



# MAKING WAVES

## Inside this Brief

- **Maritime Security.....p.6**
- **Maritime Forces.....p.13**
- **Shipping, Ports and Ocean Economy.....p.21**
- **Marine Environment.....p.35**
- **Geopolitics.....p.46**

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**Myanmar's evolving Maritime Security landscape**

**China's Sunic-Ocean targets regional maritime security roles with SU-H2M UAV**

**Singapore enhances complexity of major Maritime Security exercise amid terror threat level**

**Buhari hands over Maritime Security to Israel**

**India, US to implement HOSTAC to strengthen Maritime Security**

**Singapore holds Maritime Security exercise amid terror fears**



**‘Beyond Hardware and Technology’: The Intangibles of China’s Naval Power (Part 3)**

**Indian Navy gets Anti-Submarine warfare INS Kiltan**

**US to provide EMALS technology to India for Aircraft Carriers**

**India to launch 2nd Strategic Nuclear Sub by end of 2017**

**The Royal Marines are Britain's most potent defence – it would be madness to cut their numbers now**

**2 Indon warships arrive in GenSan for goodwill mission**

**Exercise Dawn Blitz 2017 complete, setting the standard for new amphibious capabilities**

**Scarce facilities at land ports hamper bilateral trade: study**

**APMT, DP World Grow at India's Largest Container Port**

**Container segment to drive growth at Indian Ports**

**India sends first wheat shipment to Afghanistan via Chabahar port**

**Warburg Pincus in talks with DP World to sell stake in Gangavaram Port**

**Tourism may set sail from Indian shores soon**

**India to help develop Colombo, Trincomalee Ports: Foreign Secretary S Jaishankar**

**France's Bollore can buy majority stake in logistics firm India Ports only in 2021**



## MARINE ENVIRONMENT



**Tourists Find Heaps of Trash at the Tip of the World**

**Once-pristine Arctic choking on our plastic addiction**

**Ocean acidification is deadly threat to marine life, finds eight-year study**

**Even earless oysters 'clam up' over noise pollution**

**Corals may have a taste for dangerous plastic**

**Micro-beads: 'There will be more waste plastic in the ocean than fish by 2050'**

**Missing Plane Or Marine Dumping?**



**Rohingya Crisis: A Potential Maritime Quagmire for India**

**Duterte's Foreign Policy Shift: Bandwagoning with China?**

**Tillerson Positive About India, Critical of China**

**India should make its own decisions on ties with Iran: US**

**China Takes An Expansionist View Of Geopolitics**

**What the return of quadrilateral says about India and emerging Asian Geopolitics**

**China, US will have some practical cooperation on OBOR: Envoy**



## **Myanmar's evolving Maritime Security landscape**

- Rajni Gamage

Myanmar links South and Southeast Asia and lies on maritime shipping routes from the Indian and Pacific Oceans. A key pillar of its national development agenda is establishing an efficient and integrated transport system to become Asia's newest maritime hub. Recent political and economic reforms have already had significant impact on national trade flows. According to the Central Statistical Organization, the annual value of total trade (exports and imports) during 2004-2010 remained below US\$5 billion. In 2014-2015, this figure increased to US\$29 billion. Of this trade, more than 85% is maritime-based. The security of the sea lines of communication (SLOCs) in regional waters would therefore appear to be a national priority.

However, while the security of SLOCs remains vital to Myanmar's economic outlook, it is unlikely to feature highly on the national security agenda until the internal situation stabilises. Armed ethnic groups have long posed serious security challenges in a number of Myanmar's states, and instability in Rakhine State could derail the Tatmadaw's ongoing peace process with these groups. For the time being, therefore, Myanmar is likely to leave much of the task of providing security in regional waters to its larger, more willing and more capable neighbour, India.

### *Enhancing maritime security capabilities*

Since 2008, Myanmar has steadily modernised its navy through a mix of domestic manufacturing and acquisition. The former includes development of frigates, corvettes, and missile craft in domestic shipyards with foreign assistance, especially from China. Discussions on possible submarine acquisitions have also been intermittently reported. The Navy aims to become a blue-water navy in response to regional naval modernisation (especially in Bangladesh and Thailand), and to protect its long coastline and extensive exclusive economic zone from both state-based and non-traditional threats.

Traditional security concerns (ie. the defence of sovereignty and territorial integrity from external powers) have driven Myanmar's naval modernisation ambitions since the turn of the century. Such insecurities peaked in 2008 following a clash with the Bangladesh Navy over disputed maritime borders in the Bay of Bengal. While the amicable resolution of this dispute through arbitration by the International Tribunal for the Law of the Sea has made Myanmar's anxieties less acute, this category of threats continues to dominate Myanmar's strategic calculus on the seas.

In fact, there have numerous land border clashes between Myanmar and Bangladesh subsequent to the maritime border dispute resolution. Such skirmishes have triggered a gradual build-up of land forces along the boundary and involved limited forms of bilateral naval posturing. While Myanmar's naval capabilities remain roughly even with Bangladesh, the latter's submarine acquisitions from China in late 2016 has added vigour to Myanmar's naval modernisation efforts. However, it is important to understand that given the overarching national security focus is insular, naval modernisation takes a back seat to the demands of the army.

#### *Emerging non-traditional maritime security threats*

Ongoing domestic instability has exacerbated two key non-traditional maritime security issues for Myanmar, the first being maritime asylum seekers. The events unfolding in Rakhine and the mass exodus of asylum seekers via land and sea is foremost a humanitarian issue, but with serious security implications as well. Asylum seekers from Bangladesh and Myanmar who sailed via the Bay of Bengal for refuge in Southeast Asian countries and were stranded in the Andaman Sea first grabbed international headlines in May and June 2015. Late last month at least 46 were killed when a vessel en route to Bangladesh capsized. Myanmar's second non-traditional maritime security priority is arms smuggling. Myanmar and regional states are well aware of the nexus between vulnerable asylum seekers at sea and the trafficking of humans, arms and drugs. Arms smuggling is a serious problem for Myanmar, as the border area between Bangladesh and Myanmar is a sanctuary for arms smugglers, mainly due to the its extensive coastline and weak maritime surveillance capabilities. Smugglers ship various types of small arms from Thailand and other Southeast Asian states and transit through these waters to sell them to insurgents in India, Bangladesh, and Myanmar. The ongoing Rakhine crisis has provided an opening for Islamist terror groups to rally support for their cause. Against a backdrop of a fast-growing ISIS presence in South and Southeast Asia, arms trafficking has become a greater threat to Myanmar's national security.



### *Implications for maritime security cooperation*

Myanmar's maritime-security outreach has been mostly at the bilateral level, although it does participate in multilateral maritime security initiatives within ASEAN such as BIMSTEC, IONS and the MILAN naval exercises. This outreach was initially met with enthusiasm by regional and extra-regional powers, who see enormous economic and strategic significance in a 'normalised' Myanmar, given the growing geoeconomic importance of the Indo-Pacific and the rise of China. For Myanmar, this engagement is more reflective of a desire to be recognised as a constructive player in regional security rather than a conscious policy of securing regional waters and associated SLOCs. India, which has a long maritime boundary with Myanmar, is among its major maritime security partners. The Bay of Bengal is a key geostrategic area, especially in response to China's increasing inroads, and this is reflected in India's recent 'Act East' policy. Among India's topmost security concerns is Pakistani intelligence agencies recruiting fighters from the persecuted Rohingya population in Myanmar and Bangladeshi refugee camps and attacking Indian targets. India's attitude has been to engage Myanmar during the Rohingya crisis – in September 2017, Prime Minister Modi made his first bilateral visit to Myanmar, where 11 agreements were signed, including on maritime security cooperation. China too has high stakes in Myanmar's strategic location, having invested significantly in Myanmar's maritime infrastructure development. In May, it was reported that China's CITIC Group proposed taking a stake worth up to 85% in the US\$7.3 billion deep sea port in Kyaukpyu, in Rakhine state. In September, Foreign Minister Wang Yi emphasised China's support for Myanmar's efforts to protect its national security. Given Myanmar's strategic importance to these two rising Asian powers, it is expected that they will continue to engage Myanmar in the maritime security realm, regardless of the Rohingya crisis. This is likely to provide Myanmar a degree of immunity against international backlash on the Rohingya issue, as well as ensure its continued inclusion in the slate of regional maritime security exercises.

Internal instability could yet damage Myanmar's maritime security prospects with key ASEAN partners. An Informal ASEAN Foreign Ministers Meeting (IAMM) was held in September, but no concrete action plan was set with regard to the ongoing situation or potential asylum-seeker influx. While ASEAN is coming under fire for its inaction on the Rohingya crisis, it is unlikely this will damage Myanmar's participation in regional maritime security exercises. In August, for instance, Myanmar participated for the first time in the Southeast Asia Cooperation and Training (Seacat) exercises co-hosted by Singapore and the US. However, with ASEAN being criticised openly on its non-

interventionist stance by some of its Muslim members (notably Malaysia), it seems likely that Myanmar's maritime-security relations with certain ASEAN states will be damaged. The ongoing crisis has perhaps impacted prospects for maritime security cooperation with key Western states the most. The UK has suspended its fledgling officer training program, and the US too dropped plans to expand training for Myanmar's military in areas like maritime security and combating human trafficking.

For decision-makers in Myanmar, the perceived danger of international pressure over the Rohingya crisis leading to a seaborne military invasion by foreign powers (especially certain Western states) is very real. Similar deep-seated worries over external aggression were all too evident following Cyclone Nargis, when the French government threatened to push for a UN Resolution and intervene militarily on humanitarian grounds following Yangon inhibiting the delivery of external aid to affected communities. All these concerns are likely to factor into Myanmar's maritime strategic planning.

Source: [www.lowyinstitute.org](http://www.lowyinstitute.org), 17 October 2017

### **China's Sunic-Ocean targets regional maritime security roles with SU-H2M UAV**

- Kelvin Wong

Sunic-Ocean System Tech (Sunic-Ocean), a Qingdao-based research and development company specialising in unmanned aerial vehicles (UAVs) and autonomous flight control systems, has completed development of its SU-H2M vertical take-off and landing (VTOL) UAV, *Jane's* has learnt. The SU-H2M features a 3.81 m-long tadpole-shaped fuselage with a skid undercarriage that carries a two-bladed carbon fibre main rotor with a diameter of 3.2 m. A two-bladed tail rotor is fitted on dorsal and ventral swept vertical tail surfaces towards the rear.

According to specifications provided by Sunic-Ocean, the SU-H2M has a maximum take-off weight (MTOW) of 110 kg and is powered by a water-cooled four-stroke rotary engine rated at 34hp. This configuration enables the air vehicle to carry a 10 litre AV gas fuel tank along with a 35 kg payload.

The air vehicle features a belly mounted payload bay that typically carries an electro-optical sensor pod for surveillance, although it can be replaced by other mission systems when required. The company is quoting a cruising speed of 60 km/h and an operational ceiling of 9,842 ft with a flight endurance in excess of 3 hours when carrying 20 litres of fuel. When operated with its portable control station, the SU-H2M can be controlled via line of sight (LOS) radio frequency (RF) communications at distances of up to 100 km. Wang Fucheng, sales manager at Sunic-Ocean, told *Jane's* that the air vehicle incorporates a high level of autonomy with automatic take-off and landing, automatic hover, and semi-autonomous route planning via user defined waypoints.

Source: [www.janes.com](http://www.janes.com), 27 October 2017

## **Singapore enhances complexity of major Maritime Security exercise amid terror threat level**

- Ridzwan Rahmat

Amid facing its highest terrorism threat level in recent years, Singapore has enhanced the complexity of an inter-agency maritime security exercise by including a land-based response element. The biennial series of drills, which are known collectively as Exercise 'Highcrest', typically involves maritime security agencies such as the Republic of Singapore Navy (RSN), and the Police Coast Guard (PCG). However, the 2017 iteration, a newly established PCG unit known as the Coastal Hardening Strike Force (CHSF) was included to test its interoperability with Singapore's at-sea agencies. Among scenarios tested at Exercise 'Highcrest' 2017 included a small craft infiltration operation, which was referenced after the 2008 Mumbai terror attacks, in which some of the perpetrators arrived by sea. Working in co-ordination with the Singapore Maritime Crisis Centre (SMCC) and a network of coastal sensors, the RSN, the PCG, and its CHSF unit, were tested in their ability to collaboratively identify, interdict, and predict the perpetrator's probable landing spots. Deployed for these operations were the RSN's first-of-class Littoral Mission Vessel (LMV) RSS *Independence*, a PCG 19 m patrol interdiction boat (PIB), and a couple of 14 m interception craft. Exercise 'Highcrest' 2017 took place from 19 to 26 October in the Strait of Singapore, involved about 300 personnel from 14 Singapore government agencies including the Singapore

Civil Defence Force (SCDF), the Immigration and Checkpoints Authority (ICA), Singapore Customs (SC), and the Maritime and Port Authority of Singapore (MPA).

Source: [www.janes.com](http://www.janes.com), 26 October 2017

## **Buhari hands over Maritime Security to Israel**

-Oluwakemi Dauda

President Muhammadu Buhari has handed over the country's maritime security space to an Israeli firm, to reduce the cost of clearing goods and make the seaports attractive and competitive. The award of the contract by the President and the Federal Executive Council (FEC) will boost collaboration between the firm and the Nigeria Maritime Administration and Safety Agency (NIMASA), in securing the territorial waters from pirates and sea robbers. Minister of Transport Rotimi Amaechi, who spoke at the 'World Maritime Day' in Lagos, yesterday, said the Federal Government took the step as part of efforts to reap the benefits of the Blue Economy and end the cycle of crimes on the country's territorial waters.

The event, themed: "Connecting ships, ports and people", was organised by the Ministry of Transportation, in collaboration with NIMASA, NPA, NSC, NIWA and other maritime agencies. The Israeli firm, Amaechi said, would provide world-class equipment and train the Navy and other security agencies for three years before handing over the facility to Nigeria. The training, the minister added, will begin in December and, by next April, the security agent will dominate the maritime space and cover the coastal states. He added that the security operatives will clear the coast from Lagos to Calabar, and cover the coastal states. The minister noted that a stakeholders' summit will be held in Warri, Delta State, before end of the year, to address salient issues affecting the maritime industry.

Source: [thenationonlineng.net](http://thenationonlineng.net), 31 October 2017

## **India, US to implement HOSTAC to strengthen Maritime Security**

To strengthen maritime security, India and the United States have agreed to implement the programme for Helicopter Operations from Ships other Than Aircraft Carriers (HOSTAC), the Pentagon has said. A decision in this regard was taken by Defense Minister Nirmala Sitharaman and her US Counterpart Jim Mattis during their meeting in Philippines on Wednesday on the sidelines of the ASEAN Defense Ministers' Meeting-Plus. "The two emphasized the importance of strengthening maritime security cooperation, and, in support of this objective, decided to implement the program for Helicopter Operations from Ships other Than Aircraft Carriers (HOSTAC)," the Pentagon Spokesperson Dana W White said. Sitharaman and Mattis "agreed on the importance of a rules-based international order" in which all nations are able to prosper, and the "need to work together" against the common threat of terrorism, White said.

Source: [timesofindia.indiatimes.com](http://timesofindia.indiatimes.com), 27 October 2017

## **Singapore holds Maritime Security exercise amid terror fears**

- Prashanth Parameswaran

Last week, Singapore staged another iteration of a complex, interagency maritime security exercise. The exercise, which was observed by top defense officials, is yet another sign of the city-state's determination to boost its readiness amid the rising terror threat in the wider region. As I have noted before, Singapore has long been warning about the Islamic State threat in Southeast Asia and has been taking a series of steps to both contribute to confronting the challenge in the region and further abroad as well as strengthen its response at home.

Domestically, policymakers have been undertaking measures including boosting surveillance, investing more in rehabilitation programs, raising public awareness, adjusting the way it conducts homeland defense and security operations, and using various means including drills to assess their responses. Indeed, with respect to exercises, just earlier this month, Singapore staged the first-ever large scale, interagency counterterrorism drills at Changi Airport as part of the tenth edition of two decade-old Exercise Northstar. On the maritime security front, one of the key

exercises has been Exercise Highcrest, a biennial exercise that is meant to test the ability of the Singapore Maritime Crisis Center and various agencies to plan and effectively manage a whole-of-government approach to simultaneous maritime security threats.

From October 19 to 26, Singapore held the 2017 iteration of Exercise Highcrest. This year's drills involved about 300 personnel from 14 national agencies, including the Republic of Singapore Navy, the Singapore Police Force, the Singapore Civil Defense Force, the Immigration and Checkpoints Authority, Singapore Customs, and the Maritime and Port Authority of Singapore. According to Singapore's defense ministry (MINDEF), Exercise Highcrest 17 tested these agencies on a range of maritime terrorism scenarios, including an infiltration from sea, and a chemical attack on board a ferry. Several Singapore defense officials, including Senior Minister of State for Defense Mohamad Maliki bin Osman, Permanent Secretary Chan Yeng Kit, and Chief of Navy Rear-Admiral Lew Chuen Hong, also visited the exercise on October 26 to witness the capabilities of the Singapore Maritime Crisis Center (SMCC) to counter terrorist threats at sea. The exercise saw the RSN's *Independence*-class Littoral Mission Vessel and the Police Coast Guard's *PT*-class Patrol Interdiction Boat and *PK*-class High Speed Interceptors collaborating to prevent an infiltration by terrorists on speedboats. MINDEF said that the demonstration included an update on how the SMCC can identify threats through its suite of surveillance, sense-making, and data analytics capabilities; how a report through the SGSecure App was used to corroborate the presence of a terror threat; and how the SPF's Coastal Hardening Strike Force contributed in apprehending the perpetrators.

