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Editorial Team

Captain(Dr.) Gurpreet S Khurana CommanderDinesh Yadav Mr Devendra Kumar

Address

National Maritime Foundation Varuna Complex, NH-8, Airport Road New Delhi-110 010, India

Email: maritimeindia@gmail.com

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



MARITIME SECURITY



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Australia tries to halt unrest at immigration detention camp

Cyclone Megh expected to strike parts of KSA, Yemen



MARITIME FORCES



Indian Navy's Home Grown Nuclear Submarine to Undergo Missile Tests This Month

Geo-strategic push: India-US-Japan Malabar-2015 naval exercise kicks off

Indo-Japan-US naval exercise concludes: Ocean diplomacy

Search for MH370 will continue on in Indian Ocean

Combined Maritime Forces delegation meets Secretary

Somalia: Operation Atalanta Warships Train With Seychelles Maritime Forces

During Port Visit

Abe to raise South China Sea issues at G-20, other global meetings

US Navy missile test off California creates social media stir with streak of light

U.S. Navy ship USS Anchorage rescues Sri Lankan fishermen stranded in Indian Ocean

Indian ships enter Trincomalee for Sri Lanka-India naval exercise



SHIPPING & PORTS



Norway Launches Green Shipping Project

EUR 523m fisheries and aquaculture investment package greenlighted for Greece

China to Build Asia's 1st Big Data Base for International Shipping

Promoting coastal shipping of cargo to save Rs 40,000 crore: Government

Malaysia Shipping Master Plan to be completed by end 2015

Chabahar Port links India, Iran.



GEOPOLITICS & MISCELLANEOUS



3D Printed Bikini Cleans Ocean by Absorbing Pollution

MFL to use cryogenic tankers to transport natural gas from Krishnapatam Port, India

Evolution of Geo-Strategic Relations between India and Oman

Industry pledge to help clear beach bruck



MARITIME SECURITY



Meeting of Senior Drug Enforcement Officials of the Indian Ocean Region.

The Global Maritime Crime Programme (GMCP) of United Nations Office on Drugs and Crime (UNODC) and the Ministry of Defence will co-host the Meeting of Senior Drug Enforcement Officials of the Indian Ocean Region from 13-15 October 2015 at the Taj Samudra Hotel in Colombo. The meeting will bring together 60 delegates at the level of head or deputy head from 21 countries in the Indian Ocean region and 7 organizations. The meeting will enhance regional and sub-regional cooperation among drug enforcement agencies to counter drug trafficking the in the Indian Ocean and work towards developing standardized information collection for drug seizures at sea and at seaports.

The meeting will also see the launch of the Compendium of Drug Seizures at Sea (October 2015) a joint effort by UNODC and the Combined Maritime Forces (CMF) to collate all narcotics detections in the Indian Ocean. The compendium will support efforts to explore the nexus between purity, heroin stamps and manufacturers with the objective of identifying opiate manufacturing labs in relevant countries. The deliberations will also provide opportunities for Indian Ocean states to access highly specialized training supported by UNODC in areas such as, maritime law enforcement, capacity building for purity testing, training in controlled deliveries, establishment of transnational organized crime units and analytical software tools.

The delegates will view a simulated exercise of a mid-sea boarding by the SLN boarding teams, and vessel search techniques to identify concealed compartments to detect narcotics in fishing vessels. This exercise will be jointly conducted with the expertise of the Sri Lanka Navy and the Combined Maritime Forces (CMF) at the Colombo Naval Base on 15 October.

Source: Ministry of Defence 12 October 2015

Maritime crime incidents across Southeast Asia at highest level in years

Dryad Maritime, the UK's leading maritime intelligence company, today released

their third quarter trends and analysis of global maritime crime showing a stark rise

of 38% of incidents across Southeast Asia, when figures are compared to the first

nine months of 2014. The apparent impunity of maritime gangs operating in the

region has led Dryad to call upon the three nations surrounding the Singapore

Strait, in particular, to provide a permanent security presence to deter criminals and

protect maritime trade.

The number of reported incidents has jumped from 140 on the same nine-month

period in 2014 to 194 in 2015. The main focus for criminal gangs in the region has

been the petty theft of ships stores as gangs look to steal engine parts and high

value machinery for resale on the black market. In total 14 vessels have been

hijacked in Southeast Asia in 2015 to date, with only one product tanker, the MT

Joaquim targeted for the purpose of cargo theft in the last quarter (Jul-Sep), when

3000 metric tonnes of fuel oil were stolen from the vessel.

Dryad Maritime analysts have identified the Singapore Strait as a key area for

increased vigilance. Between January and September they recorded 90 instances

of theft or attempted theft with more than 80% of these crimes occurring in the

Traffic Separation Scheme (TSS) between Pulau Karimun Kecil and Pulau Besar

during the hours of darkness.

The Malaysian Maritime Enforcement Agency (MMEA) and Indonesian authorities

have made repeated announcements pledging to enhance patrol cooperation and

coordination in the region, yet according to Dryad analysts there remains little by

way of a regular presence in this particular area. Dryad Maritime analysts warn that despite the slowdown in fuel siphoning incidents during the last three months, the final quarter of 2015 is likely to see a further increase in hijackings and petty theft.

Source: Piracy and Security News 20 October 2015

Any discussion on CPEC without addressing the region's emerging maritime security threats would be incomplete

-Farah Adeed

Pakistan has to play politically and diplomatically to win this complex game under the anarchic and perplexing world order. Last week, a seminar on Gwadar--China Pakistan Economic Corridor (CPEC) and Emerging Maritime Security Scenario arranged by Pakistan Navy War College, Lahore was interesting and appreciable. This was a great effort to highlight issues and emerging threats regarding CPEC.

There were five speakers who spoke on the subject. The focus of the discussion, however, was the history, significance and usage of Gwadar Port. The speakers extensively, or may be excessively spoke, on Gwadar's significance and benefits of CPEC but didn't like to talk about "Emerging Maritime Security Scenario", the real point of concern. For instance, one of the speakers, who was a soldier but was repeatedly claiming to be a scholar, quite simply concluded that India and the United States of America (USA) are in constant decline and they don't have any potential or ability to intervene in Pakistan's internal affairs – at least not at present.

More interestingly, one of the speakers passionately made a clear declaration that "America only opposes China's soft power – so Pakistan has no real threat from the US – Pakistanio aap ko darnay ki zarorat nahi (Pakistanis! Need not to be afraid)". A speaker from the Kinnaird College shared a lot of information about Chahbahar and

Gwadar which she had collected from Wikipedia. Unfortunately, she remained irreverent throughout her presentation.

The conclusion of the whole discussion can be summed up as: there are no maritime security threats because India and the US are unable to do anything against Pakistan, so we need not talk about those irrelevant things. Be happy Pakistanis! Soon your country is going to be a regional power! *Applause*

Being a student of politics I was not only surprised, I was shocked to see such

analyses. But I was directed to be quiet and calm.

How unfortunate is it that we never like to talk about the real issues and threats so that they could be tackled and resolved in time. The focus of the speakers should have been "Emerging Maritime Security Scenario" in the context of power politics. Focusing upon significance of Gwadar and escaping from real issues and challenges demonstrates many things. It can be either the "innocence" of the speakers regarding the real point or it can be an organized strategy to fool us – the academia – for no reason.

Discussing CPEC or maritime security challenges cannot and should be separated from the international world. We need to understand that America has its own interests in Middle East. Even China and Russia are more interested in Middle East than Pakistan. In other words, China's real focus is on Middle East and not Pakistan. It doesn't imply that Pakistan is irreverent or not dear to China. Pakistan is a bridge state. China definitely needs Pakistan.

India is being backed by the US to counter China in South Asia. Their common interest is to confront China's increasing influence in the region. So we cannot say that these powers have no reservations and we cannot close our eyes that their own interests in the region, particularly in Pakistan, are not being affected by this CPEC. What we actually need to understand is the existing complex political scenario and formulate policies to cope with all existing and emerging threats and challenges.

Things must not be seen through the prism of idealism only. This is the real world, which demands real thinking and real solutions. Pakistan has to play politically and diplomatically to win this complex game under the anarchic and perplexing world order and make the CPEC successful. Discussion without understanding the overall policy framework is of no use - "Fine clothes may disguise, but silly words will disclose a fool"

Source: The Nation 18 October 2015

Korea to Lead International Standardization of ICT-based Maritime Security Tech

-Jung Suk-yee

Korea set the stage for leading the development of ICT-based security technology in the global shipbuilding and marine industries, as its technology for protecting the equipment and systems of vessels from various cyber threats and attacks has been adopted as an international standard by the International Electrotechnical Commission (IEC).

The Electronics and Telecommunications Research Institute (ETRI) announced on Oct. 20 that the cyber security technology for ship networks that it proposed to the IEC has been accepted as an international standard by the organization.

The technology can be summarized as a series of definitions of security structures and functional requirements for the protection of the equipment, internal and external networks, and gateways of vessels from diverse cybersecurity threats and attacks. When this technology is employed, a variety of optional ship-related services can be provided in a safe way, and Korea is expected to be able to take the lead in the development of maritime cyber security techniques with it down the road.

In today's global maritime industry, cyber security is emerging as an increasingly important issue in relation to a successful realization of e-navigation, the development of which is being led by the International Maritime Organization (IMO).

Source: Business Korea 21 October 2015

Indian coast guard arrest 29 SL fishermen

The Indian Coast Guard (ICG) Ship, Samudra Prahari apprehended two Sri Lankan trawlers – Holy Cross III and VI along with 29 Lankan nationals in Lakshadweep waters for poaching endangered marine species and sea cucumber on Saturday.

In a swift air-sea coordinated search, these fishing boats were located 18 Nautical Miles (approximately 35 km) west of Chereapani Reef in Lakshadweep islands. Thereafter, both the boats were apprehended by ICGS Samudra Prahari 40 Nautical Miles (approximately 72 km from Chereapani reef) after a hot pursuit.

