bacterial product PETase enzyme turns PET into its “constituent monomers,” or building blocks. Now that scientists know about the two-step enzyme system, they wonder if bacteria that have evolved some plastic-digesting mechanisms already will continue that way and grow mechanisms that will further digest plastic—in line with the two-step system scientists understand.

For now, they’ve mixed enzymes from two different kinds of bacteria into one system that breaks plastic down in phases that are much faster. “Our first experiments showed that they did indeed work better together, so we decided to try to physically link them, like two Pac-men joined by a piece of string,” University of Portsmouth professor and study leader John McGeehan said in a statement. The enzymes work together to “chop” the most common consumer plastic into chemical building blocks, which means they can be reapplied as the ingredients for the next generation of plastics instead of distilling these ingredients from newly extracted petrochemicals. McGeehan is also director of the University of Portsmouth’s Centre for Enzyme Innovation, where scientists identify naturally occurring enzymes, study their chemical makeup, and find ways to synthesize them in the laboratory. In this case, McGeehan and his colleagues used a sun-bright synchrotron light to illuminate and zoom in on the natural enzyme until they could see all the molecules and their fully assembled structure. That step, which is already hard work, was just the first of many: “The new research combined structural, computational, biochemical and bioinformatics approaches to reveal molecular insights into its structure and how it functions. The study was a huge team effort involving scientists at all levels of their careers.”

There’s a striking causality contained in this research. “The leakage of plastics into the environment on a planetary scale has led to the subsequent discovery of multiple biological systems able to convert man-made polymers for use as a carbon and energy source,” the team writes. “These plastic-degrading systems offer a starting point for biotechnology applications toward a circular materials economy.” That means bacteria began to evolve this enzymatic capacity because of the way humans carelessly disposed of plastics beginning after their popularization. But now, they’ve role-modeled a “circular materials economy” where what we put in is reused in earnest—by recycling

or even by designing advanced materials that close their own loops based on application.

Source: popularmechanics.com; 02 October 2020

WASTE COLLECTING FLOATING JETTY LAUNCHED IN NORWAY

- PG Flow Solutions

PG Flow Solutions and Norwegian greentech start-up Clean Sea Solutions have launched a floating dock in Drammen, Norway, which automatically rinses marinas and harbours for ocean plastic, diesel film and other floating pollutants. The Clean Sea PG Aqua Pod is a flexible, modular floating dock with an ocean waste collection functionality integrated between the dock's pontoons. Plastic debris from around the pod flows into an internal collection pool through "waterfalls" created by an electric pump, which create a surface skimming effect between the dock's pontoons. "By integrating the system with the floating dock, we make ocean waste collection an automated and integral part – and not an add-on – to those in charge of harbour and port management. Hence, we lower the threshold of taking a broader responsibility to help remove plastic and other pollutants from the harbour area," says Per Elvestuen, managing director of Clean Sea Solutions.

Clean Sea Solutions has developed the idea and concept, while PG Flow Solutions has developed the final design and delivered the high-capacity pump that is used in combination with the dock. The first dock was launched in Drammen, Norway last week, and if everything goes according to plan, these floating docks can be found in marinas all over the world from spring 2021 onwards. "Through creating a continuous suction effect below the waste collection tank integrated in the floating dock, the high capacity pump will ensure that waste from a relatively large area can be gathered in the tank's filters and subsequently removed from the ocean," says Carl Engelstad, mechanical designer at PG Flow Solutions, and the engineer behind the PG-Aqua Pod. Steve Paulsen, CEO of PG Flow Solutions, adds: "We are utilising the same pump technology that we have installed on hundreds of vessels around the world. Part of our sustainability efforts is to identify new ways of utilising technologies that have previously proven their worth in the marine, shipping and offshore industries." To enable as many ports and marinas as possible to afford the Aqua Pod, Clean Sea Solutions and PG Flow Solutions offers leasing of the floating dock system.

"Users can lease our equipment instead of buying it. Marine pollution is the fastest growing environmental problem in the world, according to the UN. We therefore believe keeping capex to a minimum will lower the threshold of adopting new environmental technologies such as ours," says Per Elvestuen. PG Flow Solutions provides proprietary solutions, systems and products for companies within the energy, maritime, aquaculture and land-based process industries. The heritage of the business is pumps and pumping systems. The company's headquarters and manufacturing

facility is located in Sande, Vestfold, Norway. Its subsidiary Calder Ltd operates out of a similar facility in Worchester outside Birmingham, UK, while subsidiary Cflow Fish Handling AS operates out of Aalesund, Norway.