Source: [thediplomat.com](http://thediplomat.com), 31 October 2017



## **‘Beyond Hardware and Technology’: The Intangibles of China’s Naval Power (Part 3)**

-Gurpreet S Khurana

As introduced in the Part 1, so far, most analysis of China’s naval power worldwide has focused on the PLA Navy’s existing and projected force-levels, and their associated hardware inductions and technological progression, with little emphasis on the ‘intangibles’ of China’s naval power. These intangibles include strategic intent, objectives and strategy; tradition, operational experience and joint-service synergy; and the trends with regard to training and exercises, maintenance philosophy, and so on.

Parts 1 and 2 assessed China’s naval doctrine at the ‘military-strategic’ and ‘operational’ levels; Part 3 undertakes an assessment of the intangible elements of China’s naval power at the ‘tactical’ level, including the quality, disposition and employment of the ‘man behind the machine.’

### *Human Resource*

#### *Shortage of Educated Personnel*

Authoritative [literature](#) indicates that the PLA Navy has been beset by a major shortage of educated personnel. Alike the rest of PLA, a major proportion of the PLA Navy’s enlisted ranks constitutes rural intake requiring lower educational standard (middle school). Cognisant of better employment opportunities in cities, the proportion of urban intake has remained low (urban candidates tend to have higher academic standards). Although the officers usually come from urban areas, they also do not held a very high educational standard since they were either graduates of PLA military academies or have been directly promoted from the ranks without receiving a higher education. The urban-rural divide can lead to officer-enlisted tension in the PLA Navy.

A personal interaction between the author and Chinese think-tanks indicates that the challenge of recruiting educated youth is more acute in case of the PLA Navy’s submarine

arm. Although China has traditionally emphasised on its submarine capability, its tough demands on personnel without adequate commensurate dividends for them has led to the progressively weaning volunteering for the submarine cadre. At least until a few years ago, many *Romeo*-class submarines were placed in reserve due to non-availability of trained crews.

### *Sub-Optimal Employment of Officers*

The same RAND report also indicates that until a decade ago that the PLA Navy officers were sub-optimally employed in operational billets. The officers were tasked to undertake many duties on board warships that are usually performed by non-commissioned officers (NCO) in other navies. The PLA created the NCO cadre only in 1999. Even at present, PLA Navy's officer cadre constitutes about one-third of its total personnel strength, whereas the average ratio worldwide is about 15 per cent. This means that the officers are not groomed for their primary role relating to command and control functions of a warship. This is among the key reasons why the internal command structure on Chinese warships depends excessively on the Captain and the heads of departments (HOD). There is little if any delegation of authority and responsibility to the other officers, which leads to the degradation of the ships effectiveness as these 'command nodes' become weary with time. This becomes a particularly serious issue during extended warship deployments.

The PLA is continuing to increase the NCO cadre. NCOs presently constitute about half of the PLA's enlisted force, but 95 per cent of them are from the enlisted ranks, and thus not graduates of universities or three-year technical colleges. They are being given the required education progressively whilst being in service.

### *Training and Exercises*

[Reports](#) indicate that historically, training and exercises have been a weak area for the PLA Navy, due to both a shortage of trained manpower and 'shallow' level of proficiency attained. Until 1996, China's military training was considered very poor. Exercises were largely 'scripted', with predetermined outcomes, and very limited hitherto due to limited operational availability of assets. In 2002, the PLA Navy issued an *Outline of Military Training and Evaluation* (OMTE), which articulated the need for more realism in training and exercises. In China's [2004 Defense White Paper](#), this aspect was reiterated, indicating a realisation of this 'weak link' and the need to address it. These instructions, however, have not always had the desired effect. For instance, in accordance with the OMTE, the [PLA Navy Air Force upgraded its pilot training](#) regime adding more rigour to the training under hostile



conditions. However, while increasing the sortie-duration, it was compelled to reduce the number of training sorties so as not to increase the total number of flying hours. This was perhaps necessary to ease the load on aircraft engines to avoid their frequent overhaul/ replacement, but it amounts to a major compromise between achieving proficiency in handling a tactical opposition and the more critical take-off and landing procedures and the accompanying readiness-checks, which feed into not only flight safety, but also combat preparedness.

Since a decade ago, doctrinal emphasis has begun to focus more on the PLA Navy's training and exercises with the other PLA services. In June 2006, the PLA released [new guidance](#) to increase realism in training and exercises, including through joint-service evolutions. However, at that time, the term "joint" simply referred to forces from more than one service operating in the same area at the same time. In more recent years, the PLA Navy has been observed to be operating more frequently in coordination with the other services, and increasingly further from China's shores. The Chinese media has also been increasingly [reporting](#) these exercises/ operations, such as the following:

- PLA Air Force aircraft simulating attacks on PLA Navy warships.
- PLA Army attack helicopters providing air cover to PLA Navy ships engaged in amphibious exercises.
- The April 2014 PLA Navy and PLA Air Force joint search for Malaysia Airlines MH370 in the southern Indian Ocean.

Rather than true joint operations, however, these may be better framed as 'opposing-force training' or merely '[joint-service coordination](#)' at the tactical level. The PLA still lacks true 'integration/ jointness', which should emanate from joint-planning at the operational level, leading *inter alia* to a joint command and control at the tactical level. The operational-level integration in PLA has begun only recently in December 2015 with the permanent '[Theatre Command Concept](#)' (as examined in Part 2 of this paper). Notably, until lately, the PLA has not even conducted any joint theatre-level exercise involving all PLA defence services. Therefore, it could be assumed that the 'Theatre Command Concept' would take considerable time to translate into 'joint-ness' at the tactical level.

### *Tactical Doctrines*

The PLA Navy succeeded in instituting an organisation for development of naval concepts and doctrines well over three decades ago. The Navy Military Studies Research Institute – commonly referred to as the Navy Research Institute (NRI) has been the cornerstone of the organisation since 1985. The ‘Tactics Department’ of the NRI is tasked for development of doctrines at the tactical level. A [US intelligence report](#) of 2007 indicates that the doctrine-development process in the PLA Navy is fairly well developed, and very similar to that of most advanced navies. However, a realistic assessment of tactical practices indicates that the PLA Navy’s tactical doctrines remain underdeveloped and archaic. This is largely attributable to the fact that the PLA remains a conservative organisation with inherent internal resistance to implement transformational doctrinal reforms. This has led to a mismatch between the ostensible sophistication of the PLA Navy’s hardware and its tactical utilisation. The following text provides an illustrative (rather than an exhaustive) account of the PLA Navy’s doctrinal voids at the tactical level.

### *Anti-Shipping Task*

The ‘anti-shipping’ task constitutes one of the key enablers of the sea-denial doctrine. Ever since China followed the strategic-level naval doctrine of ‘static coastal defense’ (until the 1980s, as mentioned in Part 1 of this paper), the PLA Navy has been proficient in operating anti-ship missiles and torpedoes from their numerous low-cost combatants. The doctrinal emphasis on anti-shipping has continued to this day. China’s technological ‘head-start’ in anti-shipping capability has ensured that the PLA Navy’s meets the stringent demands of the contemporary maritime battlefield, such as in terms of the sophistication of the weapon system, the survivability of the weapon *per se*, and its ability to be launched from a variety of platforms. The imperative for maintaining a ‘top-notch’ anti-shipping capability – in terms of land, ship, aircraft and submarine launched missile systems - is reinforced further by China’s current operational doctrine of Anti-Access/Area Denial (A2/AD).

Another imperative applicable to contemporary surface missile warfare is the need for coordination among dispersed forces for greater strike effectiveness. The PLA Navy has not yet demonstrated the ability to coordinate missile strikes among dispersed units, which is a tactical imperative to extend sensor ranges (for optimum utilization of the high weapon ranges), maintaining the launch platform’s radar silence and saturating the adversary’s missile defenses. This inadequacy is linked to China’s C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) capabilities. Although the PLA Navy has been able to develop the C4 systems to contemporary standards, the ‘SIR’ component has traditionally lagged behind the C4 component. It should be noted, however, that this is more of a technological void, rather than a doctrinal one.

### *Anti-Air Task*

Since 'sea-denial' has traditionally been the mainstay of China's naval doctrine at the military-strategic level, China accorded a preferential treatment to developing anti-shipping tactics. Since China did not encounter any significant maritime-air threats, the PLA Navy's emphasis of 'anti-shipping' was at the cost of its doctrinal attention to the 'anti-air' dimension. In the 1960s and 1970s, as part of China's coastal defence doctrine, the PLA Navy warships began to be provided air cover by its own land-based fighters (PLA Navy Air Force). Such land-based fighter air-defence was considered adequate. Since the PLA Navy units have rarely been deployed as a composite task force(examined later), fleet air-defence has been a major doctrinal deficiency, and thus a capability void. This translates into PLA Navy's key vulnerability today, particularly considering the increased tonnage and value of its major warships, including large amphibious ships and the aircraft carrier.

Over the past decade, the PLA Navy has re-oriented its doctrinal orientation with increased emphasis to fleet air-defence. It has translated into all new-construction warships being equipped with advanced gun and short-range missile systems for 'terminal (point) air-defence' of individual platforms. However, the most crucial component of the fleet layered Anti-Missile Defence (AMD) to forestall the adversary saturating own missile defences is 'area air-defence', which remain relatively weak. Only a few of the PLA Navy's latest Type 052 destroyers are armed with medium and long-range surface-to-air missile (SAM) systems with engagement ranges of more than 25 km; and most of these are either imported or reverse-engineered. Furthermore, their effectiveness against modern sea-skimmers with advanced CECUM (Electronic Counter Counter Measure) features is not yet proven.

Ostensibly, China's realization of its gaping doctrinal void in fleet air-defence is among the key drivers for its decision to opt for the aircraft carrier. Theoretically, a carrier-based organic aviation could contribute significantly to interdict the adversary's missile platforms before the missile launch is achieved from stand-off ranges. However, as noted in Part 1 of this paper, this would lead to a carrier-based sea-control doctrine, which is unsuited for China's maritime geography. China could have better augmented its fleet air defence by employing land-based fighters, and extending their operating ranges through mid-air refuellers, if required.

### *Anti-Submarine Task*

Anti-Submarine Warfare (ASW) has always been the [Achilles' Heel of the PLA Navy](#). The lack of doctrinal emphasis is similar to the anti-air doctrine, viz. China's near-perennial

focus on anti-shipping task and the absence of submarine threats during the formative years of its navy. For the PLA Navy, the operational need for sanitizing the sub-surface domain never arose.

This translated into lack of the PLA Navy's ASW capacity in terms of technology, largely in terms of sonar technology, anti-submarine weapons and anti-submarine helicopters. While China's focus was directed at developing naval capabilities like submarines, strike aircraft, anti-ship missiles, torpedoes and sea-mines, it came at a cost of investing in SONAR (Sound Navigation and Ranging) technology. China has never been able to develop the technological capacity to build advanced sonars like towed arrays indigenously and has always resorted to foreign acquisitions. Even when towed-arrays were inducted in the PLA Navy, these were fitted on submarines rather than surface combatants, due to the predominance of the former in the naval doctrine. China's defence industry did develop a formidable array of torpedoes, but these were essentially for anti-shipping role. The void of ASW aircraft relate to both integral and shore-based aircraft, and to lack of air-sub (aircraft-submarine) cooperation, which is an important requisite for effective ASW. The PLA Navy's first generation ships had no integral helicopters, whose dipping sonars could have been valuable for ASW. Although the later ships do have integral aviation in the form of domestically developed helicopters, these have restrictions of all-up-weight, leading to constraints in deploying dipping sonars.

It is also important to consider that the discipline of underwater warfare, known to be as much an 'art' as it is a 'science', depends much on training and experience of operators, which heretofore has been a constraint in for the PLA Navy.

### *Submarine Operations*

The PLA Navy has taken its traditional doctrinal emphasis and strength in operating submarines further to conform to the strategic and operational-level doctrines (of 'strategic depth' and A2/AD respectively, This has translated into current level of force-levels of various submarine types and their relative sophistication. Based on the OMTE issued in 2002, the PLA Navy is developing and implementing new and more realistic tactics and combat methods to enable its submarines to be able to attack, survive after an attack, and maintain the capability to attack again at a later time. This is a change from the tactics followed by the PLA Navy in yesteryears, which focused primarily on attacking and less on defence before and after an attack, thereby reflecting a 'people's war' characteristic. The incorporation of towed arrays on PLA Navy submarines indicates the intent to operate the submarines in deeper waters. (A towed array would be unsuitable for shallow waters since it would drag along the sea-bottom). In the coming years, therefore, the PLA Navy may

increasingly deploy its conventional submarines in the waters of the Western Pacific beyond the China seas, and its nuclear attack submarines (SSN) in the Indian Ocean.

However, some prevailing practices of the Chinese submarine operations indicate very outdated tactical concepts. For instance, the PLA Navy has been exercising multiple submarines attacking an adversary's surface task force. This indicates a very outdated tactical concept of a time when surface forces were devoid of air-ASW. Today, a collective formation of PLA Navy submarines would be highly vulnerable to the ASW helicopters integral to an adversary's surface task force, and may not be able to cause any harm to the task force.

It may, however, be noted that the latest Chinese submarines today are armed with underwater launched anti-ship missiles. For targeting, the group of Chinese submarines would need data on the surface target's motion parameters. To maintain their stealth, these submarines cannot employ their integral sensors to obtain the data, and would thus need 'external' inputs through its trailing wire antenna (TWA) closer to the sea surface. This would pose a major risk in vicinity of the adversary's surface task force. However, theoretically, the inputs on the task force could be achieved as far as the maximum effective missile range of 100 km plus. If so, a combined (even if not coordinated) missile attack on the surface task force could saturate its defences and lead to much harm.

### *Composite Task Force Operations*

Based on the new OMTE of 2002, the PLA Navy's surface forces are moving away from task forces composed of a single class of vessel to employing 'composite task forces', alike the other major navies. Meeting and synergising the diverse functional demands and operating parameters of the forces comprising the 'composite' presents a major challenge for the PLA Navy. Among the challenges is Underway Replenishment (UNREP), an ability that the PLA Navy has acquired only recently since its 2008 anti-piracy deployment in the Gulf of Aden. Notably, in the first few missions, the replenishment was observed to be done in the [most rudimentary manner](#), in a stopped condition, with the receiving warship tied to the logistic ship.

This indicates that the PLA Navy is at the nascent phase of evolution with regard to the high level of tactical coordination necessary for operating composite task forces. The PLA Navy may, therefore, take substantial time before it can field an effective Carrier Task Force (CTF) with integral aviation and SSN escorts.

## *Overall Deduction*

In the light of the above, one could observe a divide between the sophistication of PLAN's hardware and its tactical utilisation. This reason of this doctrine 'lag' may be attributable to three factors:

- 'Static Inertia' of Party Functioning. The [conservative nature of the PLA](#) to adapt to new institutional, systemic or operational changes, possibly aggravated by the need for political assent to any doctrinal change, even at the tactical level.
- Lack of 'Exposure' to Doctrines of Major Naval Powers. China's traditional national policy of opaqueness in defence matters has restricted the PLA Navy's interactions with foreign navies, and thus stunted its doctrine-development through learning best-practices of major naval powers. Though the PLA Navy has lately conducted combined exercises with navies of France, Britain, Australia, Pakistan and India, as well as being part of the Rim of the Pacific Exercise (RIMPAC), these exercises have been pitched at very basic level. The exercises with the Russian Navy since 2005 have been fairly advanced, but this can provide limited doctrinal value. Notably, the PLA Navy has never conducted submarine and ASW exercises with foreign navies, the former to maintain secrecy and stealth of its submarines, and the latter to hide its 'weakness' in ASW.
- Lack of Battle Indoctrination. Although the PLA Navy is increasingly incorporating realism in its training and exercises, these efforts may not be able to completely offset its lack of battle indoctrination. Chinese naval forces have never been engaged in a conventional war, only localised maritime skirmishes such as with [Vietnam](#) and the Philippines. Even in its land wars – for instance, against Vietnam in 1979 – China did not achieve any notable edge – either technologically, or in doctrinal terms - to build upon.