At 8 pm on October 23, a message was received from the Police Control Room, Kavaratti, through the Coast Guard District Headquarters at Kavarati regarding sighting of two unknown fishing boats by local fishermen off Chereapani Reef.

Immediately, the coast guard vessel on routine patrol in L&M island was diverted for search and located the fishing boats. Simultaneously, the coast guard aircraft was launched from Kochi for air-sea coordinated search on Saturday morning.

After hot pursuit and firing of warning shots both Sri Lankan fishing boats were prevented from fleeing and apprehended off Chereapani Reef. The boats were in

possession of approximately 4,000 to 5,000 kg of Sea Cucumber each, an endangered species under the Schedule-I of the Wildlife Act, 1972.

The 29 Lankan poachers were taken into custody. This is the first such poaching incident in 2015 (The Indian Express)

Source: <u>Indian Express 26 October 2015</u>

Maritime Cyber Attacks: Changing Tides & Need For Cybersecurity Regulations

-Kate B. Belmont

Front-page headlines revealing devastating cyber-attacks on government agencies and the world's largest companies have become a regular occurrence. Recent cyber-attacks reported by the mainstream media include the cyber-attack against SONY, Anthem Health Insurance, the White House, the Office of Personnel Management ("OPM"), Ashley Madison, and even the Houston Astros. As the list of companies and agencies that suffer cyber-attacks grows longer, it is clear and undeniable that no industry is safe, and any company that relies on information and communication technology ("ICT"), must take the appropriate steps to protect itself against cyber threats. Although the maritime community has not yet garnered front-page attention as a victim of a recent cyber-attack, make no mistake, the maritime industry is one of the most heavily targeted industries in the world and also suffers cyber-attacks regularly.

Targeting the Maritime Community

Like many government agencies, as well as the aerospace and defense industry, banking and health insurance industries, and even the entertainment industry, the maritime industry is a prime target of cyber-attacks and has suffered, and continues to suffer, many significant cyber-attacks. The maritime community has been able to avoid disastrous media coverage regarding cyber-attacks not because it is immune from cyber threats, lack of opportunity, or that the industry employs cutting- edge cybersecurity programs and effective protocols to protect itself from cyber-attacks, but mostly because of luck, timing, and our tight-lipped community.

For example, the BP oil spill was not caused by hackers or cyber criminals, but it could have been, and such an event is likely to occur in the future. Yes, oil rigs are hackable. There have been multiple reports of oil rigs having been hacked, including at least one case where hackers were able to tilt the rig. Although no oil spill resulted, this should serve as a warning to the maritime community.

Likewise, the grounding and partial-sinking of the *Costa Concordia* appears to be the fault of human error, not because hackers manipulated the GPS, ECDIS, or AIS. But all vessels that rely on e-navigation and GPS, ECDIS, and AIS are susceptible to cyber-attacks, and all such systems can be manipulated by hackers and cyber criminals. There have been recent accounts outlining how both airplanes and cars can be manipulated and controlled remotely by cyber hackers, due to reliance on ICT. Vessels are no exception. It is only a matter of time before the next headline of *The New York Times* alerts us to the recent grounding of a particular cruise ship, river-cruising vessel, ferry, or container ship due to the hacking of the vessel's enavigation system.

Cyber threats are very real and the consequences of a hugely successful cyberattack in the maritime industry would be disastrous. However, cyber-attacks have been happening in the maritime community for years, resulting in mostly financial losses, as opposed to loss of human life or severe damage to the environment, which is of particular concern to the maritime community. In addition to recent reports regarding the hacking of oil rigs and the manipulation of GPS, ECDIS, and AIS, the bunkering community and many shipping companies continue to suffer tremendous losses due to cyber-attacks. For example, in December 2014, a major maritime company engaged in a deal to order a sea floor mining vessel in China on the back of a long-term charter. The maritime company reportedly pre-paid \$10 million of the \$18 million charterer's guarantee. Unfortunately, the company was a victim of a cyber-attack as it unknowingly paid the deposit into a bank account that belonged to a cybercriminal. The matter was promptly referred to police authorities, who pursued an investigation. In an effort to better protect itself from future cyberattacks, the maritime company also engaged a cybersecurity firm to ensure the ongoing security of its networks and to investigate the source of the cyber-attack. Similarly, as recently as this past August, hackers stole about \$644,000 from a shipping company registered in Cyprus. The Limassolbased shipping company received an e-mail purportedly coming from their fuel supplier in Africa requesting that money owed be paid to a different bank account than usual. The shipping company complied, only to find out that they had been defrauded when they later received an e-mail from the fuel company asking for payment.

Cyber Regulations on the Horizon

Since the U.S. Government Accountability Office ("GAO") issued its 2014 report on maritime security outlining the maritime community's vulnerability to cyber-attacks, the maritime community has slowly begun to recognize, acknowledge, and address the need for greater information sharing and the need to develop maritime cybersecurity regulations and guidelines. While the maritime industry does not currently have any cybersecurity regulations, change is on the horizon.

In 2015, the U.S. Coast Guard launched a year-long initiative to fully understand the cyber threats facing the industry, with the ultimate goal of developing cybersecurity guidelines. Midway through their initiative this past June, the Coast Guard issued a "Cyber Strategy," summarizing its vision for operating in the cyber domain. The Cyber Strategy discusses the Coast Guard's approach to defending cyberspace, including risk assessment and risk management and the strategic priority of protecting Maritime Critical Infrastructure, which includes ports, facilities, vessels, and related systems that facilitate trade within the United States. The Cyber Strategy offers a framework for the Coast Guard's plan to operate effectively and efficiently within the cyber domain.

In addition to the U.S. Coast Guard, the Round Table ("RT") group, comprising of BIMCO, ICS, Intercargo, and Intertanko, is also developing standards and guidelines to address cybersecurity issues in the industry. Acknowledging that all major systems onboard modern ships (main engine, steering, navigation systems, ballast water, and cargo handling equipment), are controlled and monitored by software and reliant on ICT, the RT group has committed to developing guidelines to assist the maritime industry to better protect itself from cyber-attacks. It is reported that the RT group is in the final phase of developing a pattern for the maintenance and updating of electronic systems. Mr. Angus Frew, Secretary General of BIMCO, is noted as saying, "The standards under development are intended to enable equipment manufacturers, service personnel, yards, owners and operators, as well as crew, to ensure their shipboard computer-based systems are managed securely—and kept up-to date to protect against the ever-growing threat from exploitation by criminals."

Likewise, the IMO also has turned its attention to the very real threat of cyberattacks and the need for cybersecurity guidance and regulations. At the 95th session of the IMO Maritime Safety Committee ("MSC"), held this past June at the IMO headquarters in London, the MSC addressed the issue of cybersecurity

extensively and agreed to work on guidelines on managing cyber-related risks

onboard ships and in port facilities at MSC 96. Proposed amendments to the ISPS

Code were discussed, but ultimately it was decided that more time would be needed

to develop the appropriate guidelines—given the current ongoing work of the

industry on cybersecurity—with the ultimate goal of submitting a draft proposal or

set of guidelines to present and discuss at MSC 96.

Accepting the Reality of Cyber Crime

The maritime industry faces very real cyber threats and potentially devastating fall

out from its failure to address and employ proper cybersecurity measures. While the

industry has been somewhat hesitant to discuss these cyber threats, cyber-attacks,

and its subsequent losses, the reality of cyber-attacks in the maritime industry can

no longer be ignored or denied. Accordingly, the maritime industry is on the verge of

great change.

The leaders of the maritime community around the world have acknowledged the

threat of cyber-attacks and have begun to develop cybersecurity guidelines and

regulations. In the interim, cyber-attacks will continue to inundate the maritime

community. To avoid catastrophic losses and to avoid becoming another victim of

cyber-crime reported on the front page of The New York Times, it behooves all

companies in the maritime industry to ensure they have the best cybersecurity

protections available, and remain diligent in the fight against cyber-crime. Cyber-

attacks are very real, and while regulations are on the horizon, cybersecurity

protections are available to help guide us today.

Source: Mondag.com 23 October 2015

The Price of Delay: US Navy To Challenge Chinese Claims

-Sydney J. Freedberg Jr.

WASHINGTON: After five months of hints, declarations, mixed messages, and dithering, the US is reportedly set to challenge Chinese claims in the South China Sea. But the months of signalling will cost us. What might have been a low-key "freedom of navigation operation" — sailing, flying, or training in disputed areas to set a legal precedent for access — may well get a lot more complicated because of the build-up. I'm still waiting to see it before I believe it," one Senate staffer said. (The Pentagon declined to comment when we asked for confirmation). "It's long overdue, and the long delay has made it a bigger deal than it actually is."

"I do think we have paid a price [for delaying], mostly in terms of confusing everybody about why freedom of navigation operations take place," said Bonnie Glaser, director of the China Power Project at the Center for Strategic & International Studies, who recently returned from her latest trip to China. "There are many people that I have spoken to in China who view this as a challenge to Chinese sovereignty, which it is not, or who view it as a provocation, which it also is not."

"People in official positions" in China are reportedly saying that the People's Liberation Army should open fire at US forces if they enter the 12 nautical mile zone around artificial islands in the South China Sea, said retired Navy Commander Bryan Clark. (Under international law, such manmade landmasses do not confer sovereignty on those who build them). World War III is not going to happen, happily, he said, but the bellicose talk shows how much pressure Chinese policymakers are under.

"The Obama administration has put themselves in a worse position strategically," said Clark, now at the Center for Strategic and Budgetary Assessments. "It was all

because the US delayed." Normal freedom of navigation operations are quiet exercises in setting legal precedents — we can sail through this area, we can fly here, we can conduct operations — but five months of public uncertainty has made this one a big deal, he said.

"The US could have done much better by simply doing the exercise without saying anything about it, and China could have responded probably at a much lower level," Clark told me. Now, "it forces China to react in order to save face [and] be able to argue to their people they didn't take this lying down."