Source: hellenicshippingnews.com; 22 September 2020

TAIWAN TO CREATE REGISTRATION SYSTEM TO FIGHT 'GHOST' FISHING GEAR

- Chang Hsiung-feng and Evelyn Kao

Taipei, Sept. 22 (CNA) The Fisheries Agency said Tuesday it has issued a new draft regulation to establish a system to better manage derelict fishing gear, known as "ghost gear," that causes marine pollution and is deadly to marine wildlife. The new measure, issued on Aug. 31 and set to take effect in July 2021, is aimed at encouraging fishing boat owners and fishermen to efficiently manage their fishing gear and equipment, said Chiu Yi-hsien (邱宜賢), a division chief at the agency. Fishermen will be required to mark their ship identification number in their drift gill nets and other fishing gear and report any fishing gear lost when working at sea to government authorities, Chiu said.

Violators could be subject to fines ranging from NT\$30,000 to NT\$150,000 (US\$1,033-US\$5,164), according to Chiu. Chiu's remarks came as environmental groups urged the government on Tuesday to manage discarded or derelict fishing gear. Taiwanese fishing boats generated about 60 metric tons of lost or abandoned fishing gear in 2019, accounting for the majority of Taiwan's marine litter, according to data provided by Kuroshio Ocean Education Foundation, citing government statistics. With ocean pollution getting worse because of the ghost gear, the foundation called on the government to better manage it at its source to protect marine life, foundation CEO Chang Hui-chun (張卉君) said at a press conference to expose the problem. About 300,000 dolphins and whales are found dead off coastal areas around the world every year because of being entangled in the discarded nets, according to Yen Ning (顏寧), CEO of Indigo Waters, an environmental consultancy established to tackle marine pollution.

Source: focustaiwan.tw; 22 September 2020

GEOPOLITICS

“WE ARE NOT ABLE TO PAY”: KENYAN MPs URGE RENEGOTIATION OF CHINESE RAIL DEBT

- David Rogers

Committee chair David Pkosing said “the entire loan framework should also be renegotiated” in light of the impact of the Covid-19 pandemic on Kenya’s finances. He said the interest rate should be decreased or the time to repay extended. The service, which has yet to make a profit, is run by China Road and Bridge Corporation, a subsidiary of the railways builder, China Communications Construction Company. Kenya currently pays Africa Star, China Road’s operating company, \$1m a month to run the service. Since 2017, Kenya has failed to meet the monthly payment for 21 months, according to the Voice of America news site. At present, Kenya owes Africa

Star about \$380m in unpaid bills, the EastAfrican news site reports. In April, Ukur Yatani, secretary to the treasury cabinet, issued a supplementary budget that envisaged \$714m in repayments to the China Export Import Bank, and £233m to the China Development Bank. Kimani Ichung'wa, chairman of the Parliamentary Budget and Appropriate Committee, told The EastAfrican: "There are some investment decisions we have taken that are not in the best interest of the country, so it is time we start re-evaluating them and renegotiating with people who gave us the money so that we are able to survive."

He added: "It is very easy to resolve this issue of loan repayment by just sitting down with the Chinese and telling them we made a mistake. We owe you all this money but you are also demanding so much from us in terms of repayment. This is a debt. Look, our economy is beaten and we are not able to pay. We are not saying the debt is not there, but we simply want to renegotiate what we owe you and the terms of payment." The railway carried more than 19,000 passengers and 421,000 tons of cargo between Nairobi and Mombasa in July. In April it was reported that it had made a reduced loss for its second year of operation (see further reading). The line made a revenue of \$126m for 2019, compared with \$57m reported in 2018. However, the line's operating cost is estimated to be \$170m a year, compared with \$120m in 2018. So far, Ethiopia and Angola are the only African countries that have succeeded in renegotiating their debts to China.

Source: globalconstructionreview.com; 25 September 2020

US EMBASSY IN TURKEY SAYS IT “DOES NOT SIDE IN MARITIME BOUNDARY DISPUTES” DESPITE SIDING IN SOUTH CHINA SEA

- Paul Antonopoulos

The US Embassy in Turkey has made a blatant contradiction by claiming that “the United States as a matter of global policy does not take positions on other states’ maritime boundary disputes” despite having a clear position against China in the South China Sea. “There has been much commentary in the Turkish press regarding the so-called “Seville Map...” the US Embassy in Turkey said on Twitter.