## *Hardware Maintenance*

A navy's hardware maintenance and upkeep philosophy represents the 'life-blood' of its hardware capabilities. There are several indicators that at least until the early-2000s, the PLA Navy encountered major problems with regard to the exploitation of its onboard equipment, machinery and weapon systems. Notably, even though the PLA Navy has been operating submarines since 1957, this void has been most conspicuous in its submarine forces. It is well known that the underwater domain is the most unforgiving to errors made by the submarine crew, but lapses are known to have occurred by the higher naval hierarchy as well. When, for instance, the PLA Navy inducted the Russian Kilo-class submarines in

the late-1990s, it 'cut corners' to save money for training of the commissioning crew in Russia. This was reported as among the key reasons why the first two boats were not operational for two years after the induction. Later, in 2003, the loss of Ming 361 submarine was a reflection on the unsatisfactory maintenance, and the technical training organization itself. It led to indictment of the entire chain of command ranging from the PLA Navy Commander (Admiral Shi Yunsheng) to the Senior Captain closely associated with the maintenance.

Another problem for the PLA Navy has been maintaining the imported hardware integrated with locally manufactured hardware. Of course, this challenge is not unique to the PLA Navy, and is an issue common to all navies of developing countries like India that are dependent on foreign systems, and concurrently endeavour to become self-reliant. However, China's adversity has been compounded due to its emphasis on 'reverse engineering' the imported hardware to build these systems domestically. Much of such 'copied' hardware was known to have no authentic documentation like 'technical description' and 'operating instructions', which has been posing major problems for both maintainers and operators in the PLA Navy.

The problems of maintenance in the PLA Navy become more complex during extended stand-alone deployments of its platforms, especially in distant areas, which – as mentioned in Part 2 of this paper - was not conceived until the Gulf of Aden anti-piracy mission beginning December 2008. Until 2002 (and possibly, even later), the warships deployed for extended missions were assigned additional spare-parts packages and specially trained technicians for routine maintenance. Interestingly, two Senior Captains of the PLA Navy embarked onboard US warships during the 1998 RIMPAC exercises in Hawaiian waters emphasized how impressed they were by the fact that the American sailors continued performing equipment maintenance while the ship was underway, which indicates that this was not the practice in the PLA Navy.

It is not clear whether today - after more than a decade - the PLA Navy has ironed out its hardware maintenance issues. Likely, some of the deficiencies have been overcome. However, the underlying reasons for these seem to have been more doctrinal - skewed maintenance philosophies – rather than the lack of adequate means. Given the PLA Navy's constraints to induct quality human resource (as mentioned earlier), any significant upgradation of hardware maintenance standards is likely to pose challenges.

## *Conclusion*

Over the past two decades, the PLA Navy's strategic imperatives have been pushing not only the development of its 'means' ('tangible' hardware capabilities), but also the 'ways' component ('intangibles', primarily doctrines) in its strategy formulation. This flows from the PLA Navy's compulsion to 'adapt' to the emerging security environment, besides furthering the national objective of attaining 'big power' status in global geopolitics. While such a 'transformative' doctrinal reorientation may be valid and justifiable, the key question is whether the PLA Navy will be able to cope with the oxymoron of 'doctrinal transformation'. At present, it is evident that China's naval doctrine at the strategic level is not self-evolved, and thus cannot be considered as 'mature'. Under these circumstances, despite the PLA Navy's overbearing commitments in the Western Pacific rim and the major doctrinal deficiencies to counter military threats therein, the force is gearing itself for distant maritime power-projection. This represents a paradox, since it does not conform to a conventional maritime strategy, at least in the thinking of the other major naval powers of the world. Perhaps, the Chinese are thinking differently.

The PLA's operational art is adapting well from its traditional land-based focus to a fighting a maritime war. However, its reorientation is still at a nascent stage. Additionally, the functional integration among the PLA services continues to develop. Hence, one may expect that it would take a few decades before the PLA Navy would be able to effectively contribute to a maritime war in any theatre of the Western Pacific rim. The PLA Navy's increasing emphasis on stand-alone distant operations, and the attendant imperatives of maritime logistics may further dilute its attention to integrated operations in China's maritime periphery.

At the tactical level, the PLA Navy could employ asymmetric means in its concept of sea-denial. The continued prevalence of its erstwhile doctrine of employing packs of submarines could be useful in this regard. However, its continued doctrinal voids at the tactical level clearly indicates that the force has not been able to effectively translate the strategic-level doctrine of 'strategic depth' articulated by China long ago in the 1980s (as noted in Part 1 of this paper) into tactical doctrines, particularly with regard to the PLA Navy's surface-based operations. At least not yet.

Source: [www.maritimeindia.org](http://www.maritimeindia.org), 16 October 2017



## **Indian Navy gets Anti-Submarine warfare INS Kiltan**

Visakhapatnam (Andhra Pradesh), Oct 16 (ANI): Union Defence Minister Nirmala Sitharaman, on Monday, commissioned the indigenously-built anti-submarine warfare INS Kiltan into Indian Navy in Andhra Pradesh's Visakhapatnam. Loaded with plethora of weapons and sensors, integrated to provide a Common Operational Picture (COP), INS Kiltan is the latest indigenous warship after Shivalik class, Kolkata class and sister ships INS Kamorta and INS Kadmatt to have joined the Indian Navy's arsenal. INS Kiltan is the first major warship to have undertaken sea trials of all major weapons and sensors as a pilot project.

Source: [www.deccanchronicle.com](http://www.deccanchronicle.com), 16 october 2017

## **US to provide EMALS technology to India for Aircraft Carriers**

WASHINGTON: The US has decided to release the crucial Electromagnetic Aircraft Launch System for the Indian Navy's future aircraft carrier, according to the Trump administration. The decision comes ahead of Secretary of State Rex Tillerson's visit to India. A formal date of the visit has not been announced yet. The Trump administration has informed India of its decision. India had sent a letter of request to the US government during the Obama administration for the Electromagnetic Launch System (EMLAS) built by General Atomics for aircraft carrier planned by the Indian Navy. Due to its flexible architecture, EMALS can launch a wide variety of aircraft weights and can be used on a variety of platforms with differing catapult configurations. The Trump administration sent a response to India on Monday about its decision to release this technology. Aerospace expert Dr Vivek Lall, chief executive, US and International Strategic Development, of General Atomics had told earlier that General Atomics is planning to open an office in Delhi to support the Indian government's military requirements. The Indian Navy plans to integrate the US-made EMALS catapults into its future supercarriers. This gesture ahead of the Tillerson's visit is another indication of the strategic alliance US wants to foster with India, informed sources said. Last month, the Defence Secretary Jim Mattis visited India.

Source: [economictimes.indiatimes.com](http://economictimes.indiatimes.com), 18 october 2017

## **India to launch 2nd Strategic Nuclear Sub by end of 2017**

- Franz-Stefan Gady

The second Arihant-class nuclear-powered ballistic missile submarine (SSBN), INS Aridhaman, is slated to be launched in November or December of this year, according to Indian media reports. A source told The Hindu that “final checks are under way.” The source adds that “all the three modules have been integrated.” The likely launch date is set for late November. That may be difficult to achieve, but “in December, it will definitely be in the sea,” according to another official source. The Indian Navy’s latest indigenously-designed SSBN is currently being built under the Advanced Technology Vessel (ATV) project at the Ship Building Center in Visakhapatnam in the Indian state of Andhra Pradesh. Following the its launch, the Aridhaman undergo further outfitting before the commencement of builders trials. The ship’s weapons systems will be installed last. The boat’s reactor was already fueled in January. However, it will only go critical following a first set of sea trials to assess the Aridhaman’s performance and general seaworthiness. The lead SSBN of the class, INS Arihant, was quietly commissioned in October 2016. The Arihant, based on the Russian Project 971 Akula I-class nuclear-powered attack submarine design, primarily serves as a technology demonstrator for the rest of the class and a training platform for future submarine crews.

The Aridhaman will purportedly have a more powerful reactor than the 6,000-ton Arihant and also be slightly bigger. In addition, compared to the lead boat of the class the Aridhaman will have double the number of missile hatches, with eight launch tubes rather than the Arihant’s four. The Aridhaman will also carry more advanced sensors than its sister boat and feature the indigenously-developed USHUS integrated sonar system and the Panchendriya sonar, a unified submarine sonar and tactical control system used for detecting and tracking submarines, torpedoes, as well as underwater obstacles. It can also be used for underwater communication. The SSBN can be armed with up to eight K-4 missiles. The K-4 is an intermediate-range nuclear-capable submarine-launched ballistic missile (SLBM), currently being development by India’s Defense Research & Development Organization (DRDO). It has an an estimated range of up to 3,500 kilometers. The Aridhaman will also be able to accommodate up to 24 K-15 Sagarika SLBMs with an estimated range of 700-750 kilometers. The boat also boasts six 533-millimeter torpedo tubes. However, following the cancellation of a \$200 million contract for 98 Black Shark heavyweight torpedoes at the end of May, the Aridhaman may not have the capability to defend itself against enemy subs for a number of years. As I explained:

A second batch of 49 Black Shark torpedoes was also to be installed aboard India's domestically developed and built Arihant-class of nuclear-powered ballistic missile submarines. According to Indian media reports, at least three of India's future fleet of four to five Arihant-class SSBNs were expected to carry the new torpedoes. The cancellation of the order could mean a two- to three-year delay in the launching of the second sub of the class, the Aridaman, due to torpedo tube modifications.

Alternative to the Black Shark torpedo are currently under evaluation. It is unclear how long the new bidding process will take. Nevertheless, the Indian Navy reportedly still plans to induct the second boat of the Arihant-class by 2019. India intends to build at least three more SSBNs of the class.

Source: [thediplomat.com](http://thediplomat.com), 18 October 2017

### **The Royal Marines are Britain's most potent defence – it would be madness to cut their numbers now**

- Paddy Ashdown

The government would do well to remember the words of Nelson's colleague Admiral, the Earl of St Vincent, who said of the Royal Marines: "If ever the hour of real danger should come to England, they will be found the country's sheet anchor". It comes to something when a senior US military figure, Lieutenant-General Jerry Harris, seems to understand better than our own Government why cutting the Royal Marines would be dangerous for our defence and that of the Western alliance. This is the most perilous and unstable time I have known in my adult life. No-one can predict the future. We will need troops who can move fast, be flexible and adapt to any environment. The Royal Marines have done that for our country for more than 350 years, and still do it regularly, day in day out and to world class standards. It is ironic indeed that this seems to be better understood abroad than it is at home. Senior US military figures have repeated unequivocally their message to the UK about cuts to the Royal Marines budget, describing them as dangerous. The Ministry of Defence is considering a cut of 1,000 Royal Marines and the loss of two amphibious assault ships, which the American high command has warned would change the relationship between the US Marine Corps and our Royal Marines.

It comes with fresh reports that the Ministry of Defence has been sounding out Brazil and Chile to buy five of our frigates while two of the navy's mine-hunters were quietly

scrapped last month instead of undergoing a series of planned upgrades. If the projected reductions to the Royal Marines go ahead, they will undermine our position as a serious military force. Col Dan Sullivan, who works at the Marine Corps Warfighting Laboratory in Virginia, says that a cut to the 6,640 strong Royal Marines would be a “real blow”. He makes the point that the Royal Marines are particularly vital because a major military power needs the capability to “project power ashore at some point.” As Major-General Julian Thompson, himself an ex-Marine said, cuts will send a message to those who threaten us and our way of life, that the UK is just “not interested” any more. As I have reminded the government before, the Royal Marines provide an essential pool of manpower from which our Special Forces are drawn. Cut them and you will cut our Special Forces too. They have fought in more theatres and won more battles than any other British unit. To dismiss this legacy, and along with it a unique military capability, is to weaken our national defences and diminish our standing with our Allies.

We have a Twitter-happy President who might well turn out to be trigger-happy, too, and a Prime Minister all too keen to ally herself with him. We have a Foreign Secretary who remarked recently that a military option for relations with North Korea “must remain on the table”. This is hardly the time to diminish one of our most unique and defining military capabilities. We all know why this is being done. The Royal Navy cannot find enough sailors to man its ships. Many believed that the decision to spend so much of our defence resources on two aircraft carriers we may never need in the future was one of the worst procurement decisions of our time. Now we have them, these ships of course must be manned. But to make the Royal Marines pay the price for this is to compound an error with a folly – a dangerous one at that, with the military strategists having to work out how they can possibly make the £20bn to £30bn cuts to the defence budgets over the next decade which the Chancellor is demanding.

This week we celebrate the 353<sup>rd</sup> birthday of Her Majesty’s Corps of Royal Marines. Last week we commemorated the 212<sup>th</sup> anniversary of the battle of Trafalgar. Have we so forgotten our history that we now consider weakening the maritime capability that has kept this country safe – that has been its sheet anchor in stormy times? The good Admiral Earl St Vincent would be spinning in his grave.

Source: [www.telegraph.co.uk](http://www.telegraph.co.uk), 26 October 2017

## **2 Indon warships arrive in GenSan for goodwill mission**

Two active warships of the Indonesian Navy arrived here on Sunday for a two-day goodwill and cooperation mission. The two Sigma class corvettes docked at the Makar Wharf Sunday morning amid a rousing welcome facilitated by the city government, Naval Forces Eastern Mindanao and Philippine Navy reservists. Lt. James Reyes, public affairs chief of the Naval Forces Eastern Mindanao, said the visit of the Indonesian warships is part of a continuing cooperation between the naval forces of Indonesia and the Philippines. He said it was aimed to showcase the landing platform dock capability and other features of the Indonesian warships — KRI Sultan Hasanuddin (366) and KRI Sultan Iskandar Muda (367). As part of the visit, the two warships were opened for public viewing and tours from 9 a.m. to 12 noon Monday and Tuesday. The “open house” is free and open to the public.

On Monday, key officers of the 177-person Indonesia crew met with city officials led by Mayor Ronnel Rivera and Vice Mayor Shirlyn Banas-Nogralles at the city hall here. “We have also scheduled goodwill and traditional games between the Indonesian crew and local counterparts,” Reyes said. He cited personnel from the Philippine Navy and reservists, Philippine National Police Maritime unit and the Army-led Joint Task Force-GenSan. KRI Sultan Hasanuddin and KRI Iskandar Muda are the second and third ships of warship type and destroyer guarded controlled Sigma class of the Indonesian Navy. The modern corvettes, which were built by Dutch shipyard Schelde, serves as patrol boats with surface anti-ship, anti-submarine and anti-aircraft capabilities.

KRI Sultan Hasanuddin was commissioned in 2007 and the KRI Iskandar Muda in 2009. Berlian Napitupulu, consul general of the Indonesian Consulate in Davao City, said the visit shows Indonesia’s commitment to strengthen traditional ties between the two countries. He specifically cited areas adjacent to Mindanao like the port cities of Bitung and Manado in North Sulawesi, Indonesia. Aside from maritime security, he said efforts are underway to draw these areas together through trade and tourism exchanges. “We’re working to promote trade and tourism in these areas. We’re discussing how to open tourism routes between Bitung, Manado and General Santos because these areas are really close,” he said.

Source: [www.mindanews.com](http://www.mindanews.com), 30 October 2017

## **Exercise Dawn Blitz 2017 complete, setting the standard for new amphibious capabilities**

Dawn Blitz is a scenario-driven exercise designed to train and integrate Navy and Marine Corps units by providing a robust training environment where forces plan for and establish expeditionary advanced bases (EAB), execute an amphibious assault, engage in live-fire events, and integrate fifth-generation aviation capabilities in a land and maritime threat environment to test new integration and concepts of operation. Planning and preparations began for Dawn Blitz in October 2016. This exercise is the culmination of a year's worth of effort by the 1st MEB and ESG-3 staffs. Participants include combined force of C3F, ESG-3, 1st MEB, 13th Marine Expeditionary Unit (MEU), Destroyer Squadron (DESRON) 21, USS Essex (LHD 2), USS Anchorage (LPD 23), USS Rushmore (LSD 47), USS Wayne E. Meyer (DDG 108), and Coastal Riverine Group 1. With supporting elements, seven ships and 33 aircraft made the exercise possible.

A key focus was integration between the Navy and Marine Corps to establish a powerful maritime force capable of meeting modern threats. The team examined the composite warfare construct and other command and control arrangements to promote unity of effort in littoral warfare. “The amphibious force integration we've seen here at Dawn Blitz and the experimentation and innovation that's been conducted, further informs how we might establish sea control and power projection on tomorrow's battlefield,” said Col. Chandler Nelms, the Dawn Blitz amphibious force's deputy commander, land warfare commander and also commanding officer of 13th MEU.