There's an impact on China's maritime neighbors, too. "They're very watchful," said the Heritage Institute's Dean Cheng. "I think it probably came as more than a bit of a shock when Secretary of Defense Carter makes these very strong statements at Shangri-La in May," Cheng told me. But then it becomes clear when Sen. John McCain pressed for an answer that the US hasn't gone within 12 nautical miles of any Chinese-claimed territorysince 2012.

At least one expert thinks the Obama administration has legitimate reasons for waiting, argued Patrick Cronin, director of the Asia-Pacific Security Program at the Center for a New American Security. Yes, they waited too long: "The White House should already have green-lighted a FONOP and should announce that the U.S. plans to conduct such operations as a matter of routine," he told me, "but I recognize the White House is looking at the issue through a different lens from the Pentagon."

Freedom of navigation operations in November could complicate the president's visit to Asia that month, Cronin said, overshadowing the rest of his agenda and making it harder to get Chinese cooperation on issues from cyber espionage to

trade. Sailing or flying within the 12nm limit in September could have scuttled that month's summit with Chinese president Xi Jinping. Earlier this summer, the administration was working hard on the Trans-Pacific Partnership and a climate change agreement, either of which an angry China could have undermined. Finally, the administration needed time to brief allies and muster regional support, he said, since the primary point of the operation is to bolster local countries and the international community against Chinese bullying.

Our congressional sources disagreed. The long delay was frankly "embarrassing," the Senate staffer said.

"The fact that it has taken so long undermines the legitimacy of the very legal claims the administration claims to be upholding," agreed a House staffer. "Why would something that is in such indisputably solid legal ground require weeks and months of deliberation, played out in the world press? The administration should never had allowed a gap in these ops....This should be an absolute nothing-burger, allowing ships in innocent passage to conduct operations that had been done for decades until 2012."

Innocent Passage & Military Activity

And this should not be a on-off event. "It has to be something that you do regularly, or regularly enough that you establish a legal precedent," Clark said. With the significant exception of the UN Convention on the Law of the Sea — which the US hasn't ratified but abides by nevertheless — international maritime law is largely a matter of precedents, customs, and norms, which freedom of navigation operations aim to establish.

"It can't be just one entrance [into disputed waters]," Dean Cheng said. "It will have to be a sustained policy, and whether or not the decider in chief recognizes that is a question."

"The United States needs to make these operations routine," agreed Patrick Cronin. Then there's the question of what, exactly, the operation should include. The simplest form of freedom of navigation operation is to sail through a body of water directly from point A to point B, without changing course to nose around or conducting any specifically military activity: This is exercising what's called the right of innocent passage.

The Chinese are cranky about "innocent passage." They often take offense at any foreign military vessel passing through their territorial waters without prior permission. But in the case of the South China Sea, just asserting the right to sail through may not be enough. That's because international law, as most nations interpret it, allows innocent passage even through territorial waters, that 12 nautical mile zone around their shores. So if the US just sails past Chinese-built artificial islets without doing anything else, that's perfectly compatible with China's claims that the islets are sovereign territory.

"If US ships ... just drive through and demonstrate innocent passage... that doesn't say whether those islands are real territory or not," said Clark. To make a clear statement that the islets are not Chinese territory and the 12 miles around them are not Chinese territorial waters, the US forces have to conduct some kind of non-"innocent" activity.

This doesn't have to be much, said Bonnie Glaser: "One option is to loiter in the area of 12 nautical miles for a period of time, not just travel from Point A to Point B, but spend an hour or two, or maybe go around the island."

More likely, however, is some kind of explicitly military activity. The Reuters story says a US destroyer will be shadowed by a P-8 Poseidon surveillance plane. "Having the surveillance [plane] is certainly a military activity in and of itself," said Glaser. "If it's accompanied by a P-8, that would check that box. The ship itself wouldn't have to do anything additional."

If a ship were not accompanied by aircraft, it would need to conduct some unmistakably military activity: deploying its towed-array sonar to practice hunting submarines, for example, or launching a helicopter to look around..

What Would China Do?

In geopolitics, for every action there's a reaction, but not necessarily an equal one. "What are the Chinese options?" Cheng asked. "Everything from ignoring us entirely... to dangerous frankly seamanship [such as] stopping directly in front of a US ship." Actual shooting is not on the menu.

Ignoring the Americans has its attractions for Beijing, especially if they don't think the Obama administration has the guts to sail by their islets more than once. "The Chinese may say 'look, yeah, you came through one time, ok," Cheng said. "'We're ignoring you because, guess what? It's still ours."

Restraint may play better with international audiences than with Chinese nationalists at home. "I can't believe they're going to threaten US forces, but they'll do something to be able to tell their people they responded to the US provocation," said Clark. "They'll turn on fire control radars or they'll make belligerent threats."

"At a minimum, they will shadow the US ships," said Glaser. "They could try...to force the ship out of their waters, [as in] the Impeccable incident several years ago, [but] that's of course potentially risky business: You could end up with a collision."

Typically, in territorial disputes, Chinese Coast guard vessels take the lead while PLA Navy warships, much more heavily armed, watch from a distance. Sometimes, ostensibly civilian craft such as fishing boats conduct the most aggressive maneuvers, no doubt out of a pure excess of patriotism without any guidance from Beijing. This three-tiered approach means the heavily armed PLAN vessels are present but aren't conducting the riskiest actions, like ramming or shoving another ship, that could quickly lead to escalation. Chinese military aircraft, by contrast, have come dangerously close to US planes.

"My understanding is that Xi Jinping is pretty serious about avoiding accidents," Glaser told me. A big difference between what's about to happen and past incidents is that the US and China now have formal agreements on how to handle them safely: the Convention on Unplanned Encounters at Sea (CUES), signed last November, and a brand new agreement on air-to-air encounters signed during Xi's visit in September. "The Chinese have done a pretty good job" adhering to CUES, she told me. The air-to-air agreement is too new to say.

Source: <u>Breaking Defence</u>, 26 October 2015

CHINA SECURITY: Are China's New 'Floating Islands' Being Built for the

Indian Ocean?

-Joshua Philipp

This news analysis was originally dispatched as part of Epoch Times' China email

newsletters. Subscribe to the newsletters by filling your email in the "China D-brief"

box under this article.

An odd project was unveiled at a recent military exhibition in Beijing, showing what

could be the Chinese regime's solution to both its lack of aircraft carriers, and the

controversies around its island building programs.

The project is a "Mobile Sea Base" concept, using the fitting name of "Very Large"

Floating Structures" (VLFS). According to an Aug. 9 report from naval defense

industry magazine, Navy Recognition, the Chinese regime's VLFS project was

publicly revealed at the National Defense Science and Technology Achievements

exhibition in Beijing.

I poked fun at this project in a previous report, but its implications are actually rather

serious.

The Chinese Communist Party (CCP) detailed its global naval ambitions in its May

26 military strategy white paper. It plans to discard "the traditional mentality that land

outweighs sea," according to the white paper, and will begin to "protect the security"

of strategic sea lines of communications, as well as "overseas interests."

"Strategic sea lines of communications" is a fancy way of saying global maritime trade routes, and includes the handful of shipping chokepoints around the world. As I detailed in a recent report, the CCP is hard at work—around all these strategic locations—signing deals that would give it access to, or control of, local ports.

If you were to take the United States as an example, it's able to have a global military presence thanks to its aircraft carriers and its military relationships with countries around the world, which grant it port access and land bases.

The Chinese regime, on the other hand, has only one very old and rickety aircraft carrier, and while it's negotiating port access with countries around the world, most of these deals are still around trade, and its warships are still largely unwelcome.

This is where the VLFS Mobile Sea Bases come into play. The CCP's strategy to close gaps in naval power has so far taken the form of its man-made islands in the South China Sea. These give it stations where its ships can refuel and resupply, as well as airstrips to compensate for its lack of aircraft carriers.

Its use of man-made islands has barely been allowed in the South China Sea, mainly because the CCP has argued it has "historical" sovereignty over the region, and because (at least until recently) it faces very little military threat from the surrounding countries.

In a recent article, I explained that the CCP is likely gearing up for a maritime push into the Indian Ocean. There, its island construction wouldn't work, not only because

neither of the above points would apply to the Indian Ocean, but also because it

lacks the reefs and shallow waters that made the CCP's island building possible in

the South China Sea.

Yet, the VLFS Mobile Sea Bases would solve all these problems. Since the bases

float, very much like aircraft carriers, they would largely be immune to the legal

controversies around the CCP's man-made islands. And also because they float,

they would be usable in the deep waters of the Indian Ocean.

It's important to note that the VLFS concept isn't new. According to Naval

Recognition, the United States seriously considered building similar structures when

it started Operation Desert Shield in 1990. They were called "mobile offshore

bases."

The rationale for the United States, according to Naval Recognition, was that with

the structures, the United States "could have a base anywhere in the world in as

little as a month," and the bases could go beyond the capabilities of aircraft carriers

to accommodate even very large aircraft like the C-17 Globemaster III.

The Chinese regime is already showing off concepts for the bases. If they decide to

build and deploy them in the Indian Ocean, the world will face a situation similar to

what's happening already with Chinese military presence in the South China Sea.

Source: Epoch Times | October 26, 2015

U.S. destroyer sails near disputed Chinese Islands

A U.S. Navy destroyer sailed Tuesday through the highly disputed South China Seas to uphold international law, officials said.