In an image attached to the Tweet, the US Embassy in Turkey stated:

“The United States as a matter of global policy does not take positions no other states’ maritime boundary disputes. With respect to this ‘legal status’ of the Seville map, the United States does not consider the Seville Map to have any legal significance. We understand the European Union does not consider the Seville Map to be a legally binding document. Maritime boundaries are for the states concerned to resolve by agreement on the basis of international law. The United States strongly supports good faith dialogue and negotiation and encourages Greece and Turkey to resume exploratory talks as soon as possible.” The so-called Seville Map was first published by Juan Luis Suárez de Vivero and Juan Carlos Rodríguez Mateos from Seville University

in the early 2000's. The map outlined shows the Exclusive Economic Zones of Greece and Turkey in the Eastern Mediterranean, according to the United Nations Charter Law of the Sea.

However, more importantly, the US Embassy in Turkey claims that "The United States as a matter of global policy does not take positions no other states' maritime boundary disputes." This has proven incorrect as Washington has taken a firm position to maritime disputes in the South China Sea. On July 13 of this year, US Secretary of State Mike Pompeo in a press release published on the US Department of State website said "Beijing's claims to offshore resources across most of the South China Sea are completely unlawful, as is its campaign of bullying to control them," showing that Washington does take positions in "other states' maritime boundary disputes." Pompeo also stated "America stands with our Southeast Asian allies and partners [against China] in protecting their sovereign rights to offshore resources, consistent with their rights and obligations under international law." These statements, made a little over two months ago, demonstrates that Washington does take clear positions in maritime disputes, but is once again choosing to appease Turkey by blatantly lying that "the United States as a matter of global policy does not take positions no other states' maritime boundary disputes."

Source: greekcitytimes.com; 23 September 2020

INDIA, US "CAN SHAPE INDO-PACIFIC ORDER FOR BETTER FUTURE": JOE BIDEN

- PTI

Washington: Asserting that India and the US share a strong interest in a rules-based Indo-Pacific region where no country including China threatens, Democratic vice presidential candidate Joe Biden on Tuesday said the two nations can undeniably shape the region for a much better future. "The US and India share a strong interest in a rules-based Indo-Pacific region, where no country including China threatens its neighbours with impunity," Joe Biden said in his address to a virtual fundraiser for Indian Americans. In his first ever virtual fundraiser as a presidential candidate for Indian Americans that was attended by 268 people, Joe Biden alleged that President Donald Trump is ceding space to China just when the country is looking to undercut its neighbours and the American leadership in the Pacific. "We can undeniably shape the Indo-Pacific order for a much better, better future. We can get it right. This election is going to determine our future," Joe Biden said during the fundraiser in a conversation with Dr Vivek Murthy, former surgeon general. Referring to his long-standing ties with India and the work that he has done over the past several decades, first as the US senator from Delaware and then as the country's vice president, Mr Biden said his administration is going to continue to value this relationship. "It is not about photo ops or handshakes, it is about getting things done," he said without elaborating any further.

Fifteen years ago, Mr Biden told the Indian Americans that he was leading the Senate Foreign Relations Committee with a Republican, Senator Richard Lugar, and they

approved the historic India-US civil nuclear deal. "At the time, I said when India and the United States become closer friends, the world will be a much safer place. Seven years ago, as vice president, I told a business owner in Mumbai that the US-India partnership was the defining relationship in the 21st century," he said. "I am not just saying it now, I said it then and I mean it," the former vice president said while asserting that he will continue to believe this as the president. "I will work to make sure it occurs," he said. Joe Biden said he has long called for standing with Indians confronting terrorism in the region, strengthening India's defence capabilities, expanding trade between the two countries and tackling global challenges like climate change and global health.

Source: [ndtv.com](https://www.ndtv.com); 23 September 2020

SUGA, MERKEL AGREE OVER INDO-PACIFIC VISION

- JiJi Press

Tokyo, Sept. 22 (Jiji Press)--Japanese Prime Minister Yoshihide Suga and German Chancellor Angela Merkel Tuesday agreed to work closely together to create a free and open Indo-Pacific region and contain the coronavirus. Speaking to Merkel by phone, Suga said he wants to strengthen relations between Japan and Germany further. Merkel, while congratulating Suga on becoming prime minister, said she is looking forward to working together with the new Japanese leader to promote Japan-Germany ties. Later, Suga also spoke to European Council President Charles Michel by phone and they agreed to cooperate in a wide range of fields including free trade, climate change and digital transformation.

Source: [Nippon.com](https://www.nippon.com); 23 September 2020

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