In scenario, Dawn Blitz began when the United Nations issued a Security Council Resolution prompting the U.S. to deploy at the request of a partner nation alongside other coalition members to restore the internationally recognized borders of a fictional country. The scenario's sequence of events was designed to provide realistic, relevant training to integrate forces in new ways, critical to maritime power projection. As the exercise progressed, units demonstrated the ability to establish EABs on San Clemente Island and Camp Pendleton, California, through tactical insertion of ground forces. The scalable EABs provided warfare commanders alternative options that enabled maneuver capabilities in the littoral environment. Marines and Sailors established two EAB forward arming and refueling points (FARP). In one scenario the FARP serviced both Navy and Marine Corps aircraft, in the other, the FARP provided the commanders a secure location to service aircraft supporting operations in the deep

fight. Navy Expeditionary Combat Command (NECC) Pacific forces from the Coastal Riverine Force, Seabees and Explosive Ordnance Disposal participated on San Clemente Island to augment EAB operations as an adaptive force package (AFP). The NECC forces conducted events in support of live airfield damage repair (ADR), Expeditionary Mine Countermeasures (ExMCM) and the amphibious assault landing. For the first time, the blue-green team validated that they could launch a High Mobility Artillery Rocket System (HIMARS) from Navy ship and hit a target at 70 kilometers. The proof of concept with the HIMARS as a sea-based fires alternative afloat provides warfare commanders greater flexibility when conducting precision strikes. To further capitalize on the HIMARS capabilities, Marines and Sailors transported the weapons system to an EAB in a hypothetical island chain. There, the HIMARS could be used in a sea denial role in support of naval shipping transiting a narrow strait. The simulated strait transit allowed the strike group to practice utilizing integrated blue/green force protection measures, and to practice maneuvering together though restricted waters where ships can be vulnerable. Throughout Dawn Blitz, the F-35B Lightning II supported operations across four of the six functions of Marine aviation: electronic warfare, aerial reconnaissance, anti-air warfare, and offensive air support. The F-35B was the force's deep strike capability, and, for the first time, it successfully integrated with the sea-based HIMARS during the combined arms strike. Navy medicine also made milestones, by establishing Role 2 surgical capabilities across the amphibious force. Historically, only the largest ship in an Amphibious Ready Group (ARG) has an embarked Fleet Surgical Team, making it the only ship with surgical capability. "The demand signal for mobile Role 2 care has risen over the past decade, both from the missions that are requested of the deploying ARG, and also by the nature of ARG deployments, which are increasingly disaggregated in which the ships operate far from each other and therefore can't rely on the LHD for surgical support," said Cmdr. Robert Staten, Officer in Charge of Fleet Surgical Team 9. The addition of Role 2 coverage on each of the two smaller ships provided an innovative capability along with the opportunity to experiment bringing that echelon of care ashore following an amphibious assault. The culminating training event of Dawn Blitz occurred Oct. 27, when U.S. Navy's Assault Craft Unit 5, Beach Master Unit 1, U.S. Marine Corps' 1st Battalion, 4th Marine Regiment, and the Japan Ground Self Defense Force infantry soldiers led an assault on Camp Pendleton's Red Beach. Eighteen amphibious assault vehicles and six landing crafts, air cushion landed on the beach for additional training ashore, and to establish the final EAB. "Our Sailors and embarked Marines displayed exceptional professionalism and warfighting readiness in the execution of the amphibious assault," said Capt. Patrick Foege, Commander, Amphibious Squadron 1. "The ARG/MEU performed as a

cohesive, single entity, demonstrating the inherent mobility and operational flexibility that this integrated naval force brings to the combatant commanders.” Overall, Dawn Blitz 2017 brought 2,900 Sailors and 1,600 Marines together to train, validate new concepts, and build ties. The success of this exercise continues to show the strength of the Navy-Marine Corps team, and the demonstration of our lethality and ability to fight and win in the future operating environment.

Source: [www.dvidshub.net](http://www.dvidshub.net), 30 October 2017



### **Scarce facilities at land ports hamper bilateral trade: study**

Inadequate facilities at the Benapole and Petrapole land ports hamper bilateral trade between Bangladesh and India, found a survey conducted by the South Asian Network on Economic Modelling (Sanem), a private think tank. Some 37 percent of the respondents found the business operation hours at Benapole to be unsatisfactory, 20 percent adequate and 43 percent very poor. The effective working hours in practice are from 10am to 2pm, meaning that instead of the eight hours of a working day, this port was effective for only four hours a day, says the survey. Among respondents at Petrapole, 36 percent found business operation hours at the Indian port to be unsatisfactory, 18 percent adequate and 46 percent very poor. The situation is more or less the same in other areas, such as infrastructure, regulatory and administrative procedure, facilities and use of digital and advanced technology, capacity of the workforce, social and local conditions and basic utilities, including electricity and water. Sanem disclosed the findings at a press conference at its office in Gulshan yesterday.

The USAID Asia, Middle East Economic Growth Best Practices Project (AMEG) and Bangladesh Trade Facilitation Activity (BTFA) supported Sanem in carrying out the survey. Selim Raihan, professor of economics at the University of Dhaka and executive director of Sanem, presented the findings of the report titled “Boosting Bangladesh-India bilateral trade: Are Benapole and Petrapole land ports ready to take the challenges?” The think-tank carried out the survey to assess business needs of these two priority land ports that handle about 80 percent of land trade between the two countries, worth around \$4 billion recorded in fiscal 2016-17. On an average, 350 trucks enter Bangladesh from India every day, whereas only 70-80 enter India from Bangladesh. Private sector traders complain about delays stemming from burdensome processes, inconvenient operating hours and insufficient facilities and human resources at both sides. In case of infrastructure, such as equipment, transport and space facilities, at Benapole, some 62 percent found it to be poor and 30 percent unsatisfactory. Infrastructure facilities are relatively better at Petrapole as 43 percent found it to be adequate, 37 percent unsatisfactory and 20 percent poor.

Regarding regulatory and administrative procedures, 26 percent of respondents in Bangladesh said it was poor whereas 28 percent said the same for India. Some 70 percent of respondents said facilities and use of digital and advanced technology at Benapole are poor compared to 33 percent in India. Insufficient storage capacity is another major barrier for the port users, according to the survey. “The findings of the study will be useful for the governments of India and Bangladesh in designing policies in order to boost trade between the two nations,” said Raihan of Sanem. He said well-functioning business operation facilities and support systems at these land ports are essential to deepening connectivity between the two South Asian economies. The think tank also came up with some recommendations. These include widening existing roads, building additional warehouses, incorporating advanced digital and technological facilities and policy level advocacy between the customs houses and between the governments.

Source: [www.thedailystar.net](http://www.thedailystar.net), 18 October 2017

### **APMT, DP World Grow at India’s Largest Container Port**

According to stats released by India's government, JNPT handled a total of 2.4 million TEUs, with APM Terminals contributing 990,000 TEU — up 11.6% on its own individual figures, and DP World handling 625,000 TEU — an increase of 5.2% against its comparative period in 2016. JNPT is undergoing many enhancements that will increase its cargo handling capability, such as PSA completing the first phase of the Bharat Mumbai Container Terminals project in 2018.

In addition, Jawaharlal Nehru Port Container Terminal (JNPCT), one of the container terminals directly managed by JNPT, has upgraded its terminal operating system to Navis N4 in order to streamline processes and help reduce costs, time and documents. The N4 implementation process will be managed by Cargotec Corporation, which will directly work with JNPCT to utilize Navis’ methodology and project management tools. Cargotec will provide testing, configuration, report and field extensions, and go-live support services such as training courses so that the management and mid-management teams are up and running on N4 as quickly as possible. JNPCT stated that it had increased its share “modestly” from 780,000 TEU in 2016 to 787,000 TEU in 2017 for the first six months of the fiscal year. ICRA, an Indian independent investment information and credit rating agency, recently reported that container

volumes at non-major Indian ports registered a combined compound annual growth rate (CAGR) of 20% to 4.5 million TEU over the last five years against CAGR of 2% to 8.4 million TEU by major ports from 2012-2017.

Source: [www.porttechnology.org](http://www.porttechnology.org), 17 October 2017

## **Container segment to drive growth at Indian Ports**

- Jayajit Dash

Container segment is expected to fuel the next stage of growth at Indian ports. Major ports in the country are already ramping up container handling capacity despite sluggish global container and freight movement in the past two years. A report by Care Ratings has pegged the cargo container handling of ports in the country to reach 25 million TEUs (Twenty Tonne equivalent units) by 2020-21 from the current 13 million TEUs. Non-major ports are set to add higher capacities in this segment. "We expect the same (global container movement) to recover globally over the next 2-3 years. We also expect a pick-up in containerisation of a wider variety of cargo in India, since handling and transportation becomes faster and easier," the report stated.

With the Sagarmala programme aiming to increase the depth of major ports so as to cut time on trans-shipping of goods, the ports would be able to handle new generation mega vessels over the next two to three years. Presently, petroleum and its products account for 25-30 per cent of the import-export volume of the country. The government intends to double the petroleum refining capacity to meet the domestic demand and also augment exports. Current refining capacity stands at 230 million tonnes per annum (mtpa). The increased refining capacity is expected to cater to regional demand especially petroleum exports to countries like Bhutan, Nepal, Myanmar, Bangladesh and Sri Lanka. Petroleum, oil and lubricant (POL) segment is poised to be the major growth segment for the overall growth of cargo capacity handled by ports. Capacity utilization of six major ports on the eastern coast was 56.2 per cent in 2016-17, a slide of 3.4 per cent compared with FY17. Similarly, major ports on the western coast reported capacity utilisation of 65.9 per cent in last fiscal, a slump of 3.3 per cent. "During 2016-17, major ports implemented 100 million tonnes of capacity addition. We expect the capacity utilization to remain stable during the current year. Fall in import of commodities like coal would be compensated by the

increased export of iron ore, zinc and steel", the report noted. During the past three year, technology improvements such as new container terminal projects at JNPT, Kamrajar port in Tamil Nadu, new cargo terminals, improving rail connectivity and implementation of RFID (Radio Frequency Identification) system across ports has helped improve the efficiency and handling capacity. Major ports continued to witness growth in operating surplus backed by the steady increase in operating margins. The 12 major ports posted a combined net surplus of Rs 2820 crore in 2016-17 on income of Rs 11,894.5 crore from handling 647.6 million tonnes of cargo.

Source: [www.business-standard.com](http://www.business-standard.com), 24 October 2017

### **India sends first wheat shipment to Afghanistan via Chabahar port**

- Elizabeth Roche

India on Sunday flagged off a shipment of wheat for Afghanistan through Iran's Chabahar port—marking the operationalization of the port for the trans-shipment of goods from India to the landlocked country. The development is seen as a significant one as it torpedoes Pakistan's veto over trade between India and Afghanistan—a move aimed at circumscribing India's role in Afghanistan. And it comes almost 15 years after India and Iran first agreed to develop the Chabahar port to ease connectivity bottlenecks for New Delhi in reaching out to landlocked Central Asia and Afghanistan. It also follows US president Donald Trump in August calling on India to play a larger role in stabilizing war-torn Afghanistan as he announced a revamped security plan to defeat a resurgent Taliban.

On Sunday, Afghan foreign minister Salahuddin Rabbani joined his Indian counterpart Sushma Swaraj through a joint video conference as the latter in New Delhi flagged off a ship carrying the first consignment of wheat from India's Kandla port to Afghanistan. "The shipment is part of commitment made by the Government of India to supply 1.1 million tonnes of wheat for the people of Afghanistan on grant basis," an Indian foreign ministry statement said. "Six more wheat shipments will be sent to Afghanistan over the next few months," it said. "The wheat shipment is a landmark moment as it will pave the way for operationalisation of the Chabahar port as an alternate, reliable and robust connectivity for Afghanistan. It will open up new opportunities for trade and transit from and to Afghanistan and enhance trade and

commerce between the three countries (India, Iran, Afghanistan) and the wider region,” the statement added. It was in 2003 that India and Iran first agreed to develop the Chabahar port, located in the Gulf of Oman near Iran’s border with Pakistan, to allow New Delhi to reach markets in Afghanistan and landlocked Central Asia. The project was delayed due to international sanctions on Iran over its suspect nuclear programme and India’s focus on concluding a civil nuclear pact with the US. Interest in the project was rekindled in 2013 after Iran and the US, UK, France, Russia, China and Germany reached an interim agreement on Tehran’s nuclear programme and some sanctions were lifted. And in May last year, India, Iran and Afghanistan signed a trilateral trade pact when Prime Minister Narendra Modi visited Tehran to enable the movement of goods from Chabahar to Afghanistan.

The Chabahar port is also less than 100km from Pakistan’s Chinese-built port of Gwadar, which is part of the China-Pakistan-Economic Corridor project (CPEC) aimed at opening up an energy and trade corridor from the Gulf to western China. The CPEC is also a strand of China’s ambitious Belt and Road Initiative that aims to connect around 60 countries across Asia, Africa and Europe through a series of roads, railways and ports. When linked to the International North-South Transport Corridor (INSTC), the Chabahar-Zahedan-Zaranj corridor would connect South Asia on one hand and Europe on the other, Modi had said. INSTC is an ambitious multimodal transport system established in 2000 by Iran, Russia and India to promote transportation cooperation. It is planned to connect the Indian Ocean and Persian Gulf to the Caspian Sea through Iran and then onwards to St. Petersburg and northern Europe through Russia.

It was expected that a 2010 US-supported pact between Afghanistan and Pakistan on transit trade would be extended to India to allow Indian goods to pass through Pakistan. But that floundered when Pakistan refused to allow Afghan trucks to come up to the Indian border at Attari, Punjab, or take back Indian goods. At present, Afghan trucks with Afghan products come up to Torkham on Afghan-Pakistan border where the goods are loaded onto Pakistan trucks that in turn come up to the India-Pakistan border at Wagah. Once the goods are offloaded, the trucks go back into Pakistan empty, an Indian official said. With the US refusing to certify that Iran was complying with its commitments under the international nuclear pact, there were doubts that India’s plans to use Chabahar for trade with Kabul could come under a cloud once again. Last week, however, US secretary of state Rex Tillerson said that the US did not intend to “interfere with legitimate business activities that are going on with other businesses, whether they be from Europe, India, or agreements that are in

place that promote economic development and activity to the benefit of our friends and allies”.

Source: [www.livemint.com](http://www.livemint.com), 29 October 2017

### **Warburg Pincus in talks with DP World to sell stake in Gangavaram Port**

- Reghu Balakrishnan

US-based private equity firm Warburg Pincus has started talks with UAE ports operator DP World to sell its 31.5% stake in Gangavaram Port in Andhra Pradesh, two people aware of the development said. Warburg has hired investment bank UBS to find a potential buyer, said one of the two people, both of whom spoke on condition of anonymity, adding the port is valued at \$1-1.4 billion and Warburg plans to sell its 31.5% stake for \$300-400 million. Other interested parties include Adani Ports and Special Economic Zone Ltd (APSEZ) and JSW Infrastructure, a unit of Sajjan Jindal led JSW Group, according to the second of the people cited above. Warburg plans to sell its stake while the other shareholders have no such immediate plans, according to the second person who spoke on condition of anonymity. In 2007, Warburg had invested around Rs150 crore (\$40 million) in the port at Gangavaram in Andhra Pradesh.

The port, operated by a D.V.S. Raju-led consortium, is the deepest all-weather port in India. Raju and his family owns 58.11% stake and Warburg Pincus 31.5%, while the Andhra Pradesh government holds the rest. With a depth up to 21 metres, Gangavaram can handle fully laden Super Cape size vessels of up to 200,000 DWT (dead weight tonnage). Commissioned in 2008, it handles cargo groups including coal, iron ore, fertilizer, limestone, bauxite, raw sugar, project cargo, alumina, and steel products, according to a company website. “We are always looking out for the right opportunities. We don’t comment specifically on any unless there is something to announce. We plan to increase our market share by increasing capacity at key locations and developing our beyond-the-gate strategy,” said a DP World spokesperson. Mails sent to spokespersons at APSEZ and JSW Infra were not answered while spokespersons from Warburg Pincus and Gangavaram port declined to comment.

The Dubai government-owned DP World has a portfolio of 77 terminals in 40 countries with a capacity of 85 million TEU (twenty-foot equivalent units). Last year, DP World had announced its plan to invest \$1 billion in India over the next few years.

The group has already invested \$1.2 billion in India and runs six terminals—Nhava Sheva (India) Gateway Terminal (NSIGT) and Nhava Sheva International Container Terminal (NSICT) at Jawaharlal Nehru Port Trust (JNPT); Mundra International Container Terminal (MICT); Chennai Container Terminal; India Gateway Terminal at Cochin Port; and Visakha Container Terminal at Visakhapatnam Port. DP World holds about 30% market share of India’s container trade. “The maritime sector contributes significantly to our trade and we are witnessing several positive developments in the sector. Private sector participation, aided by favourable policy framework, extends from creating port infrastructure to logistics to wider participation in coastal economic zones,” said Jaideep Ghosh, partner and head, transport and logistics, KPMG. Private sector ports have immense potential, and are an important private sector investment vehicle in the maritime sector. However, these are longer term investments and financial attractiveness such as valuations need to be considered accordingly, Ghosh added.