The USS Lassen, a guided missile destroyer, travelled within 12 nautical miles of Subi reef in an area the Chinese have claimed is their territory, a Defense Department official said. The Chinese have built artificial islands on the reef they say is for scientific purposes, but satellite images imply they might be military bases. The Lassen passed through the area without incident, despite increasing tensions with China over the building of the islands. China has had disputes with virtually every nation in the region over ownership of various islands. The United States will not take sides in any of those disputes, the official said. The U.S. Navy's visit is a direct challenge to China's growing influence in the region and a follow through on President Barack Obama's assertion to Chinese President Xi Jinping last month that the United States will work to maintain "unimpeded commerce" in the area. China's Foreign Ministry said earlier this month it would "never allow any country to violate China's territorial waters and airspace in the Spratly Islands, in the name of protecting freedom of navigation and overflight." China has contended it is exercising its ancient rights to the reef as national territory. The United States said the ship was there to uphold international law and protect safe passage in a busy shipping lane. The United Nations Convention on the Law of the Sea states the typical 12-nautical-mile boundary nations enjoy off their coastlines cannot be placed around artificial islands or structures, only a 500 meter safety zone. Even within the 12 nautical miles, a military ship can pass through under the rule of "innocent passage," allowing ships to sail as long as they are not conducting military manoeuvres. The passage of the Lassen is the first visit by a U.S. warship since construction on the artificial islands began in 2013.

Source: <u>USA Today</u>, <u>26 October 2015</u>

Somalia's new Pirates

-Hassan Sheikh Mohamud

MOGADISHU—Somalia is blessed with the largest coastline in continental Africa. Our rich marine waters are some of the most productive in the world, teeming with schools of yellowfin tuna, blue marlin, dolphinfish, and sardines. For more than 30 years, however, this bountiful marine wilderness has also been a source and site of conflict, as foreign illegal, unreported and unregulated fishing vessels have plundered our waters—stealing our fish and selling their catches at distant ports.

Just a few years ago, the encroachment of illegal, unreported and unregulated fishing vessels sparked a wave of piracy in Somalia that cost the global maritime shipping industry billions of dollars in lost revenue. As illegal foreign fishing vessels fled our waters, Somali pirates quickly shifted their focus toward more lucrative vessels, such as cargo ships and oil tankers. And, now that piracy has mostly been eliminated, there is growing evidence that foreign fishing vessels have returned to plunder our waters once again.

A new report by the group Secure Fisheries (called "Securing Somali Fisheries") unveils new satellite data showing that foreign illegal, unreported and unregulated fishing vessels are now catching three times more fish than Somalis. They are targeting some of the highest-value fish in our waters, leaving their Somali counterparts to compete over lower-value fish.

The report shows that, making matters worse, these foreign fleets have contributed to overfishing our swordfish, snapper, marlin and shark populations. Foreign bottom trawlers have fished recklessly and acted with impunity, dragging heavy nets, razing the bottom of our sea floor, and damaging an astounding 120,000 square kilometers (46,000 square miles) of important marine habitat. The damage is so extensive that even if trawling were stopped today, this area may need many years to recover.

This pillaging of our marine ecosystem is taking place even as Somalia has made great strides over the last 18 months toward better management of our waters. In June 2014, my government laid claim to Somalia's 200-nautical-mile exclusive economic zone, in line with the United Nations Convention on the Law of the Sea. This past December, we also passed the Somali Fisheries Law, which explicitly outlaws bottom trawling. This groundbreaking legislation calls for improved monitoring of fish landings, an ecosystem-based approach to fisheries' management whereby the area would be managed holistically, and the protection of threatened and endangered fish species.

But, despite all our progress in strengthening fisheries' management domestically, we lack the ability to police our vast waters. The international community could make a significant difference in this area, by helping my government monitor and control Somalia's exclusive economic zone, as well as through improved sharing of the critical intelligence gathered by international naval patrols.

According to the Secure Fisheries' report, eliminating illegal, unreported and unregulated fishing today would enable Somalia to begin to license and sell commercially valuable tuna sustainably, generating up to \$17 million per year. These funds could then be reinvested into better infrastructure—such as port construction, improved cold storage, and modern processing facilities—to support our artisanal and industrial fishing fleets.

The elimination of illegal, unreported and unregulated fishing would also allow our overfished stocks to recover and help build a prosperous Somali domestic fishery, along with increased government support and funding for data collection and resource management. The report shows that healthy fish stocks could provide significantly greater amounts of resources than they currently do. In fact, almost half of our managed fisheries are currently exploited at sustainable levels. But we need more investment in better infrastructure to realize our industry's full potential.

Fishing in Somali waters must not be allowed to remain a free-for-all, where farflung foreign fleets exploit the ecosystem in unsustainable ways. I call upon the international community to collaborate with my government to ensure that illegal,

unreported and unregulated fishing in Somali waters is stopped for good.

Doing so would improve maritime security and promote a vibrant domestic fishing

industry that benefits and helps sustain all Somalis. A sustainable, dynamic fishing

industry would help us build a more stable and prosperous Somalia.

Given our country's great potential and its strategic location, that is an outcome that

everyone should be willing to support. Project Syndicate

Hassan Sheikh Mohamud is the president of Somalia.

Source: Opinion Inquirer 27 Oct 2015

Coast Guard issues fresh advisory on fishermen straying into Pakistan waters

An Indian delegation will visit Pakistan to inspect 22 Indian boats seized by the

neighbouring country and discuss modalities for their release New Delhi |

With two incidents in a month of Indian fishermen being attacked after venturing into

Pakistani waters, the Indian Coast Guard has issued a fresh advisory to the Gujarat

government asking it to warn them not to stray into the "no-fishing" zone.

The advisory comes against the backdrop of a 40-year-old fisherman venturing 10

nautical miles into the Pakistani waters and being shot dead on September 18. On

October 15, another fisherman was injured when his boat was in Pakistani waters.

The injured fisherman, identified as Dhanji Bamaniya, was let off on humanitarian

grounds along with five others who sailed back to Jakhau coast. Pakistan's Maritime

Security Agency (MSA) also arrested 24 fishermen the same day.

Authorities have now warned the fishermen against not only crossing the

International Maritime Boundary Line (IMBL), but also not to fish in "no-fishing"

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zone, failing which their documents would be forfeited. We have informed the Fisheries Department of Gujarat government about this. On our part we can only seize their documents and hand it over to the state authorities," a Coast Guard official said. There have been several instances of Indian fishermen venturing into Pakistani maritime boundary and vice-versa. As per the figures till October 20, some 790 fishing boats have been seized by Pakistan's MSA.

This year alone, around 205 fishermen were arrested and 35 boats seized by the MSA for venturing into Pakistani waters. An Indian delegation will visit Pakistan to inspect 22 Indian boats seized by the neighbouring country and discuss modalities for their release. Coast Guard sources said Pakistani authorities keep releasing fishermen, but not the boats. The delegation will comprise two representatives of boat owners, two mechanics, an official of Gujarat fisheries department and a member from state fishermen's association. Some repairs will be required before the 22 boats can be brought back to Gujarat.

Source: Indian Express 25 October 2015

Australia tries to halt unrest at immigration detention camp

- Kristen Gelineau

SYDNEY — Australian officials were working Monday to contain unrest at a remote detention center for asylum seekers in the Indian Ocean, with protesters lighting a series of small fires and guards withdrawing from the compound.

The immigration department confirmed there was a "major disturbance" at the detention center on the Australian territory of Christmas Island. Immigration Minister Peter Dutton said one detainee caught up in the fray had requested medical assistance for an unspecified reason, but no serious injuries had been reported.

Refugee advocates say riots broke out following the death of an asylum seeker who escaped from the facility on Saturday. The man's body was found the following day at the bottom of a cliff on the island. The cause of his death is under investigation.

The immigration department denied there was a large-scale riot, but said staff had withdrawn from the facility for safety reasons.

The department said the problem began when a small group of Iranian detainees staged a peaceful protest following the asylum seeker's death. Other detainees then began damaging the property, including lighting several small fires.

Officials were negotiating with the detainees in a bid to end the standoff, Dutton told reporters. He declined to elaborate on what the detainees wanted, and said he didn't know how many people were involved in the protest.

The group leading the unrest appeared to be detainees who are being held at the facility due to their visas being cancelled — not asylum seekers, immigration officials said.

Australia last year strengthened the power it has to cancel visas, making it mandatory to do so if a person has been sentenced to at least a year in jail. That has led to an influx of New Zealanders with criminal records — some of whom were long-term residents of Australia — ending up in immigration detention while they await deportation. Some of them are appealing the government's decision to revoke their visas.

New Zealand Prime Minister John Key said he was told there may be a few New

Zealanders involved in the unrest and if so, they're doing nothing to help their case

to stay in Australia.

"The risk is that they actually damage their own appeals because they undertake

other criminal activity," Key told reporters.

New Zealand lawmaker Kelvin Davis, who recently visited the island, said a New

Zealander held at the facility told him that detainees had taken over the center.

"They have put holes in the walls, so even if they are rounded up and put back in

the cells they actually can't be locked up," Davis told the Australian Broadcasting

Corp.

The immigration department said the perimeter was secure.

Australia has taken a tough stance in recent years on asylum seekers who try to

reach its shores illegally. Asylum seekers who pay people smugglers to take them in

rickety boats to Australia from Indonesia are detained on Christmas Island and on

the impoverished Pacific island nations of Nauru and Papua New Guinea.

Source: Chron 09 Nov 2015

Cyclone Megh expected to strike parts of KSA, Yemen

EDDAH: Saudis are waiting anxiously to see the effects of a possible second cyclone that is currently gaining strength in the Indian ocean, which is being called "Cyclone Megh," just days after "Cyclone Chapala" brought torrential rains to the Kingdom's south.

The new cyclone is expected to reach Socotra Island in Yemen in the next 24 hours, making it the first recorded case in which two hurricanes have hit Yemen within just one week.

Head of the Meteorology Department and Director of the Center of Excellence for Climate Change Research at King Abdulaziz University, Dr. Mansour Al-Mazroui, told local media that Cyclone Megh comes in the form of a storm that resulted from a weather depression over the Indian Ocean, and which is expected to become stronger during the next 24 hours.

He added that predictions state that a cyclone is forming to the west of the Arabian Sea, and will affect the island of Socotra, before moving west to reach Al-Mukalla and the Aden coast. lts effects will he limited on Somalia. Al-Mazroui confirmed that the cyclone will affect Yemeni and Saudi territory, bringing heavy rain, adding that this phenomenon is caused by the rising temperatures of the Indian Ocean which coincides with the rising temperatures of the atmosphere.