In 2015, *Times of India* had reported that APSEZ was in exclusive talks to acquire Gangavaram Port for \$2.1 billion. APSEZ, India’s largest private port operator and the logistics arm of Adani Group, operates ports in Mundra, Dahej, Hazira, Dhamra and Kattupalli and terminals in Mormugao, Vishakhapatnam, Tuna-Tekra. Ennore Container Terminal and Vizhinjam Port are under construction. Ports and terminals under JSW Infrastructure in Maharashtra and Goa currently have an operational capacity of 33 MPTA. Within the next four years, this is going to increase more than six-fold to reach 200 MTPA through Greenfield and Brownfield expansions, according to a company website. The port facilities of JSW are located at Mormugao Port Trust in Goa, Jaigarh and Dharamtar in Maharashtra. Indian ports have seen tepid response from private equity investors in the last few years. The port sector saw its biggest PE investments in 2007 when about \$500 million was invested, out of total \$1.2 billion invested in the sector till 2016. India’s merchandise exports rose 25.7% to \$28.6 billion in September, and the trade gap narrowed to \$8.9 billion. Merchandise exports grew at the fastest pace in six months in September, helping cut the trade deficit to a seven-month low, belying concerns that implementation of the goods and services tax (GST) from 1 July may blunt export competitiveness, said 13 October report in *Mint*.

Source: [www.livemint.com](http://www.livemint.com), 30 October 2017

## **Tourism may set sail from Indian shores soon**

- Yogima Seth Sharma,

Come 2018 and Indian sea farers can set sail for Australia, the Middle East, Thailand or Indonesia without having to first fly to Singapore or Bangkok to board a cruise liner. The government has prepared a plan to develop cruise tourism from India and is in talks with international companies to kick-start the facility by next year as part of efforts to promote the country as a complete tourist destination. The move is expected to boost revenue from tourism and create jobs. A high-level taskforce chaired by the shipping secretary is in advanced discussions with cruise terminal management and construction companies including Singapore-based SATS-Creuers Cruise Services and London-based PSA to start operations from India, a senior government official told ET on condition of anonymity because the proposal is yet to be finalised. "The tenders for the same would be floated soon," the official said, adding that the shipping ministry has roped in Miami-based consulting firm Bermello Ajamil & Partners along with EY to draw up a plan for the development of cruise tourism. The ministry will invest Rs 1,500 crore to set up five cruise terminals in the country, one each in Mumbai, Goa, Chennai, Cochin and near Kandla port.

Another top official in the tourism ministry confirmed that work is in advanced stages and the government will finalise incentives to be offered to attract international companies to set up base in India. "These could include extending the facility of e-visa at ports, giving tax concessions, creating ports of international standards and setting up dedicated berths at select ports for cruise liners," the official added, requesting not to be identified. According to the second official, there is no international cruise starting from India and Indians craving for a holiday at sea must first travel to Singapore or Thailand to take up one. "Consequently, they lose time in going to Singapore or Thailand and shell out extra for air tickets," the official said. "The rollout of international cruises from India will give a big boost to tourism and would also open doors to big Indian weddings on cruises, besides creating more jobs," the official said, adding that over the years, cruise tourism could become one of the major revenue generators for the country.

The cruise tourism sector is estimated to have a revenue potential of close to Rs 35,000 crore and is expected to create over 250,000 jobs, shipping and road transport and highways minister Nitin Gadkari had said in August. Demand for cruise tourism increased 62% between 2005 and 2015, with more than 25 million such passengers



likely by the end of this year, according to Cruise Lines International Association. The industry generated \$117 billion in output worldwide in 2015.

Source: [economictimes.indiatimes.com](http://economictimes.indiatimes.com), 31 October 2017

## **India to help develop Colombo, Trincomalee Ports: Foreign Secretary S Jaishankar**

- Dipanjan Roy Chaudhury

India will help develop both Colombo and Trincomalee ports in Sri Lanka, foreign secretary S Jaishankar said on Thursday, days after Sri Lankan Prime Minister Ranil Wickremesinghe named India as a top contender for developing the strategically located Trincomalee harbour in eastern part of the island nation. The development potentially extends India's outreach in the Indian Ocean, where China is pursuing an expansionist policy. India is also helping build road and rail projects in Sri Lanka, Jaishankar said while addressing at a workshop titled 'Connecting the Bay of Bengal India, Japan, and Regional Cooperation', organised by the India chapter of global think tank Carnegie India. Wickremesinghe had said while participating in the 45th anniversary celebrations of the Kandy Sinhalese Traders' Association in Kandy earlier this week that discussions were on with both India and Singapore for developing the Trincomalee harbour. Japan will also play a role in building the Trincomalee port, said people aware of the matter. Unlike the previous Mahinda Rajapaksa regime, the current regime in Colombo since 2015 has sought to balance its policy between India and China, giving India a stake in Hambantota airport, Colombo port project and a key expressway, besides preventing Chinese submarines in Sri Lankan waters in the backdrop of loans from Beijing that have pushed Sri Lanka into debt trap.

India, in collaboration with Japan, has sought to develop infrastructure and connectivity projects in the Bay of Bengal region including Andaman Islands amid China's outreach to South Asia through One Belt One Road (OBOR) initiative. Sri Lanka had indicated a few months ago that it would hand over to India running of the Chinese built Hambantota airport near the deep-sea port. Handing over the loss-making Mattala Rajapaksa International Airport (MRIA) in Hambantota to India would enable Sri Lanka to pay back dues to China's EXIM Bank, which had provided loans to build the airport. There are reports that India could invest \$205 million in

MRIA for a 70% share for 40 years. MRIA, located 250 km south from Colombo, was built at a cost of \$209 million largely with Chinese assistance (\$190 million). By the end of 2016 MRIA suffered a loss of nearly \$113 million, according to Sri Lankan government.

Source: [economictimes.indiatimes.com](http://economictimes.indiatimes.com), 26 October 2017

### **France's Bollore can buy majority stake in logistics firm India Ports only in 2021**

- P Manoj

Bollore Africa Logistics SAS, a unit of Paris Stock Exchange-listed Bollore Group, will have to wait at least till 2021 to raise its stake in an Indian logistics company to comply with the terms of the contract the local firm's subsidiary was awarded to run a container terminal at VO Chidambaranar Port Trust (VOCPT) in Tamil Nadu's Tuticorin district. On October 10, the Department of Economic Affairs (DEA) said it has approved a proposal from Bollore Africa Logistics to raise its stake in India Ports and Logistics Pvt Ltd up to 70.40 per cent from 49 per cent at an investment of ₹75.35 crore.

In 2013, Bollore Africa Logistics had invested ₹48.64 crore to buy a 49 per cent stake in India Ports and Logistics. DEA is vested with the task of vetting foreign investment proposals in India, which was earlier looked after by the Foreign Investment Promotion Board (FIPB). Dakshin Bharat Gateway Terminal Private Ltd (DBGT) is a special purpose vehicle (SPV) formed by India Ports and Logistics (formerly ABG Container Handling Pvt Ltd) to run a container terminal at VOCPT. India Ports and Logistics is 51 per cent owned by Star Ports Ltd, a unit of Mumbai-listed Starlog Enterprises Ltd (earlier known as ABG Infralogistics Ltd), with Bollore Africa Logistics holding the balance stake. The container terminal run by DBGT, the second at VOCPT, has a capacity to load 600,000 twenty-foot containers a year.

#### *Foreign investor*

Bollore Africa Logistics, Africa's biggest transport and logistics operator, is one of the few foreign investors in recent times to put faith in the Indian ports sector. "Bollore's plan to increase stake in India Ports and Logistics has received clearance from the

DEA. But the stake hike will have to be approved by VOCPT,” a Shipping Ministry official said. “Under the terms of the concession agreement signed between VOCPT and Dakshin Bharat Gateway Terminal, change in management control – direct or indirect – cannot be permitted until three years from the commercial operations date (CoD) of the terminal,” the official said. VOCPT is yet to notify the CoD for the terminal and this is expected sometime in March 2018. “DBGT is still in the construction phase during which it is allowed to handle containers according to the terms of the concession agreement,” he added. When Bollore Africa Logistics bought a 49 per cent stake in India Ports and Logistics in 2013, it did not result in a change in management control of the company. But if its stake goes beyond 51 per cent, there will be an indirect change in the management of Dakshin Bharat Gateway Terminal and, hence, requires VOCPT’s approval. “The concession agreement says that the no change in management control –either direct or indirect – can be allowed without the prior, written permission of VOCPT,” he said. That is not the concern of the DEA, which merely clears foreign investment proposals. “If DBGT violates the concession agreement, that is between DBGT and VOCPT,” the ministry official said. “As on date, there is no change in ownership or management control of the two companies. Star Ports continue to hold 51 per cent and Bollore Africa Logistics 49 per cent in India Ports and Logistics. And India Ports and Logistics continue to hold 100 per cent stake in DBGT,” a spokesman for Starlog Enterprises said.

Source: [www.thehindubusinessline.com](http://www.thehindubusinessline.com), 19 October 2017



## MARINE ENVIRONMENT



### **Tourists Find Heaps of Trash at the Tip of the World**

- Kimberly Hickok

For many decades, scientists, fisherman and oceangoers have known there is plastic in the ocean. In 2014, scientists estimated that the ocean holds more than 5 trillion pieces of floating plastic, which together weigh more than 250,000 tons. That's more than twice the weight of a fully loaded aircraft carrier.

Earlier this year, researchers from HAUSGARTEN, an Arctic deep-sea observatory, reported that plastic and other human-made debris can be found on the Arctic Ocean floor and the amount seems to be increasing. But the extent of pollution on Arctic beaches was still unknown. Last summer, citizen scientists collected data on Arctic beach litter, which is detailed in a new study published in *Marine Pollution Bulletin*. According to the authors of the study, this is the first set of data on litter at remote Arctic beaches. The study authors include tourist cruise ship leader Birgit Lutz, who collected data with the help of her passengers. Study co-author Lars Gutow, a biologist at the Alfred Wegener Institute in Germany, said that gaining assistance from tourists was an "inexpensive and efficient way to compile data on a large spatial scale." The cruises traveled to six beaches on the Norwegian archipelago of Svalbard, north of the Arctic Circle. As the tourists walked along the beaches, they recorded the weight and type of trash they found. A lookout watched for polar bears. Between 82 and 100 percent of the trash found on each beach was plastic, which is more than the global estimate of 72 percent of all beach litter. The majority of the plastic was fisheries-related -- items such as nets, boat fenders and buoys, mostly from commercial fishing operations. In some locations, all of the plastic on the beach was from fisheries.

Fishing activity has dramatically increased in that area in recent years, so it wasn't surprising that most of the trash was fisheries-related, said Gutow. However, the researchers weren't expecting to find such a large amount of it. The average concentration of trash found on these beaches was more than 30 times the average amount reportedly found on beaches in South China and India.

Tourists also took photos of wildlife amidst the litter. In some cases the litter may have caused injury or death. One tourist found an Arctic tern dead and entangled in a fishing

net, but it's unknown if that's why the bird died. Researchers were surprised at the diversity of organisms that may have been affected by the litter. Some of the more startling finds included the antlers and skulls of reindeer tangled in fishing nets. "This tells me these fisheries-related items are not just a marine problem," said Gutow. "They also become a terrestrial problem, because these reindeer are for sure terrestrial organisms." The tourists also found beer cans from Denmark and a British Petroleum label, but Gutow said it's impossible to tell when or where the trash originated. The scientists haven't yet developed models to explain how trash reaches the Arctic beaches. Marine pollution expert Kara Lavender Law, a research professor at the Sea Education Association who was not involved in the study, said that citizen scientists could help researchers learn more about the extent of ocean pollution. "When you think geographically of what's been surveyed across the world's beaches, we've only measured or sampled a small fraction of those places," said Law. "It's really expensive [for researchers] to get to the middle of the ocean or these really remote regions." Gutow and his colleagues think these findings show that humans impact everything they touch. "It's not just 'we go there, and we leave, and everything is fine'" he said. "We leave our footprint there whatever we do, and people have to be aware of that," he said.

Source: [www.insidescience.org](http://www.insidescience.org), 23 October 2017

### **Once-pristine Arctic choking on our plastic addiction**

- Jonathan Vigliotti

I first travelled to the Arctic Circle in 2013 after a biologist friend told me about a small village in Greenland under attack by polar bears. The iconic animals hunt seals on ice, which is now thinning because of climate change. With their frozen bridges gone, the bears turned to garbage cans, just like raccoons. The piece was one in what became a long list of "hungry polar bear" stories to circulate on TV and online. The polar bear is the poster animal for our changing planet -- and for good reason. They are beautiful, Endangered, and great click-bait. But they're not perfect messengers, because even when they are frail and starving, they're still awe-inspiring.

Earlier this year a global team of scientists sounded another alarm, revealing what they called the next major threat to the polar bears' Arctic habitat: plastic.

After spending five years tracking currents and collecting and analysing water samples, they estimated there to be around 300 billion pieces of plastic from all over the world floating in this once pristine ecosystem. The story made headlines and gained traction on social media, but soon the unpredictable tides of news carried it back out to sea. A simple Google search a few months later turned up not a single television news report from the Arctic.

In an apparent attempt to get a few clicks, one article on the topic featured a fake photo of what appeared to be a passed out polar bear holding a plastic bottle of Coca Cola. To be fair, the photo was real, but the polar bear was in a zoo thousands of miles away from its allegedly plastic-plagued Arctic home. So were the findings of this plastic research a myth? I mean if there were 300 billion pieces of plastic floating in the Arctic, where was the proof? In late July my producer Leigh Kiniry and I asked our bosses to send us on a myth-busting expedition. The greenlight came quickly, and we grabbed photojournalist Abdi Cadani and set off for Norway's Arctic Circle. It took three flights and a bumpy boat ride to get to our final destination, but once there, it only took a few minutes to find the plastic. Plastic's omnipresence in this remote region is a product of both our warming planet, and our unsustainable appetite for the material.

### *Plastic Patrol*

Norway's Lofoten islands are a dreamscape of jagged mountains and glassy water. It's so beautiful, Disney used the polar paradise as its muse when creating their blockbuster animation "Frozen." During the summer months, when some islands are thawed out, an unusual mission kicks into gear.

- Surfers brave frostbite to surf Arctic waves in the Lofoten islands

I first read about June Gronseth's "plastic patrol" online. She leads a group of volunteers who comb through the Nordic tundra, searching for garbage. Some of the photos she's posted to her website are unbelievable. "There's so much beauty here, but if you look closely enough, you'll see the beast," she told me as our boat pulled up to a rocky coast. "How many people live on the island," I asked. "Here? Actually none. We're on our own," she said with a warm smile. We may have been on our own, but everywhere we looked there were unwanted signs of life. Within minutes we had huge, industrial-sized garbage bag full of plastic junk. Everything from a Coca-Cola carrier with the words "Made in Venezuela" on it, to plastic rope and even a motorcycle helmet. Some of the plastic had been in the water so long you couldn't even make out what it was.

"The worst is plastic bottles. Water bottles. We see them everywhere," Gronseth told me as she fished out a plastic bag wedged between two rocks. Gronseth began cleaning-up the arctic in 2012, after she found two birds caught in some plastic line. "Trapped and dead in one piece of plastic on the beach," she said. "My eyes were wide open and I thought, 'we have to stop polluting our seas.'" That discovery unlocked a dirty secret -- the Arctic Circle has become the world's dumping ground. In only a few years, Gronseth's team grew from a ragtag bunch of fishermen and local activists to a network of over 1,000 volunteers spread out over hundreds of miles. Last year alone they collected more than 40 tons of plastic. The only way to remove it all from the remote islands was by airlifting it out with a helicopter.

### *The Global Conveyor Belt*

Science has traced this trash back to its source. In April, two global research programs unveiled the results of their five-year study in the journal, *Science Advances*. They discovered a global conveyor belt of ocean currents like the Gulf Stream carry plastic all the way from the Americas and Europe to the Arctic. "There is a continuous transport of floating waste from the North Atlantic," said Andres Cozar Cabanas, a Spanish biologist at the University of Cadiz and the leader of the study. This waste enters the ecosystem a number of ways; small items like plastic toothpicks are often flushed down the toilet, beachgoers leave behind bottles and food packaging, and plastic that is thrown out can easily blow away from landfills and ending up in rivers or oceans. Scientists say that, for the first time, melting ice has enabled this conveyor belt to dump plastic all the way up in the Arctic's northernmost regions, which were previously protected from the outside world.

Climate change has also made it easier for research vessels to gain access, and to measure the full extent of the problem. Cabana's team spent five months dipping nets into Arctic water and studying the results. While large floating objects are a concern, Cabanas says the soupy mix they discovered just under the surface is a bigger threat. "The amount of floating plastic debris trapped in the surface waters is estimated to be on the order of hundreds of tons. It comprises around 300 billion pieces, mainly fragments around the size of a grain of rice," he explained. Those fragments are known as microplastics, broken down bits of bigger items like straws, Q-tips, plastic bags and water bottles. They're so small, marine animals often mistake them for food.