Regarding the influence of the El Nino phenomenon, he said that studies conducted by the Climate Research Center confirmed that the impact of the phenomenon will be strong this year, and will continue to contribute to the increased rainfall rates in the near future.

Cyclone Megh is expected to hit the Yemeni coast on Sunday, and will cause increased humidity rates and rainfall in Saudi Arabia, as occurred during Cyclone Chapala.

Source: Arabnews 09 Nov 2015



MARITIME FORCES



Indian Navy's Home Grown Nuclear Submarine to Undergo Missile Tests this Month

The Indian Navy's first indigenously developed nuclear submarine, INS Arihant is set to undergo Nirbhay and another missile tests later this month. The missile test from the nuclear-powered submarine is aimed at paving the path for handing over it to the Indian Navy during the International Fleet Review in Visakhapatnam in February next year," Indian Media quoted unnamed defense ministry sources as saying Monday. Firing of Nirbhay missile from the submarine will be followed by firing of another type of missile. So far, all trials and tests have been held successfully from the nuclear submarine," official sources claimed.

India plans to build at least two more Arihant-class nuclear-powered submarines. India had started building INS Arihant in the 1990s under its highly secretive ATV (advanced technology vessel) programme.

The INS Arihant was built as a ship submersible ballistic nuclear (SSBN) submarine capable of firing nuclear-capable missiles and will complete India's nuclear triad. With the operationalistion of INS Arihant, India will have the capability of firing nuclear missiles from the sea as well apart from land and air."INS Arihant will go for deep sea diving this year and along with a series of tests, we would like to test B-05," Director-General of Defense Research and Development Organization (DRDO) and Secretary (Research and Development), S Christopher said to Indian media last month. The submersible ballistic, nuclear (SSBN) submarine is capable of carrying medium range nuclear tipped missile 'B-05'. While Nirbhay is a long range subsonic cruise missile with a strike range of over 1,000 km, the next missile would

be India's first Submarine Launched Ballistic Missile, which has a range of about

700 km.

Source: Our Bureau 12 October 2015

Geo-strategic push: India-US-Japan Malabar-2015 naval exercise kicks off

NEW DELHI: The Indian and US navies will jointly conduct the 19th edition of

Malabar naval exercise-2015 in the Bay of Bengal from October 14 to October 19.

In what could be an annoyance to China, alongwith the Indian Navy and the US

Naval Forces, Japanese Maritime Self Defense Force (JMSDF) will also participate

in the exercise.

"The scope of MALABAR-15 includes wide-ranging professional interactions during

the Harbour Phase and a diverse range of operational activities at sea

duringHarbour Phase and a diverse range of operational activities at sea during the

Sea Phase," said Ministry of Defence press release.

"Initiated in 1992, as a bilateral exercise between the Indian and US Navies, the

scope, complexity of operations and level of participation has increased steadily in

successive editions of the India-US Malabar Naval Exercise." said the release.

During MALABAR-15, the Indian Navy will be represented by INS Shivalik an

indigenous frigate, INS Ranvijay a guided missile destroyer, INS Betwa an

indigenous frigate and INS Shakti ----a Fleet Support Ship. In addition, one

Sindhugosh class Sindhugosh class submarine, INS Sindhudhvaj, Long Range

Maritime Patrol Aircraft P8I and integral rotarywing helicopters are also scheduled to

participate in the trilateral exercise.

The US Navy will be represented by the ships from Carrier Task Force (CTF) 70 of

the USN 7th Fleet, which is based at Yokosuka, Japan. The CTF will include the

Nimitz class aircraft carrier USS Theodore Roosevelt, Ticonderoga class Cruiser

USS Normandy and Freedom Class Littoral Combat ship USS Forth Worth. In

addition, one Los Angeles class nuclearpowered submarine USS City of Corpus

Christi, F18 Aircraft from US Carrier AirWing and P8A Long Range Maritime Patrol

Aircraft will also participate in the exercise.

The JMSDF will be represented by JSFuyuzuki, a missile destroyer with SH 60K

integral helicopter.

"The scope of MALABAR-15 includes wide-ranging professional interactions during

the Harbour Phase and a diverse range of operational activities at sea during the

Sea Phase," the release said.

The release also mentioned that sharing of best practices by the three navies will

strengthen their respective capacities and help create better synergies for effective

and speedy action to deal with challenges of disaster prevention and relief and

maritime safety and security in the Indo-Pacific region, for the benefit of the global

maritime community.

Source: Economic times 15 Oct 2015

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Indo-Japan-US Naval Exercise Concludes: Ocean Diplomacy

-Pranav Kulkarni

The Indo-Japan-US trilateral exercise, Malabar in the Bay of Bengal, which started on October 14 concluded on Monday. Started in 1992, the original bilateral Indo-US exercise is into its 19th version this year with the additional participation of the Japanese Maritime Self Defence Forces (JMSDF).

The Bay of Bengal- along the eastern seaboard- is important to India in the light of its Look East Policy, which has been tweaked by PM Modi as the Act East Policy. In 2007, China protested against the Japanese participation in Malabar 2007. This was followed by the then UPA government limiting the exercise to just a bilateral one between India and US. The JMSDF participation in the exercise in Bay of Bengal is thus a significant diplomatic decision for India for two reasons. On one hand, it underlines the importance Delhi imparts to ASEAN. On the other, it sends out a strong signal to China that India will independently pursue its foreign policy notwithstanding interference from any other power.

On the face of it, the exercise focused on disaster prevention and relief, maritime safety and security in the Indo-Pacific region. However, there is more significance to Malabar 2015 than just the "military learning"- thanks to the JMSDF participation. For the US, the exercise is a means to underline the Indo-Japan-US trilateral cooperation in the maritime domain in the light of its Pacific Rebalance.

While Beijing has kept a watchful eye on the activities in the Bay of Bengal over few days, the exercise also assumes importance in the context of deteriorated Sino-Japanese ties over Senkaku/ Diaoyu Islands and the Chinese construction work in the South China Sea — Japan has aggressively protested against it. The exercise thus sends out a subtle message to the Dragon indicating where the US stands when it comes to upholding freedom of navigation in international waters at large and the South China Sea to be specific. In the Malabar 2015, the Indian Navy has been represented by INS Shivalik -an indigenous frigate, INS Ranvijay - a guided missile destroyer, INS Betwa- an indigenous frigate and INS Shakti- a Fleet Support Ship. In addition, one Sindhugosh class submarine, INS Sindhudhvaj, Long Range Maritime Patrol Aircraft P8I and integral rotary wing helicopters also participated in the trilateral exercise. The US Navy was represented by the ships from Carrier Task Force (CTF) 70 of the US Navy's 7th Fleet, which is based at Yokosuka, Japan. The CTF included the Nimitz class aircraft carrier USS Theodore Roosevelt. Ticonderoga class Cruiser USS Normandy and Freedom Class Littoral Combat ship USS Forth Worth. In addition, one Los Angeles class nuclear powered submarine USS City of Corpus Christi, F18 Aircraft from US Carrier Air Wing and P8A Long Range Maritime Patrol Aircraft have been a part of the exercise. The JMSDF was represented by JS Fuyuzuki, a missile destroyer with SH 60K integral helicopter.

Source: Indian Express 19 October 2015

Search for MH370 will continue in Indian Ocean

The search for missing Malaysia Airlines (MAS) flight MH370 will continue on in the Indian Ocean, says Transport Minister Datuk Seri Dr Liow Tiong Lai (BN-Bentong).

He said the flaperon that was found on Reunion Island proved that MH370's journey ended in the Indian Ocean.

"This is based on data analysis that was confirmed by a team of experts; in an area as wide as 120,000km that covers 95% of the possible flight path.

"Since early data analysis and search areas were determined, a drift model was created by search teams from the Australian Transport Safety Bureau (ATSB) and Joint Agency Coordination Centre (JACC).

"Based on the drift model, a hypothesis was made that if there is debris from MH370, it will be carried by the current northwest of the Indian Ocean where the flaperon was found at Reunion Island," said Liow in a written reply in Parliament today.

He was responding to a question by Hee Loy Sian (PKR-Petaling Jaya Selatan) who asked the government to state the status of the search for the plane that went missing in March last year.

He also asked the government to reveal the latest results of investigation into MH17 and identify those who were responsible in the incident.

While reiterating the results of the investigation published on Oct 13, which revealed that MH17 was downed by a 9N314M explosive warhead, the government said that the investigation was ongoing.

"Criminal investigations by the Joint Investigation Team (JIT), headed by the Dutch and participated by Australia, Belgium, Malaysia and Ukraine, is being conducted and is expected to go on until 2016. In that regard, the identification of those who were responsible for MH17 being shot down depends on the results of the criminal investigation," added Liow.Flight MH370 disappeared from radar on March 8 last year, just over an hour after it left Kuala Lumpur International Airport while flight MH17 was on its way from Amsterdam heading to Kuala Lumpur when it was shot down over Ukraine, killing all those on board, including 43 Malaysians.

Source: The Rakyatpost 27 October 2015

Combined Maritime Forces delegation meets Secretary

A delegation of the Combined Maritime Forces (CMF), led by its Director Operation Captain Michael J Turner of Royal Australian Navy paid a courtesy call on the Secretary to the Ministry of Defence Eng. Karunasena Hettiarachchi at the ministry premises today (14th Wednesday, October 2015).

The Deputy High Commissioner for Australia in Sri Lanka Tim Higgins and representatives from Canada and USA were also present at the occasion. A cordial discussion was held between the Secretary and visiting delegation on matters of mutual interest.

The Combined Maritime Forces officials are in Colombo to attend the Senior Drug Enforcement Officials Meeting of the Indian Ocean Region.

As a part of this Meeting a simulated exercise of a mid-sea boarding by the Sri Lanka Navy boarding teams, and vessel search techniques to identify concealed compartments to detect narcotics in fishing vessels will be conducted. This exercise will be jointly conducted with the expertise of the Sri Lanka Navy and the Combined Maritime Forces at the Colombo Naval Base on 15th October.