### *Faster than Bolt but Weighed Down by Plastic*

You need a microscope and a quick eye to see the animal inside Marine Biologist Ceri Lewis' petri dish in her laboratory at England's Exeter University. "They can reach speeds a hundred times faster than Usain Bolt," Lewis told me with pride. At just about an eighth of an inch long, translucent and scaly, the Arctic Copepod is far from "poster animal" status, but as Lewis explains, this shrimp-like crustacean is one of the reasons polar bears and other cute arctic species are able to eat every day. "They are essential for the marine food chain. They produce really lovely fatty acids that then support the fish, which then support the seals, which then support the polar bears." Copepods also support the same fisheries that supply supermarkets and restaurants. Lewis' research monitors the health of the Copepod population, which has already been under stress from warming water. The new concern is microplastics, which Lewis told us the Copepods are starting to eat. "When that happens, the animal's stomach tells it its full so it stops eating. That could kill it or stunt its growth due to a lack of nutrients which could have drastic effects on the health of the marine ecosystem," she said. Lewis has already found several specimens of Copepods with plastic in their gut but said it's too early to tell how widespread the problem is. Plastic has already invaded other parts of the food chain in our world's oceans. Roughly a quarter of fish sampled from markets in California and Indonesia had plastic in their guts, according to a study by the University of California, Davis. Seabirds are also devouring the trash. The United Nations Environment Programme estimates that 99 percent of all seabirds will have ingested plastic by mid-century

### *Plasdiction*

The world is addicted to plastic. Consider this: in 1950 our planet consumed about 1.5 million tons of plastic. That number jumped to over 300 million tons by 2016. The United Nations says at this rate there will be more plastic than fish in the ocean by 2050. Scientists say there are simple measures people can take now to make a lasting impact. The biggest threat is single-use items like plastic bags and bottles. According to watchdog group "Ban The Bottle," the average American uses about 129 plastic water bottles a year that are tossed in the garbage. If you do the math, that means Americans throw out over 40 billion water bottles annually. Our dependency on plastic bags is even worse. According to the Environmental Protection Agency, Americans use over 380 billion plastic bags and wraps each year. Most of them wind up in landfills or are carried out to sea. Every year about 8 million tons of plastic is believed to escape into the oceans. Back in Lofoten, June Gronseth picked up yet another plastic bag. She



hates seeing them blanket the beach like Saran wrap but says she's happy she got to it first, before an animal did. "I do hope that all people in the world get their eyes open and stop polluting the ocean, we have to stop now," she said. Gronseth is hopeful, but knows kicking an addiction is difficult, which is why she'll be out here next season patrolling the Arctic, Earth's last paradise, now a new frontier for pollution.

Source: [www.cbsnews.com](http://www.cbsnews.com), 23 October 2017

### **Ocean acidification is deadly threat to marine life, finds eight-year study**

- Fiona Harvey

If the outlook for marine life was already looking bleak – torrents of plastic that can suffocate and starve fish, overfishing, diverse forms of human pollution that create dead zones, the effects of global warming which is bleaching coral reefs and threatening coldwater species – another threat is quietly adding to the toxic soup. Ocean acidification is progressing rapidly around the world, new research has found, and its combination with the other threats to marine life is proving deadly. Many organisms that could withstand a certain amount of acidification are at risk of losing this adaptive ability owing to pollution from plastics, and the extra stress from global warming. The conclusions come from an eight-year study into the effects of ocean acidification which found our increasingly acid seas – a byproduct of burning fossil fuels – are becoming more hostile to vital marine life. “Since ocean acidification happens extremely fast compared to natural processes, only organisms with short generation times, such as micro-organisms, are able to keep up,” the authors of the study *Exploring Ocean Change: Biological Impacts of Ocean Acidification* found.

Marine life such as crustaceans and organisms that create calcified shelters for themselves in the oceans were thought to be most at risk, because acid seas would hinder them forming shells. However, the research shows that while these are in danger, perhaps surprisingly, some – such as barnacles – are often unaffected, while the damage from acidification is also felt much higher up the food chain, into big food fish species.

Ocean acidification can reduce the survival prospects of some species early in their lives, with knock-on effects. For instance, the scientists found that by the end of the

century, the size of Atlantic cod in the Baltic and Barents Sea might be reduced to only a quarter of the size they are today, because of acidification.

Peter Thomson, UN ambassador for the oceans and a diplomat from Fiji, which is hosting this year's UN climate change conference in Bonn, urged people to think of the oceans in the same terms as they do the climate. "We are all aware of climate change, but we need to talk more about ocean change, and the effects of acidification, warming, plastic pollution, dead zones and so on," he said. "The world must know that we have a plan to save the ocean. What is required over the next three years is concerted action." The eight-year study was carried out by the Biological Impacts of Ocean Acidification group (known as Bioacid), a German network of researchers, with the support of the German government, and involved more than 250 scientists investigating how marine life is responding to acidification, and examining research from around the world. The study was initiated well before governments signed a global agreement on climate change at Paris in 2015, and highlights how the Paris agreement to hold warming to no more than 2C may not be enough to prevent further acidification of the world's seas. Governments will meet in Bonn in November to discuss the next steps on the road to fulfilling the requirements of the Paris agreement, and the researchers are hoping to persuade attendees to take action on ocean acidification as well.

Ocean acidification is another effect of pouring carbon dioxide into the atmosphere, as the gas dissolves in seawater to produce weak carbonic acid. Since the industrial revolution, the average pH of the ocean has been found to have fallen from 8.2 to 8.1, which may seem small but corresponds to an increase in acidity of about 26%. Measures to reduce the amount of carbon dioxide reaching the atmosphere can help to slow down this process, but only measures that actively remove carbon already in the atmosphere will halt it, because of the huge stock of carbon already in the air from the burning of fossil fuels. Worse still, the effects of acidification can intensify the effects of global warming, in a dangerous feedback loop. The researchers pointed to a form of planktonic alga known as *Emiliana huxleyi*, which in laboratory experiments was able to adapt to some extent to counter the negative effects acidification had upon it. But in a field experiment, the results were quite different as the extra stresses present at sea meant it was not able to form the extensive blooms it naturally develops. As these blooms help to transport carbon dioxide from the surface to the deep ocean, and produce the gas dimethyl sulfide that can help suppress global warming, a downturn in this species "will therefore severely feed back on the climate system".

Source: [www.theguardian.com](http://www.theguardian.com), 23 October 2017

## **Even earless oysters ‘clam up’ over noise pollution**

- Teresa L. Carey

Even without ears, oysters are “clamming up” when they hear too much noise in the ocean. In response to sounds similar to cargo ships, oysters slam their shells closed, seemingly to protect their soft bodies, according to a study published Wednesday in PLOS ONE. Oysters are filter feeders, so noise pollution in the ocean may stunt growth and reduce water quality, the scientists argue. Ocean noise pollution is a known problem for many marine mammals, which use their hearing for survival tasks like navigation and finding food. But little is known on how sound affects invertebrates, which account for the largest number of animals in the sea. A few years ago in a bustling Spanish port, University of Bordeaux physiologist Jean-Charles Massabuau came across an underwater filmmaker. As a large cargo ship crossed the water, the filmmaker surfaced and said, “Wow, I never heard such a noisy spot,” Massabuau recalled. Man-made sounds such as offshore drilling, seismic testing for deep sea oil, and even the hum from that Spanish cargo ship permeate the ocean at ever-increasing levels.

Massabuau’s research involves learning how changes in light, temperature or salinity affect oysters. So after his exchange with the diver, Massabuau wondered, “Can the oysters hear it?” Back in the lab, his team affixed accelerometers to thirty-two oysters to detect when their shells were open or closed. An oyster’s shell position is linked to its well-being. An open shell indicates a relaxed state, while shutting is a marker for stress. Massabuau lowered the animals into two tanks replete with food, currents and seawater pumped from the Bay of Arcachon, France. With an underwater speaker in one of the tanks, he played a variety of sounds, including low frequencies below 200 Hertz that are typically produced by cargo ships. Massabuau found that the oysters rapidly closed their shells with sound frequencies between 10 to 1000 Hertz. He likens an oyster’s reflexive shutting to the sharp shrug that humans do when startled by an unpleasant sound. “They are aware of the cargo ships,” Massabuau said. “What is for sure is that they can hear. The animals can hear these frequencies.” Many marine organisms can detect vibrations like ones produced by predators. But most definitions of hearing require an organ capable of sound perception, said University of Hull marine biologist Mike Elliott.

Oysters don't have ears like humans, but hair cells similar to ones in the inner ear are found on the gills. These cells sense vibrations, Massabuau said, so whether people call it "hearing" or "sensing sound vibrations" makes little difference to him. Elliott, who was not involved in the study, has conducted research similar to Massabuau's, but with hermit crabs and mussels. Elliott said when these animals become stressed and hide inside their shells, they stop feeding and breathing, "and sooner or later they start suffering." But Elliott said it remains unclear if sound pollution can harm these organisms in the long run. "It is quite a big leap from detecting a response [to sound] to if the animal is being harmed by it," Elliott said. "The big challenge is converting this into a response that denotes harm to the organism." Massabuau agreed. His lab is investigating if chronic exposure to unnatural sounds can disturb the growth rates of oysters. He reports signs of slow growth rates, indicating poor health in a study in the process of publication.

Source: [www.scientificamerican.com](http://www.scientificamerican.com), 28 October 2017

### **Corals may have a taste for dangerous plastic**

The ocean is full of plastic. Eight million tons are dumped in the seas every year. Plastic bags have been found in the guts of dead sea turtles, which mistake them for jellyfish. More than 200 species have been documented eating plastic, which looks colorful and edible but can kill them. In lab experiments, even tiny corals, the organisms that make up reefs, have been observed nibbling on a confetti of broken down plastic fragments similar to what swirls through the depths. But they aren't just eating whatever floats by. Instead, according to a new study in *Marine Pollution Bulletin*, some of the chemicals infused in the plastic may actually taste like food to the corals.

It isn't yet clear how much plastic is consumed by corals in the wild, or what harm it might do to these important marine organisms, which are already threatened by environmental dangers like warming seas and pollution. But understanding why plastic might appeal to them is important, especially because some particles appear to get stuck in the corals, potentially disrupting their digestive process. Hundreds of chemicals are mixed into plastics to achieve certain textures or other characteristics. Because the corals sense the presence of food with receptors, it would not be all that surprising if some chemical additives mimicked substances that set off the corals' appetites, suggested Alexander Seymour and Austin Allen, who were both graduate students at Duke University when they led this study.

In their experiment, the researchers offered corals collected from North Carolina's coastal waters two different kinds of plastic to see what would be more popular: plastic dipped in seawater and covered with a thin layer of bacteria, or weathered plastic without added bacteria. The corals seemed to prefer the bacteria-free plastic, ingesting more of it than the other shards. The difference between the consumption of the two plastics could come down to the concentrations of additive chemicals. Perhaps the microbes on the first set of plastic kept those added compounds from reaching the corals as swiftly. Or maybe the microbes produced substances that kept the corals from eating them as quickly. Daniel Rittschof, the pair's adviser, and other members of the lab are now working to verify whether specific substances in plastic are tasty to marine invertebrates. Finding out what these are and how they work could have far-reaching implications. "If we could manufacture plastic to taste attractive, maybe we can manufacture plastic to taste repulsive," Mr. Seymour said. "Maybe we can prevent critters from eating plastic in the first place."

Source: [www.nytimes.com](http://www.nytimes.com), 31 October 2017

### **Micro-beads: 'There will be more waste plastic in the ocean than fish by 2050'**

ONE YEAR AGO this week, the Green Party introduced the Micro-plastic and Micro-bead Pollution Prevention Bill 2016 into the Seanad. The aim of this legislation was to address the growing problem of micro-plastic pollution in our oceans and rivers. Despite stated support for the principle from Minister Simon Coveney, the government, together with Fianna Fáil, voted the bill down. Speaking against it, the minister promised action on micro-beads within a year, together with a new regime to set up a number of much needed Marine Protected Areas ("MPAs"). Well, it's a year on, and there's no sign of either.

#### *Contaminated drinking water*

Micro-plastic pollution is a serious problem. A study conducted by Orb Media this year found that 83% of drinking water supplies in the countries tested, including Ireland, the UK, the US, India, Germany, and France, were contaminated. In June 2017, the Environmental Protection Agency published a report that found that exposure to micro-plastics in drinking water, and food prepared with contaminated

water, poses a risk to the health of the population and to wildlife. The evidence against micro-plastics is mounting. Several other countries have already banned or are banning micro-beads, including France, the UK, the US, and Canada. The Ellen MacArthur Foundation report in 2016 warned that if current trends continue, there will be more waste plastic in the ocean than fish by 2050. We've all seen the photographs of rivers, beaches and oceans teeming with plastic, but it's impossible to see the smaller particles that are making their way into marine food chains. This problem is compounded because large pieces of plastic degrade into micro-plastics over time.

### *Introducing concept into Irish law*

The Green Party bill would have introduced the concept of micro-plastic pollution into Irish law for the first time. It would have banished all products containing micro-beads from our shelves, and obliged the EPA to perform and publish annual tests for micro-plastic pollution. The Minister would have been obliged to present the EPA's findings to the Oireachtas, together with some solutions. The government claimed a ban was contrary to EU single market rules, but as highlighted during the debate, exceptions to these rules are allowed.

Indeed, Minister Coveney illustrated this himself by writing to EU Environment and Marine Commissioner, Karmenu Vella, to say that Ireland would act on the issue. In reality, any issues with the Bill could easily have been amended during its passage through the Oireachtas, a point Senator O'Sullivan emphasised during the debate.

### *Progress has stalled*

Initially it seemed as if the government was genuine in its commitment to tackling plastic and micro-plastic pollution and, to its credit, they engaged in a public consultation process on the issue in early 2017. Indeed, Minister Denis Naughten even told his EU colleagues at the Council of Ministers that Ireland would not wait for EU measures on micro-plastics, but would press ahead with its own legislation to tackle the problem. A subsequent Labour Party bill to 'ban the bead' was allowed to pass the first hurdle in the Dáil and is still being considered. Yet progress has since stalled. In April, Minister Coveney told a workshop on MPAs that the government was advancing work on a comprehensive 'Oceans Bill', (something the Green Party would welcome with enthusiasm) but there is no sign of it on the government's autumn legislative agenda.

### *Broken promises*

As if to underline the government's lack of commitment to tackling plastic pollution, Minister Naughten recently sought to oppose the joint Green Party and Labour Party effort to introduce a deposit recycling scheme and a ban on non-recyclable or non-compostable single-use plastics. Clearly, government statements that protection of the environment from plastic pollution was a priority were empty words, mere lip service to the cause of the environment. The EU has been informed, the public consultation concluded, and many promises made, so where is the Oceans Bill? Minister, the clock is ticking.

Source: [www.thejournal.ie](http://www.thejournal.ie), 31 October 2017

### **Missing Plane Or Marine Dumping?**

- Mahesa Abeynayake

When Malaysia Airlines Flight MH370 disappeared on March 8, 2014, a massive search began in the Gulf of Thailand and the South China Sea. After many false starts and misconstrued information, the search finally ended up in the Southern Indian Ocean. Searchers, mainly led by Australians, were delighted to find pieces of debris that they thought were pieces of the broken aircraft when it crashed into the sea. Imagine their disappointment, and the devastation of the hopeful relatives of passengers, when they examined the items to find that, in fact, they were marine litter as a result of marine dumping. It has been a frequent practice to get rid of unwanted "stuff" from a ship or a boat. Crews on ships or boats do an inspection, see what requires discarding and just throw it overboard. Different from dumping garbage and it is one of the deadly marine sins I have written about in the past. Marine dumping has been going on since mankind took to the oceans.

The section of the sea that search parties were salvaging debris while looking for the missing aircraft is a known central receptacle for things such as empty oil drums, fishing nets, plastic buckets and toilet seats. The area became a garbage dump of the sea as currents just kept rotating floating sea junk in that region.

Discarded rope, medical waste, glass bottles, plastic bottles, cigarette butts, aluminum cans, six-pack rings, and buoys are some of the debris thrown overboard by sailors and seaman without a care in the world. The sight of fish entangles in fishing nets, rope, and six-pack rings, other fish choking after swallowing debris thinking it is food is all too common. With little thought of the damage, they do to the environment mainly to marine life, the “stuff” conveniently dumped overboard.

Unsecured shipping containers which fall overboard in heavy weather is another problem that creates hazards to ships. There is of course contribution from land lubbers who throw rubbish where they please. That rubbish too always end up in the ocean. The international maritime, community particularly The International Maritime Organisation, has acted to minimise the damage. The “Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other matter 1972” has set regulations for the affective control and has been in force since 1975. It is known as the “London Convention.” By classifying waste material into a black and grey lists, it prohibits dumping of items on the blacklist. Appreciating the vastness of the ocean and the difficulty of policing any illegal activity, it is the responsibility of our seafarers to keep the world’s oceans clean. Awareness of regulations and the moral responsibilities to society by protecting the marine environment are some of the valuable lessons learned by the students of Fiji Maritime Academy.

Source: [fjjsun.com.fj](http://fjjsun.com.fj), 01 November 2017





### **Rohingya Crisis: A Potential Maritime Quagmire for India**

-Dinesh yadav

Continued ethnic strife and the State's overtly discriminatory policies in the Rakhine province of Myanmar have resulted in hundreds of thousands of Rohingyas fleeing their homes. As the exodus began in earnest in the late 1970s, the majority of the Rohingyas, escaping prosecution, crossed into Bangladesh through the land route, although a significant number also took the sea route, and fetched up in far off countries like Indonesia, Malaysia, Thailand, and even Australia. Whilst the issue of Rohingya refugees/ illegal immigrants in Bangladesh, Indonesia, Malaysia, Australia have been widely covered by the international media, there has been no mention, even in the Indian media, about the presence of nearly 40,000 of [Rohingyas in India](#), of whom 16,500 have been [formally recognised and registered](#) by the United Nations Refugee Agency (UNHCR). Most of these are believed to have crossed into India through Bangladesh and have now settled even in far off places like Jammu.