Source: MoD Sri Lanka Press release 15 October 2015

Somalia: Operation Atalanta Warships Train With Seychelles Maritime Forces

During Port Visit

On Friday 30 October 2015 Operation Atalanta warships, ESPS Meteoro and HNLMS Groningen, carried out training with the Seychelles Air Force, Coast Guard

and Marine Police during their port visit to Port Victoria.

The busy day of training started with ESPS Meteoro welcoming the Seychelles Air Force on board to practice sea survival techniques following an aircraft ditching, with briefings about basic survival techniques and the various types of equipment

used.

At the same time on board Dutch warship HNLMS Groningen, the Seychelles Marine Police and Coast Guard conducted maritime security and fire-fighting training with the Royal Netherlands Marine detachment.

After proceeding out to sea, HNLMS Groningen and the Seychelles Air Force took the opportunity to train in maritime surveillance and search and rescue procedures.

Operation Atalanta warships regularly engage with regional states during port visits

and have helped to train and develop counter-piracy and maritime security

procedures in the region.

Source: All Africa 3 Nov. 2015

Abe to raise South China Sea issues at G-20, other Global Meetings

Prime Minister Shinzo Abe plans to raise issues concerning the South China Sea at

international meetings in coming weeks involving the Group of 20 major countries,

and Southeast Asian nations and their dialogue partners.

"The rule of law should be carried out to preserve the open, free and peaceful sea,"

Abe said during a speech in Tokyo, underlining the importance of international

cooperation to ensure that the rule of law prevails in maritime affairs.

Abe's remarks come amid heightened tension in the South China Sea following the

passage late last month of a U.S. guided-missile destroyer within 12 nautical miles

of an artificial island China has built in the disputed Spratly Islands. That irked

Beijing, which has expressed "resolute opposition" to moves that threaten Chinese

sovereignty.

"I would like to reaffirm the principle (of the rule of law) with concerned parties (and neighboring countries)...at the G-20, Asia-Pacific Economic Cooperation (meeting) and East Asia Summit," Abe said.

He was referring to the G-20 summit in Turkey, APEC forum in the Philippines, and the East Asia Summit in Malaysia where the 10 members of the Association of Southeast Asian Nations will meet with the group' dialogue partners.

China is part of the G-20 which also groups Argentina, Australia, Brazil, Britain, Canada, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United States and the European Union.

China, which claims most of the South China Sea, is locked in territorial rows with some of the members of ASEAN. ASEAN comprises Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

While Japan is not directly involved in the South China Sea disputes—which pits China against the Philippines, Vietnam, Malaysia and Brunei over competing territorial claims—Abe stressed the indispensable role of that sea to Japan's economy.

"Resources and goods enter Japan through many seas including the South China Sea," Abe said, referring to one of the world's busiest and vital shipping lanes.

Regarding South Korea's and Indonesia's expressed desire to join a U.S.-led free

trade initiative involving 12 Pacific Rim economies including Japan, Abe said he

"very much welcomes" such developments.

"The prerequisite is that (they) accept the new rules we have created" for the Trans-

Pacific Partnership free trade pact agreed last month, he said.

In Seoul last Monday, Abe held his first talks with South Korean President Park

Geun Hye since they took office in 2012 and 2013, respectively. During their

meeting, Park expressed South Korea's desire to join the TPP.

Source: Japan Today 08 Nov 2015

US Navy missile test off California creates social media stir with streak of light

The U.S. Navy has fired an unarmed missile from a submarine off the coast of

California, creating a stir on social media as people as far away as Nevada and

Arizona reported a streak of light in the night sky.

A Navy spokesman told The San Diego Union-Tribune the Navy Strategic Systems

Programs conducted the missile test Saturday in the Pacific Test Range near Los

Angeles.

Cmdr. Ryan Perry said the launches are conducted frequently to ensure the

continued reliability of the system and that information about such tests is classified

prior to the launch.

The streak of light led to a flurry of calls to law enforcement agencies

Source: Associated Press 21 October 2015

U.S. Navy Ship USS Anchorage rescues Sri Lankan fishermen stranded in

Indian Ocean

Nov 06, Colombo: The crew of the amphibious transport dock ship USS Anchorage

came to the rescue of six Sri Lankan fishermen stranded deep in the Indian Ocean.

The San Antonio-class amphibious transport dock ship USS Anchorage (LPD 23)

rendered assistance and provided aid to the crew of the stranded Sri Lankan-

flagged fishing vessel, M/V Lakshan, on early Wednesday (November 4).

The Anchorage, part of the Essex Amphibious Ready Group, which has been

deployed to the Middle East since May, was returning to home base in San Diego

and transiting through the U.S. 7th Fleet area of operations when the watchstanders

spotted six mariners aboard the vessel waving articles of clothing in an attempt to

get the attention of the U.S. Navy ship, the U.S. Navy said in a communiqué.

The Commanding Officer aboard Anchorage, Capt. J.J. Cummings, ordered the

dispatch of a rescue and assistance team, which determined Lakshan had

experienced a crank case explosion, leaving both engines unworkable and beyond

at-sea repair. The fishing vessel had been at sea without power for one day when

the fishing vessel's crew hailed the crew of Anchorage for assistance.

"Once our Rescue and Assist Team determined the vessel was dead in the water

and 300 miles from land with no food or water, it was obvious that the crew was

facing a life or death situation," said Cummings.

"Giving them assistance became our number one priority, and we were not going

anywhere until we had full confidence that the crew was safe. Our Sailors instantly

flexed from underway operations to mariner assistance, and it was a beautiful thing

to watch."

The rescue and assistance team delivered food, water and car batteries to power

the stranded vessel temporarily to the crew of Lakshan. The fishing vessel's parent

company sent another vessel M/V Beyanara, roughly 165 nautical miles away at the

time of Anchorage's arrival on station, for assistance. Anchorage remained on

station until their arrival.

Beyanara arrived Thursday afternoon, at which point the crew aboard Beyanara

assumed on-scene commander responsibilities from Anchorage's commanding

officer, and is now in the process of towing the vessel and crew back to land.

"This event stands as testimony to what lengths our nation will go to help complete

strangers and the remarkable professionalism of the Anchorage Sailors," continued

Cummings. "Our bridgewing lookouts, who were the first to spot their distress

signal, literally saved the lives of these mariners in distress."

Source: Colombo Page News Desk 6 Nov 2015.

<u>Indian ships enter Trincomalee for Sri Lanka-India naval exercise</u>

NEW DELHI: Reinforcing strong neighbourly ties underscored by extensive

maritime interaction, the Indian and Sri Lankan Navies would undertake the 4th

edition of Sri Lanka-India Exercise (SLINEX) off Trincomalee, Sri Lanka from October 27 to November 15.

Indian Naval ships Kora, Kirpan and Savitri along with ship-borne integral helicopters entered Trincomalee on Tuesday to participate in the exercise. Kora and Kirpan, the missile corvettes, are commanded by Commander Ashok Rao and Commander Abraham Samuel, respectively, and the Offshore Patrol Vessel Savitri is commanded by Commander Prashant Negi. In addition, an Indian Naval maritime reconnaissance aircraft will also participate in the exercise. The Sri Lankan Navy will be represented by Sayura, Samudra, Sagara, six Fast Attack Crafts, two fast gun boats and one fast missile vessel. The exercise will commence with a Harbour Phase, during which, the participants will engage in professional, cultural and social interactions. The Harbour Phase will be followed by the Sea Phase, which will commence on 30 Oct. The Sea Phase will include complex operations including anti-piracy exercises, gun firings, cross-deck helicopter operations and anti-surface exercises. The benefits of operational interactions under the aegis of SLINEX are clearly visible as both the Navies have an improved and steadfast understanding. SLINEX 15 will further enhance the capability of the two navies to work together at sea and contribute towards maritime security in the region," said a Ministry of Defence press release. SLINEX aims to promote mutual understanding and provide exposure to both the Navies to each others' operating procedures, communication procedures and best practices. This allows the two navies to develop greater confidence to operate together, if required, during complex maritime missions. Periodic conduct of this exercise has helped to build on past experiences and further advance professional as well as operational engagements between the two navies.

Source: Economic Times 27 Oct 2015



SHIPPING & PORTS



Norway Launches Green Shipping Project

- MarEx

The shipping industry is in a state of transition as it adjusts to increasingly strict emissions standards set forth by regulators. The European Parliament recently stated its aim to reduce emissions by more than 40 percent by 2030. The International Transportation Forum has also proposed reducing emissions by more than 50 percent by 2080, as well as taxes on those who exceed regulations. And with the U.N. Climate Change Conference on the horizon, it is possible that emissions regulations will only get more stringent. Government officials and industry leaders are scrambling to innovate to stay ahead of new rules. In a joint program with the Norwegian government, Oslo-based DNV GL recently launched the Green Coastal Shipping Programme which aims to create the most environmentally-friendly vessels in the world.

The program is comprised of five pilot projects which chiefly use LNG and batteries as energy sources."We envision a fleet of offshore vessels, tankers, cargo, container, bulk and passenger ships, ferries, fishing and aquaculture vessels, tugs and other coastal vessels, run entirely or partly using batteries, LNG or other green fuels," said DNV GL's Narve, who is the program director for the Green Coastal Shipping Programme.

The first project is a cargoferry plug-in hybrid which targets the development of costeffective and profitable short-sea box ships that are powered by a hybrid LNG and battery propulsion system. The second project is a green shuttle tanker project which utilizes batteries. The third project is a hybrid farming vessel project aimed at optimizing a hybrid propulsion system for more efficient energy operations. The

fourth project converts a cargo ship into a hybrid battery and LNG carrier.

Converting existing vessels into LNG carriers has been seen as cost-effective to

many small operators. The final project involves developing a low-energy

consumption green port with a minimal carbon footprint. Some of the technologies

being employed to achieve this include electric heavy-duty vehicles and cranes. The

green port will also be equipped with smart gates, offer cold ironing services and

charging stations for plug-in hybrid ships.