The illegal ingress of Rohingyas poses a serious security threat to India, especially in insurgency affected areas. The proximity of Bangladesh, from where these people are channeling into India, with the insurgency-ridden northeastern states and the Red Corridor, further exacerbates India's security challenges.

According to some estimates, more than 10,000 illegal Rohingya immigrants are settled in Jammu, of which around [7,000 are registered](#) with the UNHCR. The settlement of these illegal immigrants, in large numbers in Jammu, is singularly intriguing as it defies the usual immigration norms. The usual determinants of terrain, climate, culture, food, etc., of Jammu should not have matched with the settlement preference for Rohingyas, nor does Jammu provide any preferential economic opportunities. Proximity to the troubled region of Kashmir and the volatile India-Pakistan Line of Control should have, in fact, de-incentivized the Jammu option for these settlers. Also, the far off location chosen is a pointer towards the conclusion that these people might not have any intentions of ever going back, not even as and when the situation improves in Myanmar.

To compound the situation further, there always exists a high potential of displaced and aggrieved youth becoming cannon fodder for extremist and terrorists groups. The most relevant example in this regard would that be of the Taliban, which was born in the [seminaries set up in the refugee camps](#) of Pakistan, as they poured out of Afghanistan in the early eighties, after the Soviet invasion. Pakistan, a proven exporter of terror to India, would not hesitate in fishing in troubled waters and use misguided youth from the Rohingya community in furtherance of its intention to inflict a "thousand cuts" on India. The presence of these potential recruits in Jammu, close to the India-Pakistan Line of Control, therefore, further complicates the security conundrum for India.

According to an assessment made by Indian intelligence agencies, some of the top Rohingya leaders are suspected to have [links with a number of Pakistan-based extremist groups](#) including Hafiz Saeed's Jamaat-ud\_Dawah(JuD) and Masood Azhar's Jaish-e-Mohammed (JeM). In fact, the Myanmar-based extremist Rohingya group, Arakan Rohingya Salvation Army (ARSA), is even believed to have a Pakistani chapter. As per the International Crisis Group (ICG), the extremist group ARSA is led by Ata Ullah, a Karachi born Rohingya and Rohingya fighters are being secretly trained by Afghan and Pakistani extremist groups.

Renewed violence, since 2016, has worsened the conditions in the Rakhine province, resulting in an accentuated exodus of refugees. Bangladesh alone has received more than [300,000 Rohingyas](#) since August 2017, when violence erupted afresh, thus taking the estimated population of displaced Rohingyas in Bangladesh to 600,000 – 800,000. These large numbers of refugees impose huge economic, humanitarian and security strains and Bangladesh might have already reached the limit of its resilience. It will, therefore, become increasingly difficult for Bangladesh to hold such large numbers in its territory, let alone accepting fresh exodus. The consequent probability of some of these Rohingyas crossing over to India through Bangladesh and also directly from Myanmar through the sea route increases manifold.

With a large numbers of Rohingyas already in India and a near certain arrival of many more in the near future, as the situation deteriorates further in Myanmar, India faces a serious security challenge. The potential of their misuse for nefarious activities, including terrorism, also remains high. Amidst the backdrop of these revelations, the Indian government has expressed its intention to identify and deport Rohingyas who have illegally entered India.

It is germane that India is not a signatory to the UN Refugee Convention, which spells out the rights of refugees and the responsibilities of countries. Neither does India have a domestic refugee law. As per the existing rules of the land, the illegal immigrants in India could, therefore, well be deported. However, India has a long history of providing refuge to groups fleeing persecution, although on an ad hoc basis, including Tibetans, Bangladeshis, Sri Lankan Tamils and Afghans in recent history. However, national security implications weigh heavily as the Indian Government takes a stand to deport Rohingyas.

Meanwhile, Naypyidaw, for the first time, has offered to take back Rohingyas who have fled to other countries. Aung San Suu Kyi, in her [state address on September 19, 2017](#) has said that “*Myanmar is prepared to start a refugee verification process for those who wish to return.*” This welcome change in Naypyidaw’s policy on Rohingyas has come about soon after the visit by Prime Minister Modi to Myanmar. During his visit to Myanmar, whilst the criticism of Myanmar was growing, the Indian Prime Minister expressed [India’s solidarity with Myanmar](#) and had also shared India’s concerns over the violence in its Rakhine state.

New Delhi must, therefore, continue to work with Naypyidaw and Dhaka to help stabilize the situation such that the exodus stops and conditions become conducive for the return of these migrants to their home country. Although the statement from Aung San Suu Kyi is a welcome change, the identification and deportation of Rohingyas back to Myanmar would still remain a challenging task for the concerned Indian agencies.

Also, with increased chances of India emerging as one of the preferred location for displaced Rohingyas, it is quite likely that these people might take the sea route for transit from Myanmar/ Bangladesh to India. With Bangladesh and Myanmar hardening their stance on not allowing the influx through the land borders, the ingress through land would become increasingly difficult and consequently, the sea route becomes the obvious alternative. Rohingyas are no strangers to the seas, and have travelled by boats to distant places such as Malaysia, Singapore, Indonesia and Australia. The east coast of India is hardly a long distance from Myanmar/ Bangladesh for these intrepid seafarers!

Such a development would pose a severe challenge to the maritime security organisation of India off the East Coast. While the maritime security apparatus on the country’s western seaboard has been regularly tested, largely due to regular misadventures by our western neighbor, the eastern seaboard remains relatively

uninitiated to this kind of security threat. All maritime security agencies on the East Coast of India must, therefore, gear up for this challenge, lest we should be taken by surprise by ‘Boat People’ landing up on our eastern shores.

Source: [www.maritimeindia.org](http://www.maritimeindia.org), 18 october 2017

### **Duterte’s Foreign Policy Shift: Bandwagoning with China?**

- Jyotishman Bhagawati

The election of Rodrigo Duterte as the President of the Philippines in June 2016 led to a remarkable shift in the foreign policy of the archipelagic state. Unlike the previous administration of Benigno Aquino III, which was somewhat confrontational with China on several fronts, including dragging Beijing to the Permanent Court of Arbitration (PCA) over the maritime disputes in the South China Sea (SCS), Duterte downplayed the friction and adopted a more conciliatory stance towards China. Shortly after his election victory, Duterte announced that his foreign policy “will not be dependent on the United States”. He also embarked on a state visit to China in October 2016 (his first outside the Association of South East Asian Nations countries) where he announced his “separation” from the U.S. in favour of a new association with China and Russia. Incidentally, this policy pivot also comes a year after the arbitral tribunal invalidated China’s claims in the South China Sea and censured it for violating the Philippines’ sovereign rights in the region. This reflects the unpredictable nature of geopolitical shifts in the Indo-Pacific, which has recently witnessed traditional U.S. allies like Thailand and the Philippines moving into closer relationship with China.

In view of the increasing geopolitical competition at play between China and the U.S. over dominance in the Indo-Pacific region especially over the South China Sea, this paper attempts to evaluate how Beijing has been successful in bringing the Philippines to its fold and whether the Philippines under Rodrigo Duterte is ‘bandwagoning’ with China. It also analyses the declining U.S. influence in the Philippines and attempts to examine the implication of Duterte’s strategy for India and the wider Indo-Pacific region.

### *Conceptual Framework*

Several scholars like Amitav Acharya and Peter Katzenstein are inclined to believe that Western theoretical frameworks do not adequately explain the full range of ideas, norms and attributes associated with intra-Asian relationships. A prominent voice among this group is of David Kang, who points out that Eurocentric ideas, concepts and theories have created wrong predictions and conclusions about Asia. He, therefore, highlights the need for new analytical frameworks to study Asia. According to him, Asian states behave differently than the West because of their different historical and cultural traditions and dissimilar geographical and political realities. Kang argues that containment of China does not have a strong appeal in the region as most Asian states generally have a penchant for 'hierarchy' as opposed to 'equality'. He criticizes not just Realism but Western International Relations theory in general for "getting Asia wrong" and argues that instead of balancing against China, they are bandwagoning with it.

### *Duterte's Approach to China*

Whether Kang's conceptual framework can fit into Manila's recent bonhomie towards Beijing can only be gauged from an understanding of Duterte's broader policy priorities since coming to power. It is noteworthy that even though Duterte assumed office just before the PCA verdict in July 2016, he continued to downplay the disputes in the South China Sea and moved towards rapprochement with Beijing. During his first visit to China, Duterte declared his intention to have an "independent" foreign policy, to reduce U.S. influence over the Philippines. As part of his poll promise, he is also seeking foreign aid and investments in order to drive growth and create more employment opportunities. Furthermore, Duterte is facing pressing domestic challenges including a violent campaign against illicit drug trade, which has already claimed around 3,000-7,000 lives and the ongoing conflict in Marawi City, where the government is currently battling a homegrown pro-Islamic State, Maute group. The ensuing violence has also led to the killing of over 300 people, besides displacing tens of thousands of Marawi residents. Duterte has also been unsuccessful so far in negotiating a peace treaty with another significant armed group, the Moro Islamic Liberation Front (MILF). Simultaneously, his administration is also negotiating for peace with the National Democratic Front-Communist Party of the Philippines-New People's Army (NDF-CPP-NPA); although, even after repeated setbacks, prospect of a final settlement of the five decade old conflict still looks dim. He has attached more importance to confronting illegal drug trade and militancy in Marawi City on the island

of Mindanao, his home island. Duterte has further promised to the progression of infrastructure projects held up under the previous administration, and is also planning to build a large infrastructure system in Mindanao.

Towards these domestic policy priorities, Duterte has been able to receive substantial financial, military and diplomatic support from China. Beijing has consistently supported Duterte's campaign against drugs and his confrontation against the Islamist militants in the south; for which, it has been willing to provide large-scale assistance in counter terror and domestic security operations. Besides offering the Philippines about US\$ 12 million in weapons and ammunitions for counter-terror operations, Beijing has also made available a loan of US\$ 500 million for its military to counter its historically close ties with Washington, D.C., and increase China's own ability to shape the Philippines' defence and foreign policies. Duterte has also been able to garner investments and financing agreements worth US\$ 24 billion (of which US\$15 billion comprised investment projects and US\$ 9 billion credit facilities) during his first three day visit to China. Moreover, recently, China has also began allowing Filipino fishermen to resume fishing activities around the Scarborough Shoal under a tentative fishing agreement which is now being hailed by Duterte's administration as "fruits" of his "strategy". However, the Scarborough Shoal is still under the administrative control of the Chinese Coast Guard, and the Filipino fishermen have only been allowed to operate in the immediate vicinity of the Shoal. They have not been allowed to enter the lagoon within the shoal, which is not only rich in fisheries but also serves as a crucial rest, repair and recuperation spot for fishermen, especially during inclement weather.

Another positive development in the region has been China's agreement to sign a "Code of Conduct for the South China Sea" with the Association of Southeast Asian Nations (ASEAN). Although not a legally binding agreement, it is still taken as a "positive momentum" for a "steady progress toward a substantive Code of Conduct". Also, in contrast to its past attempts to diplomatically isolate the Philippines, China is now wooing the Philippines to partner in its Asian Infrastructure Investment Bank (AIIB) and the "Belt and Road" initiative. Hostilities between the two states have also reduced considerably despite China's unabated island construction activities in the region.

### *Analyzing Duterte's Anti-U.S. Stance*

In contrast to China's strong backing of Duterte's policies, the U.S. has not been able to offer similar support and assistance to the Philippines. On the contrary, the Obama administration was harshly critical of Duterte's anti-drug campaign over concerns regarding gross human rights violations and extrajudicial killings allegedly committed by the Duterte administration. In light of these concerns, the U.S. State Department halted a planned sale of 26,000 assault rifles to the Philippines national police. Washington had also deferred an aid package to Manila worth up to US\$ 434 million in December 2015.

The U.S. was very supportive when the Philippines approached the PCA on the SCS issue against China. Surprisingly, however, it took a comparatively subdued position on the PCA verdict by calling for calm and patience in the region rather than declaring its resolute support to the Philippines, with which it has a "Mutual Defence Treaty" since 1951. This was in contrast to states like Japan and Australia, which despite having no defence obligations to the Philippines, categorically called for compliance by all parties to the dispute over the ruling.

Thus, the repeated Western criticism over human rights in the Philippines, the U.S.' restrained stance with regard to the arbitration verdict, the increasing need for aid and investments to sustain higher growth and investor confidence in the Philippines as well as Duterte's own predicament to pursue an independent foreign policy steered him to maintain distance from the U.S., and opt for rapprochement with China. As part of this policy shift, Duterte also reversed from the Filipino leaders' diplomatic tradition of undertaking their first major foreign trip to Washington. Much to the chagrin of the U.S., he has not only visited China twice in his capacity as the Filipino President but has also become the first President to undertake a state visit to Russia, while deliberately snubbing major Western capitals including Washington, D.C. Even when President Donald Trump invited him to the White House in April 2017, Duterte refused to give any positive response, saying he "cannot make any definite promise".

### *Philippines-U.S.: Continued Engagement*

Of late, relations between the U.S. and the Philippines have shown signs of improvement. Both of them have been conducting joint patrols, more recently in the Sulu Sea amid rising concerns about Islamist militancy and piracy in the region. The high profile exercise involved the American Littoral Combat Ship *USS Coronado* and

the flagship warship of the Philippines Navy, the *Del Pilar* Class Frigate *BRP Ramon Alcaarez*. The U.S. have also been providing technical assistance to the Philippines military in the battle against the pro-Islamic militants. However, when asked about the U.S. support to the Philippines, Duterte said he had “never approached America” for assistance and was “not aware of that until they arrived”.

Nevertheless, despite all the rhetoric about “separation” of ties with the U.S., security relations between the U.S. and the Philippines is likely to remain strong since territorial and maritime disputes with China continue to persist especially over growing assertiveness by the Chinese Navy. Duterte is also facing heavy criticisms from several quarters at home. Apart from the military which has been historically close to Washington, D.C. and deeply suspicious of Chinese activities in the region, Duterte’s approach to China has also been criticised as lacking “discernible direction, coherence or vision” by Antonio Carpio, the Philippine Supreme Court Justice who played an advisory role in the arbitration award. Nevertheless, Duterte has shown proclivity to his domestic concerns while downplaying the disputes with China.

### *Deduction*

Although known for his temperamental attitude and use of unparliamentary language, Duterte has been successful in receiving defence assistance from both the U.S. and China. Similarly, through pragmatic diplomatic flexibility, Duterte is also enhancing diplomatic ties with Japan and Russia. Besides, military-to-military contact and coast guard talks with China have also resumed in order to enhance confidence-building and reduce risk of miscalculation. This clearly indicates that rather than bandwagoning with China, Duterte has adopted a multi-vectored approach in dealing with both the U.S. and China in the region. This is also reflected in the fact that Duterte has improved relations with not only China and Russia but also U.S. allies in the region like Japan, which shows his emphasis to have balanced relations with the major powers of the region.

### *Conclusion*

To conclude, Duterte’s policy change towards China can best be described as a tactical maneuver rather than a strategic realignment of foreign and security policies. Therefore, this may not affect India’s immediate interests in the region. However, Delhi should have a long term perspective on the region taking into account the changing facts on the ground marked by the growing presence of the Chinese Navy and



the implications that it can have over India's external relations and trade in the region. India must also remain actively engaged with like-minded regional states like Japan, Vietnam and Australia especially in view of the prevailing uncertainties in the region, particularly after the election of Donald Trump as the U.S. President.

Source: [www.maritimeindia.org](http://www.maritimeindia.org), 23 October 2017

### **Tillerson Positive About India, Critical of China**

U.S. Secretary of State Rex Tillerson spoke on “Defining Our Relationship with India for the Next Century” at the Center for Strategic and International Studies on Wednesday highlighting that this year marks the 70th anniversary of relations between the two nations. He spoke of the positive relationship between the nation's two leaders. “President Trump and Prime Minister Modi are committed, more than any other leaders before them, to building an ambitious partnership that benefits not only our two great democracies but other sovereign nations working toward greater peace and stability. Prime Minister Modi's visit in June highlighted the many areas of cooperation that are already underway in this new area of our strategic relationship. Our defense ties are growing. We are coordinating our counter-terrorism efforts more than ever before. And earlier this month, a shipment of American crude oil arrived in India, a tangible illustration of our expanding energy cooperation.”

The Trump administration is determined to deepen its partnership with the world's largest democracy, he said. “The driving force of our close relationship rests in the ties between our peoples, our citizens, business leaders and our scientists. Nearly 1.2 million American visitors traveled to India last year. More than 166,000 Indian students are studying in the United States. And nearly four million Indian-Americans call the United States home, contributing to their communities as doctors, engineers and innovators, and proudly serving their country in uniform.”

Tillerson was critical of China: “The very international order that has benefited India's rise, and that of many others, is increasingly under strain. China, while rising alongside India, has done so less responsibly, at times undermining the international rules-based order, even as countries like India operate within a framework that protects other nation's sovereignty. China's provocative actions in the South China Sea directly challenge the international law and norms that the United States and India

both stand for. The United States seeks constructive relations with China, but we will not shrink from China's challenges to the rules-based order and where China subverts the sovereignty of neighboring countries and disadvantages the U.S. and our friends."

In discussing military security, he said: "For prosperity to take hold in the Indo-Pacific, security and stability are required.... The fact that the Indian Navy was the first overseas user of the P-8 maritime surveillance aircraft, which it effectively fields with the U.S. Navy counterparts, speaks volumes of our shared maritime interests and our need to enhance interoperability. "The proposals the United States has put forward, including for Guardian UAVs, aircraft carrier technologies, the future vertical lift program, and F-18 and F-16 fighter aircraft, are all potential gamechangers for our commercial and defense cooperation. The United States military's record for speed, technology and transparency speaks for itself, as does our commitment to Indian sovereignty and security. Security issues that concern India are concerns of the United States. Secretary Mattis has said the world's two greatest democracies should have the two greatest militaries. I couldn't agree more."

Source: [maritime-executive.com](http://maritime-executive.com), 18 october 2017

### **India should make its own decisions on ties with Iran: US**

WASHINGTON: India should make its own decisions on the relationship with Iran based on its interests, a top US official has said, days after President Donald Trump condemned Tehran as a "fanatical regime" and threatened to terminate the landmark nuclear deal.

At the same time, the countries should take a hard look at their business partners in Iran, the senior Trump administration official said when asked about India developing the strategically located Chabahar port in Iran, which will give it access to Afghanistan and then to Central Asia. "India should make its own decisions based on how it sees its interests," the official told PTI. An agreements on the Chabahar port was inked by India and Iran in May 2016 after detailed discussions between Prime Minister Narendra Modi and Iranian President Hassan Rouhani. As per the pact, India is to equip and operate two berths in Chabahar Port Phase-I with capital investment of USD 85.21 million and annual revenue expenditure of USD 22.95 million on a 10-year lease. Ownership of equipment will be transferred to Iranian side on completion of the 10-

year period or for an extended period, based on mutual agreement. "What we're asking is for all countries to take a very hard look at who you're doing business with in Iran and to understand who are the beneficial owners of these companies," the US official said, warning against the business deals with Iran's Islamic Revolutionary Guard Corps-controlled companies. The countries also need to have a look at what is the relationship of these companies with the groups which have contributed to the scourge of terrorism, the official said, referring to the IRGC. Earlier this month, the US slapped sanctions on the IRGC for its alleged support to various terrorist organisations. Countries doing business with Iran also need to ensure that their economic relationships with Iran do not lead to the strengthening of the IRGC in particular and their ability to do so much harm to so many people, the official added. Talks between India and the US in this regard if any are happening through normal channels all the time, the senior administration official said. Trump's Ambassadorial nominee to India Ken Juster, who is awaiting the Senate confirmation process, is "going to just really be a fine representative" who understands the importance that the president places on the US-India ties. And he "is going to do everything he can to advance that relationship to a new level," the official said. Officials from the national security establishment from both the country are in regular contact and discuss a wide range of issues, the official added.

This includes, maintaining the non-proliferation regime and the severe danger of weapons of mass destruction and how to "ensure a higher degree of confidence that those" most destructive weapons will never be used. Among other things they also talk about the transnational terrorist threat and how to work together to combat and defeat these enemies of all civilised peoples, the official added. "We also talk about geopolitics broadly and geostrategic concerns to ensure that revisionist powers don't advance their interests at the expense of other countries and that we can ensure that all countries have a free and open access to markets," the official said. "We talk often in geostrategic terms about the importance of a free and open Indo-Pacific region that allows all countries especially those that are like minded in terms of free and open markets and democratic systems...That all countries in the region enjoy the kind of security and prosperity that they deserve," the official said.

Source: [economictimes.indiatimes.com](http://economictimes.indiatimes.com), 21 October 2017

## **China Takes An Expansionist View Of Geopolitics**

- Zhixing Zhang

Former U.S. national security adviser Zbigniew Brzezinski managed to capture thousands of years of Chinese history in about 10 words. In his seminal work, *The Grand Chessboard*, Brzezinski characterized China's geopolitics through the ages as "cycles of reunifications and expansions, followed by decay and fragmentations." The assessment gets at the heart of the the country's recurring struggle to unify an insurmountably vast landmass under a centralized authority -- a struggle that continues to this day. Nearly 70 years after its most recent unification, following more than two centuries of decay and five decades of fragmentation, China is now on the verge of another period of expansion. And as its influence on the global stage increases, China will have to adapt to a new view of geopolitics.

### *The Middle Kingdom: A World Unto Itself*

Compared with its counterparts in the West, China historically has taken a narrower view of geopolitics, one that reached scarcely farther than its borders. Part of the reason for its Sinocentric perspective is the country's sheer geographic scale and diversity. China's borders encompass a territory as immense and varied as that of the entire European continent. Though for the most part it has held together as a cohesive nation, the country is a collection of states, each with its own ethnic, cultural and economic characteristics. And whereas the sweeping European Plain is large enough to accommodate the Continent's many competing powers, China's heartland, making up less than one-third of its total area, doesn't lend itself to coexistence.

The strongest of China's rival forces periodically rose from the chaos to bring the country under centralized rule. Each successive dynasty, be it Han, Mongol or Manchu, followed a well-worn path to power, with few exceptions. Up until the 10th century, political power was concentrated largely in the Guanzhong Plain in northwestern China (and sometimes around the Central Plain), as were the wars and conquests aimed at expanding the central leadership's authority. The power eventually drifted eastward as the North China Plain took on increased economic and cultural importance, linking up with the fertile Yangtze Plain. As the empire pushed its frontiers farther to the north and east, the North Plain's prominence grew. The Yangtze Plain, by contrast, produced dynasties that quickly succumbed either to their own weaknesses, as the Southern Song did in the 12th and 13th centuries, or to their

northern competitors, as the short-lived Nationalist government did in the 20th century. And no matter how the power shifted across China's sprawling territory, the same process -- competition for the Central Plain, or Zhongyuan -- underlay each dynastic transition. The country's various factions understood that control of the heartland would give them control of the entire territory. This principle was laid out later by British geopolitical theorist Halford Mackinder in his "Heartland Theory." As Mackinder might have put it, "Who rules the Central Plain commands the heartland; who rules the heartland commands the Middle Kingdom." The Sinocentric thinkers behind China's geopolitical strategy, however, would take the theory a step further: Who rules the Middle Kingdom commands the world.

This idea guided the country through centuries of unification, expansion, fragmentation and decay, prescribing a distinct approach for managing each stage in the cycle. At times of dynastic decay and rebellion, for instance, military strategy and defense were the answer for aspiring leaders trying to secure the "mandate of heaven." A different set of rituals and rules, interregional links such as the Grand Canal and military forays into the surrounding area helped a dynasty maintain the mandate it had worked so hard to attain. At the same time, subsidiary tiers of government extended the rulers' authority from the heartland to the rest of the Middle Kingdom and beyond. Using a tributary system of appointed officials and, in rare cases, military installations, China's leaders managed to radiate their power from Central Asia to the Korean Peninsula and Indochina, reaffirming their control of the heartland, the kingdom and the world as they saw it.

### *Facing the Sea*

By the 17th century, though, the dawn of the maritime era would shatter China's illusions of the cloistered domain at its command. Maritime intruders began arriving on the country's shores, where the Manchu rulers of the Qing dynasty, China's last imperial dynasty, eventually met them. Though the Manchu boasted what Mackinder called the "superior mobility of horsemen and camelmén," their strategy to repel invasion was no different from that of the ethnic Han rulers that preceded them. Where the Han Ming dynasty built the Great Wall to defend their rule against the Manchus, the Qing Empire erected fortresses along the coastline to keep the intruders at bay. China had yet to develop its naval assets, and its geopolitical theory wouldn't evolve to account for maritime power for three centuries. Even then, the theory gained little attention in the country until Japan used it against China to win the first Sino-Japanese War in 1894-95. The defeat marked the start of another period of

fragmentation in the Middle Kingdom -- and the end of the Sinocentric strategy. It took the so-called century of humiliation for China to realize that its limited worldview was no longer viable. Of course, the broader geopolitical strategy that prevailed in the West didn't serve the European powers much better. After struggling for control of the Eurasian landmass -- what Mackinder dubbed the "World Island" -- they emerged from two world wars and countless smaller conflicts only to find that the center of global power had shifted across the Atlantic Ocean. The difference is that while Europe had lost some of its clout in world affairs, China, preoccupied as it was with its own problems, was all but irrelevant -- at least to many classical geopolitical thinkers of the time. When maritime and land-based power were the rule of the day, the combination of a disjointed territory on the edge of the Eurasian landmass and a hemmed-in coastline seemed to doom China to exist on the margins of the global order.

Source: [www.forbes.com/](http://www.forbes.com/), 31 october 2017

### **What the return of quadrilateral says about India and emerging Asian Geopolitics**

- C. Raja Mohan

Some ideas are not easily killed. The proposal for quadrilateral cooperation among India, Japan, Australia and the United States may be one of those. The concept is inextricably linked to China's emergence as a great power, second only to the United States. The fear of China's growing unilateralism drives Asian nations to reduce the regional imbalance by banding together. But the attractions of doing business with China and the dangers of provoking it limit the impulses for collective action against Beijing. The proposition that Asian democracies and the United States should get together to balance China had a brief moment in the sun during 2007. Killed in 2008 by Australia, the proposal began to breathe again in the last few years. It has gained some real traction last week. India, which was reluctant to revive the quad until recently, now seems ready for a discussion of the terms and conditions for its participation.

Just a couple of days after Prime Minister Shinzo Abe won a sweeping mandate in Sunday's snap general elections, Japanese Foreign Minister Taro Kano told the Nikkei Asian Review that he planned to present to US President Donald Trump a formal

proposal for a high-level dialogue among the four nations. Japan would like to see substantive cooperation among them on defence cooperation, maritime security, and infrastructure development. Senior officials of the four countries could meet next month on the margins of the East Asia Summit in the Philippines. Kano added that Tokyo also wants London and Paris to eventually join this effort.

It was Abe who conceived the idea of Asian democracies joining forces. In a book published in 2006 just before he began his first tenure as Prime Minister, Abe called for a quadrilateral dialogue among Japan, India, Australia and the United States. At the end of 2006, during his visit to Tokyo, Prime Minister Manmohan Singh endorsed the idea of a new dialogue among “like-minded countries” in Asia. An exploratory meeting of officials of the four countries took place on the margins of an Asian summit at the end of May 2007. If Abe was making bold to look beyond the sole focus on the alliance with the United States, New Delhi too was shedding hesitations justified under the name of non-alignment.

In an address to the Indian Parliament in August 2007, Abe fleshed out the idea. Emphasising the shared values of freedom and democracy between India and Japan, he called for a joint effort by New Delhi and Tokyo for the formation of an “arc of freedom and prosperity... along the outer rim of the Eurasian continent”. Abe hoped that an India-Japan strategic partnership will help construct a “broader Asia” that could evolve into an “immense network spanning the entirety of the Pacific Ocean, incorporating the United States of America and Australia. Open and transparent, this network will allow people, goods, capital, and knowledge to flow freely”.

The idea seemed to gain some real world significance with the annual Malabar exercises between India and the United States in September 2007, just days after Abe’s address. The exercise saw ships from Japan, Australia and Singapore join the Indian and American navies. Although the exercise was not planned as proof of the quad concept, Beijing went ballistic — attacking it as the first step towards the formation of an “Asian NATO”. As China objected, the UPA government began to wobble. The then Defence Minister A K Antony ticked off the Chief of the Naval Staff, and ruled out future multilateral naval exercises amidst a chorus of protests from the communist parties. But it was Australia that delivered the blow against the quad. In early 2008, the Australian Foreign Minister Stephen Smith, standing next to his Chinese counterpart Yang Jiechi, announced that Canberra was no longer interested in the quadrilateral dialogue. The quad certainly looked dead, but it was not buried. As China began to assert itself after the global financial crisis of 2008, the Obama

Administration moved the United States away from the idea of shared leadership with China (the notorious G-2) towards a balancing strategy. In 2011, the US announced the idea of a pivot to Asia that involved the revitalisation of America's Asian alliances and strengthening partnerships with key Asian countries like India and Indonesia.

In Japan, Abe returned to power at the end of 2012 and began an effort to revive the quad. New Delhi, however, seemed reluctant. Having seen the quad disintegrate quickly, New Delhi was content with expanding its trilateral engagement with the US and Japan at one forum, and with Australia and Japan at another. The NDA government discarded the UPA's defensiveness on multilateral naval exercises — but while it was ready to include Japan in the Malabar exercises, it has not been too eager to bring in Australia, despite repeated requests from Canberra.

In response to the Japanese proposal to revive the quad, New Delhi has signalled a little more flexibility. In a statement on Friday, the spokesman of the foreign office said "India is open to working with likeminded countries on issues that advance our interests and promote our viewpoint." The key question, according to the spokesman, is over what the quad does, and how.

India's issue with the quad, therefore, is no longer about the principle. It is about the purpose and process. The UPA government suggested not participating in the quad was some kind of moralpolitik that was vaguely conflated with the tradition of non-alignment. The Narendra Modi government is no longer defensive. It is saying that New Delhi will sit down with anybody in any kind of forum if that serves India's national interest. At the receiving end of Chinese power, Japan thinks it must proactively shape Asian regional environment. As foreign minister Kano put it, "We are in an era when Japan has to exert itself diplomatically by drawing a big strategic picture." As a rising power in its own right, New Delhi argues, India must demonstrate the will to influence geopolitical outcomes in Asia and beyond. There is no doubt that the construction of quad will face many challenges, given the deep divisions in all countries on how best to deal with China. There will be differences on setting priorities and allocating resources. Yet, India's incipient engagement with Japan, America and Australia on the quad agenda suggests that the era when a diffident New Delhi hid behind ideological slogans is now behind us. India is now confident enough to embark on complex geopolitical jousting in Asia.

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## **China, US will have some practical cooperation on OBOR: Envoy**

Ahead of President Donald Trump's visit to Beijing next month, China's envoy here has welcomed America's participation in the One Belt One Road (OBOR) initiative, saying the two countries can have some practical cooperation on the project. The Belt and Road Initiative (BRI) is a demand of the world's development, and it should follow the principle of achieving shared growth through discussion and collaboration, Chinese Ambassador to the US Cui Tiankai told reporters here. The BRI is a development strategy proposed by China's President Xi Jinping to improve connectivity and cooperation between Eurasian countries. "This initiative is not limited by the geographical region, it is open to the world, so we welcome the US to join us. Lots of political experts and entrepreneurs are very interested in it. We already have had some discussion," he said. "I hope we can deepen these communication, and China and US will have some practical cooperation with the Belt and Road Initiative," Cui said in response to a question amidst reports that Japan, India and the US are working on initiatives that would provide alternative financing to countries seeking investment. Cui said there should be no "strategic competition" between China and the US. The two countries should find a way to co-exist based on a win-win cooperation, he said. "I think the so-called "China model," the meaning of China model, shows to the world that the development of a country does not need to follow a specific pattern. Each country should find a development path that suits its own national conditions. Every country should have a custom development model and this is the core meaning of China model. It shows possibility to the world," he said. Noting that in Chinese there is an expression: "harmony but not uniformity," he said "to achieve a harmonious world which is set up on the basis that fully reflects diversity, if China did it, that is to show all other countries of the world that they can follow this way as well". "In English, there is a term called "all roads lead to Rome", and every country can go its own way. China has taken the path of socialism with Chinese characteristics for so many years. It was quite a success so far," Cui said adding that he believes that that is an inspiration to many nations.

Cui said Trump's first visit to China will be a historic moment. Trump would be the first head of state to visit China after the recently concluded 19th Communist Party of China Congress, which laid the blueprint for China's development in next few decades. This conference confirmed that China will stick to the path of peaceful development and the win-win strategy of opening-up, as well as seek the common interests and strengthen the cooperation with powerful countries, he said. "Such a situation will ensure a successful visit. I hope, and I believe that this meeting between the two

leaders will give a clear direction and strategy on the development of the two nations. If an agreement can be reached in the highest strategic dialogue between the US and China, which is primarily favourable for two countries and international society," he said. "I hope, China and the US, as permanent members of UN Security Council, as the first and the second largest economies, can take the obligations and play a role in cooperating in the international community, facing the global challenges, and strengthening the global governance. We also hope that this can be one of the achievements of Trump's visit," Cui said. Trump will travel to Japan, South Korea, China, Vietnam and the Philippines from November 3-14. It will be Trump's first visit to the region as president.

Source: [economictimes.indiatimes.com](http://economictimes.indiatimes.com), 31 October 2017