While the project appears promising, it is unclear if and when such infrastructure will

be commonplace worldwide. However, Norway's leaders appear to believe that the

shipping industry is in position to blaze the trail towards an environmentally-friendly

future. The shipping industry is very well equipped to lead the way in the green shift.

This can contribute to exports of good, future-oriented and environmentally friendly

solutions," said Monica Mæland, the Minister of Trade and Industry.

Source: Maritime-Executive 20 Oct 2015

EUR 523m fisheries and aquaculture investment package greenlighted for

Greece

The European Commission has adopted a key investment package for the Greek

maritime, fisheries and aquaculture sectors. The roughly EUR 523.4 million

available for the period 2014-2020 includes more than EUR 388 million of EU funds.

Welcoming the adoption, Commissioner for Environment, Maritime Affairs and

Fisheries, Karmenu Vella stressed: "With this investment package for fisheries and

aquaculture in Greece, the Commission can help deliver projects with long-term

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benefits. Greece's has a world-renowned maritime tradition. With good spatial planning and an integrated strategy, its vast coastline can be a fundamental part of the country's economic recovery. We want to give a jobs boost to Greek fishermen, fish farmers and their communities."The adopted operational programme (OP) is in line with the priorities of the European Maritime and Fisheries Fund (EMFF) and the EU's Common Fisheries Policy and Integrated Maritime policy. It aims at environmentally sustainable, resource efficient, innovative, enhancing

competitive fisheries and aquaculture as well as promoting blue growth and

maritimeskills in Greece.

In particular, funds will support projects that improve the livelihood of Greek fishing communities - for instance by improving infrastructure or by offering new professional development opportunities. Funding will also help limit the impact of fishing on the marine environment and enhance biodiversity by balancing fishing capacity and available fishing opportunities. Given the importance of the aquaculture sector in Greece, special focus will be placed on the promotion of economically and environmentally sustainable techniques.

Source: European Union 28 October 2015

China to Build Asia's 1st Big Data Base for International Shipping

BEIJING: A big data base for international shipping, stated to be the first in Asia will be established in east China's port city of Qingdao.

The 5 billion yuan (USD 787 million) project includes a big data exchange, a research academy, an industrial park and a big data center, according to an official with the Qingdao International Shipping Service Centre.

The centre signed a strategic agreement to jointly develop the base with AsiaInfo, a

leading provider of high-quality software and solutions in China, at an international

ocean forum held here yesterday.

"The construction of the base will push the modernisation of Qingdao's shipping

industry and its integration with information technologies," state-run Xinhua news

agency quoted the official as saying.

The container throughput of Qingdao Port ranks fourth in the country. Qingdao is

also one of China's seven international cruise home ports.

Source: New Indian Express 31 October 2015

Promoting coastal shipping of cargo to save Rs 40,000 crore: Government

NEW DELHI: As much as Rs 40,000 crore could be saved by promoting cargo

transportation by enhancing coastal shipping in 10 years under the ambitious

Sagarmala project, a port-led development scheme, as per government estimates.

Sagarmala is an ambitious project to promote port-led direct and indirect

development of coastal states and to provide infrastructure for transporting goods

via ports quickly, efficiently and cost-effectively.

Higher coastal shipment of coal by 100 million tonne per annum (MTPA) and higher

coastal shipment of other commodities (cement, steel, fertiliser, food grains, POL)

by 50 MTPA" alone could result in savings to the tune of Rs 11,500 crore by 2025,

an official document on Sagarmala has said.

Building of new coastal capacities for 120 MTPA steel and cement in southern

Gujarat, Central Andhra Pradesh, northern Karnataka, Odisha and northern Andhra

Pradesh would result in savings of another Rs 8,500 crore, it said.

According to the document, another Rs 12,500 crore could be saved in the next ten years by reducing time to export container by 5 days through customs efficiency and last mile connectivity by building dedicated road corridors.

Apart from these, the government plans saving Rs 7,500 crore by increasing "share of railways in modal mix from current 18 per cent to 25 per cent, creating "transshipment hub at Southern tip" and building "three new container ports" at Vadhavan, central Andhra Pradesh and Sagar. It said these will reduce the cost to export by Rs 3,000 per container.

The government last month has announced to spend Rs 70,000 crore on development of major ports only which have received 104 suggestions from international consultants to increase efficiency.

Once implemented, this will result in cargo traffic increasing three-fold while the ports will also go under performance audit.

Last month, Road Transport and Highways Minister Nitin Gadkari has said, "Mahanadi Coalfields Ltd in Odisha is expanding its output capacity to 260 million tonnes from the present 60 million tonnes and if the coal is transported through water, this will save Rs 7,000 crore annually."

He has said two ports - Kandla and Paradip - were being developed into Green smart cities and the government is eyeing at Rs 4,500 profit from ports this fiscal.

Gadkari has said the Prime Minister's emphasis is on "cooperative federalism" and Chief Ministers of states like Andhra Pradesh, Goa, Tamil Nadu, Karnataka, Maharashtra, Gujarat and Odisha, who attended the first meeting of Sagarmala had come out with many good proposals.

He has said 13 states and union territories were involved in Sagarmala initiative

which will be implemented across India's 7,500 kms coastline.

In March, the Cabinet had given 'in-principle' nod to the project, aimed at port-led

development in coastal states.

Source: Economic Times 1st Nov 2015

Malaysia Shipping Master Plan to be completed by end 2015

The Malaysia Shipping Master Plan (MSMP) will be completed by year-end and

discussed in the Cabinet, said Transport Minister Datuk Seri Liow Tiong Lai.

Liow said the ministry through its agencies including the Marine Department and the

Maritime Institute of Malaysia (MIMA) had worked closely with industry

representatives in drafting the MSMP.

"The objective of the master plan is to revitalise the shipping industry and maritime

sector in Malaysia through structured strategies from holistic representatives in

order to strengthen and ensure a dynamic and sustainable industry," he told

reporters at a press conference after launching the World Maritime Day 2015.

He said the MSMP in their preliminary assessment had identified and underlined

specific and strategic market targets for Malaysia's industry player to penetrate and

capitalise.

"Thus, MSMP is proposing the participation of Malaysia's fleet in the global energy

shipping, intra Asean trade shipping and to enlarge their current operation in the

domestic market," he added.

In undertaking the plan, the MSMP must be aligned with other national plans and

agendas which includes the Shipbuilding and Ship Repair Master Plan undertaken

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by the Malaysia Industry-Government Group for High Technology (MIGHT) and the

study of Malaysia's port sector that is currently being led by the Economic Planning

Unit (EPU).

"This is to ensure that targets recommended by MSMP will get the buy-in of the

Government and are parallel with the nation's aspirations and policies," he said.

Liow said in keeping with this year's "World Maritime Day" theme, one of the

components of MSMP is maritime education and training.

"Even though the plan focuses on the shipping sector and maritime industry, it

cannot stand nor succeed without the component of maritime education and training

and other maritime related resources," he said.

Source: The SunDaily 02 Nov 2015

Chabahar port links India, Iran'

Tehran, Nov 8 (IANS) The Chabahar port in Sistan-Baluchestan province of Iran

enjoys remarkable capacities and serves as a point linking the governments in New

Delhi and Tehran, Indian ambassador to Tehran Saurabh Kumar said on

Sunday. Saurabh Kumar made the remarks while touring the development project of

a jetty at Chabahar port, state run news agency IRNA reported.

He said India was seeking investments in the second phase of the development of

the jetty. He referred to a recent trilateral agreement between Iran, India and

Afghanistan on transit cooperation and said the second meeting on the issue was to

be held in New Delhi soon.

The ambassador said Indian firms were keen to take part in projects in Chabahar

port.

According to a local official, the jetty development project, once implemented, will raise the operational capacity of the port to 86 million tonnes.

Source: The Statesman 08 Nov 2015



GEOPOLITICS & MISCELLANEOUS



3D Printed Bikini Cleans Ocean by Absorbing Pollution

-Ana Verayo

If climate change is an imminent threat to the environment, ocean pollution is also part of this global concern where waste from oil spills and different industries are dumping chemicals into waterways, eventually ending up in the world's oceans. This ultimately results in extreme algal bloom, suffocating marine ecosystems.

In order to help alleviate this problem, engineering professor Mihri Ozkan and his team from the University of California, Riverside designed and developed a special 3D printed bikini to absorb toxic contaminants when the wearer splashes and swims into the ocean.

With this ingenious product, Ozkan utilized a reusable material known as the Sponge to create this swimsuit. The team developed this material by using heated sucrose to produce a porous structure that can repel water and at the same time, absorb, harmful contaminants. This special material was first used by Ozkan and his team to clean up oil and chemical spillages and in order to desalinate water. After initial testing, the Sponge was manufactured into the shape of a bikini which is also

encased in a net like cage structure, produced from 3D printed plastic which is also

flexible, that can be moulded into the shape of the wearer.

Ozkan explains that the filler amount and allocation for the 3D printed material was

created from several design options that consider the form and ergonomics of the

human body, and in turn, also pushing the boundaries of translucent swimwear

design.

The Sponge works by absorbing contaminants by as much as 25 times its own

weight. The contaminants then become trapped inside the Sponge's pores and it

does not, in any way, comes in contact and harm the wearer of the swimsuit.

Apart from working effectively by absorbing harmful toxins in the ocean, it is also

inexpensive to produce, where it only costs US \$0.15 cents for the material to be

moulded into different kinds of outfits and swimwear such as swim caps.

Source: Yibada 19 Oct 2015

MFL to use cryogenic tankers to transport natural gas from Krishnapatam

Port, India

- Jagdish Kumar

Indian government-owned fertiliser firm Madras Fertilizers Limited (MFL) is to use

cryogenic road tankers to transport natural gas from Krishnapatnam Port.

The gas will be imported to the Ennore LNG terminal, scheduled for operations in

2018.

Speaking on the development, an MFL official explained that the company will use

the imported gas for producing urea and this gas will be transported to its storage

tanks using cryogenic road tankers. The proposal to set up storage tanks has been

cleared and it is understood that work will soon commence on the construction of

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these. Initially, MFL will use tankers with an LNG carrying capacity of 7-8 tonnes to 15 tonnes per trip, with a distance of 500 km. However, the company is yet to decide whether it will purchase these tankers or hire them from a contractor.

The Ennore LNG Terminalis being set up by Indian Oil Corporation (IOC) and is expected to start operations by 2018.MFL is also in talks with Gas Authority of India (GAIL) to procure natural gas for its plant. GAIL's Kochi-Koottanad-Mangaluru-Bengaluru pipeline would be ready by 2018. In addition, Andhra Pradesh-based KEI-Ros Petroleum & Energy is setting up an LNG import terminal at the port, laying a 250km gas pipeline connecting Nellore and Ennore, which is likely to be commissioned by December 2017.

Source: Gasworld 26 Oct 2015

Evolution of Geo-Strategic Relations between India and Oman

Since its independence, Oman has followed a foreign policy largely autonomous from the Gulf Cooperation Council member States. Oman's initiatives to strengthen cooperation with India can be seen as part of its efforts to diversify its security partnerships. Muscat's ministerial visit to New Delhi, weeks after the new Indian government took charge in 2014, is suggestive of India's centrality in the Gulf's strategic calculus. Even though India's engagement with the Gulf region is largely limited to energy and trade related exchanges, India and Oman's security ties are relatively developed. In 1972, they signed a military protocol wherein Indian Navy personnel were deployed in Oman for three years. The protocol was institutionalized in the immediate aftermath of Oman's independence from Britain. Another MoU on defence cooperation was signed between India and Oman in 2005. Areas of cooperation include joint military exercises, military training and IT, educational courses and programmes, exchange of observers and formal visits. Currently, a two-tier arrangement for defence cooperation — Joint Military Cooperation Committee (JMCC) and Air Force-to-Air Force Staff Talks (AFST) exists with Oman.

Over the years, India's bilateral security ties have advanced with Oman, which has become central to any international strategy to stabilize the Arabian Sea as well as the Persian Gulf, the world's most volatile sea links. They also come under the shadow of terrorism, piracy and increasing illegal traffic in narcotics, arms and personnel. Post signing of a protocol on military relations, India and Oman have developed vibrant military cooperation during the last decade. Maritime cooperation between India and Oman is essential to impose security in the region. This was highlighted by Rear Admiral Anil K. Chawla, Flag Officer in Command of the Indian Navy's Western Fleet while addressing a gathering at a reception on INS Mysore (on September 22, 2013) at Port Sultan Qaboos when he said that the Omani Government provided important support to the ships of Indian Navy's Western fleet during their deployment in the Gulf of Aden for anti-piracy activities. "In fact, it will not be wrong to state that without Oman's staunch support to all the navies participating in anti-piracy operations in the region, the scourge would have not been brought under control. Oman is playing a key role in bringing stability in Somalia." Speaking on the occasion, J.S. Mukul, the Indian Ambassador to Oman, said that Port of Salalah is fast emerging as a regional hub in the multilateral fight against piracy. He added that "naval cooperation forms an important pillar of our multi-faceted relationship. The Indian Navy and RNO regularly conduct exercises, and training exchanges at all levels have further cemented bilateral ties. Oman has become an exceptionally reliable and close friend of India in supporting operations of our ships and aircraft in the region.

Though, Muscat has also expanded it's military relations with Beijing, which include joint anti-piracy operations in the Gulf of Aden. Chinese naval vessels dock at the Port of Salalah in Oman for replenishment. Oman's Defence Minister, Ayyiid Badr al-Busaidi, announced in 2010 that "his military would continue to provide the Chinese naval fleet with supplies if necessary". Oman was also the first Arab nation to export oil to China in 1983, to be noted.

Flashback

Oman's centrality to India's energy and maritime security dates back to the 19th and

20th century. The British government in India established New Delhi's political and

security role in Oman through the appointment of a Political Agent in Muscat to

manage British India's relations and protect ships in the Arabian Sea. As a protector

of the Gulf Sheikhdoms, the British Raj assumed responsibility for the foreign affairs

and defence of Oman (and the Gulf Sheikhdoms) in the 19th century.

The Government of Bombay established a Persian Gulf Squadron in 1821 to

enforce the General Treaty - anti-piracy treaty - using about 7 ships-of-war and 4

gunboats to patrol the Arabian waters. The Sultan of Muscat was also the first Gulf

ruler to be extended the protection of the Gulf squadron5. Post-independence, India

signed a Treaty of Friendship, Commerce and Navigation (1953) with Oman, which

segregated Indo-Oman relations from the British Political Agent in Muscat.

Former Indian Prime Minister Rajiv Gandhi and Sultan Qaboos had signed a MoU

on military cooperation in 1985 and joint naval exercises had begun in January

1993. 'Naseem al Bahr', a biennial joint naval exercise, completed its ninth edition in

September 2013 1. Oman also provides berthing facilities to Indian navy warships

for anti-piracy operations. MoUs on defence cooperation in 2005 and 2006

strengthened the military dimension of this bilateral relationship.

Source: IndraStra Global 05 Nov 2015

Industry pledge to help clear beach bruck

- Pete Bevington

SHETLAND'S aquaculture industry has promised to do all it can to cut down the amount of waste it produces and help clean up the local environment. The pledge comes as local campaigners started highlighting the amount of plastic being washed up on the islands' coastline, despite the annual Voar Redd Up that sees thousands of local people collect tonnes of rubbish every spring.

It also comes after a three day international conference was held in Lerwick to work out practical ways the crisis of marine litter in the north east Atlantic can be tackled right across west and northern Europe.

Beach bruck has long been a concern of islanders as witnessed by the success of Shetland Amenity Trust's award-winning Voar Redd Up, which celebrates its 30th anniversary next year.

However more and more people are recognising the annual cleanup has failed to cut down the amount of litter that washes up on local beaches, and some believe an even greater effort is needed.

Brae electrician Wills Sandilands, who's been raising the issue of beach bruck online for the past week, said he had been awakened by recent comments on the Let's Make Change – Let's Start Locally Facebook page.

"I started noticing what was on the beaches in Brae when I was walking the dogs," he said.

"I suppose I have been going past it every day and not thinking about it much, but my eyes have been opened and I'm learning how much damage this stuff can cause to marine life.

A dead seabird whose stomach was filled with plastic. Photo Chris Jordan"I've been reading about a whale they found with loads of plastic in its stomach, and about how plastic breaks down and small marine life eat it and it ends up in the food chain and in people's food supply – so this is becoming a health issue for people as well."

Sandilands particularly noticed the level of industrial waste from the aquaculture industry, especially mussel farms, and pondered whether they should be more proactive in cleaning up the mess they make.

Shetland Shellfish Growers' Association chairman Kenny Pottinger acknowledged that the mussel industry had left its mark on Shetland's coastlines over the years.

However he said great strides had been made in recent years, with the phasing out of polypropylene mussel pegs in favour of continuous rope, and the introduction of more resilient mussel floats.

"We are using better technology now, which should have reduced the amount of waste we produce for the past three or four years," he said.

"But if there are floats lying around we should be clearing them up and we usually do. If it's been a gale we wait for a fine day to go ashore whether they're ours or someone else's and take them ashore and to the dump."

He said most mussel companies were actively involved in the Voar Redd Up, providing vehicles and trailers and even boats to access remote sites.

He added that the industry would be keen to do all it can to help alleviate the problem and would welcome any approach from anyone with suggestions.

The OSPAR Commission's intercessional group on marine litter met in Shetland for three days last week. Photo Austin TaylorA similar stance is coming from Shetland's salmon industry, who say they have already taken major steps towards minimising waste and regularly help out with the Voar Redd Up.

Industry spokesman David Sandison said there had been many initiatives to reduce waste, such as recycling heavy duty plastic pipes and cage material.

The only waste he saw being produced now was blue string and small pieces of pipe that escaped into the sea, and believed a far greater problem existed with crew chucking stuff overboard from all kinds of boats.

He also pointed out that salmon farmers were often victims of marine pollution themselves, for example when a pot full of paint gets washed into a salmon cage.

"I have been approached in the past by certain individuals who have asked if the industry is willing to help with a clean up and our answer has always been yes," he said, adding that they could do more if they were approached.

"If a group of people wanted to go and clean an area up I am sure a company would be really happy to engage with that."

Shetland has always been at the forefront of tackling marine litter, a fact that was recognised by the intergovernmental OSPAR Commission when it met in Lerwick last week.

OSPAR's three day conference focussed exclusively on how to implement its action plan to tackle marine litter in the north east Atlantic, which was drawn up last year.

The organisation, which made it a legal obligation for oil companies to decommission redundant offshore installations, has now made marine litter one of its main campaign targets.

The 15 countries involved stretching from Russia and Greenland in the north, to Spain and the Azores in the south, has come up with a series of obligations for each country to implement.

It is also implementing major surveys to establish how much marine litter is lying on the ocean floor and to figure out how effective their action plans are proving to be, both of which will report in 2017.

Dutch minister Lex Oosterbaan, the joint chair of OSPAR's intercessional group on marine litter, said in Lerwick on Friday that Shetland could take credit for pushing the issue up the organisation's agenda.

"I can easily say that without Shetland, marine litter would not have been as strong

as it is in OSPAR or Europe - Shetland was the cradle for OSPAR working on

marine litter," he said.

Meanwhile Wills Sandilands said it was probably going to be up to local people in

Shetland to make more of an issue of plastic pollution along the coast if the situation

is to improve.

"The Voar Redd Up is excellent, it gets so many people involved, but I think more

needs to be done," he said.

David Sandison agreed. "We always get people (in the salmon industry) to

participate in the Redd Up.

"But one of the problems is it's become part of the culture to clean up once in the

year, which means people are less likely to clean up at any other time."

Source: Shetnews 08 November 2015