



MAKING WAVES

Fortnightly E-News Brief of National Maritime Foundation

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People-Smugglers Draw From Large Pool of Merchant Shipping Workhorses

- Ben Quinn

The 'ghost ship' Ezadeen is a former livestock carrier that has had many names since it first started operating in 1966. The so-called ghost ship carrying at least 450 migrants which was towed into an Italian port by coastguards on 27th December after people-smugglers abandoned it off Europe's south coast was drawn from the large supply of often rusting hulks that have acted as workhorses in the merchant shipping industry over recent decades.

Records of the Ezadeen's movements show that it left Tartus, Syria's second largest port, in October before sailing north towards the southern coast of Turkey and looping back towards northern Cyprus. After leaving Famagusta, in northern Cyprus, on 19 December, it returned to the Turkish coast and repeatedly changed direction as if in a holding pattern between Cyprus and Turkey.

According to co-ordinates recorded by Vessel Finder, which provides software that tracks vessels using AIS (Automatic Identification System) signals, the Ezadeen then embarked on a fairly steady route over the last week and a half, skirting Turkey's southern Mediterranean coast, passing north of Crete and then along the west coast of Greece. It is not clear at what point the bulk of the migrants were taken on board.

The Ezadeen is a former livestock carrier that has gone through at least seven changes of name since it first started operating as a cargo ship in 1966. Its most recent owner – officially at least – appears to have been a merchant marine company based in Lebanon, but somewhere along the way it seems people-smugglers took control of it.

Made in Germany, the 1,474-tonne vessel has been flying under the flag of Sierra Leone for the past four years and was previously under that of Syria. A sample of its docking history over the past year also reflects the disparate jurisdictions that such ships pass through. In March last year it was in the Romanian port of Midia, before

later visiting Beirut, Dubai, Beirut again, Aden and the Egyptian ports of Suez and Port Said.

A previous “ghost ship”, the Blue Sky M, which was abandoned and believed to have been left on autopilot by people-smugglers, was carrying 970 people when it was intercepted this week. It is listed as a general cargo ship, sailing under a Moldovan flag. The BBC reported that the safety manager of a company hired to provide safety certification for the vessel said he had withdrawn its certificate several months ago after finding it unsafe.

A report by the International Maritime Organisation in 2011 estimated that around the world there were 100,000 sea-going merchant ships with at least a 100 gross tonnage. The average age was 22 years and they were registered across more than 150 countries.

Source: [Guardian](#), 2 Jan 2015

What Critics of the Navy’s Strategy Get Wrong

- Barney Rubel

A series of articles, blog posts, and open letters have bemoaned the lack of a coherent American maritime strategy. Much of this criticism was generated by the difficult gestation of a follow-on document to the 2007 “A Cooperative Strategy for 21st Century Sea power,” commonly referred to as CS21. Some critics of CS21 have pointed to its lack of any mention of resources, while others have argued that it appears to be too focused on peacetime functions at the expense of warfighting. Chief of Naval Operations Admiral Jonathan Greenert called for a “refresh” to CS21 not many months after taking office (Sept. 2011), but as yet, the Navy Staff has been unable to produce one. CS21 is over seven years old, predating much of the recent rise of China’s People’s Liberation Army Navy (PLAN) and the current budget crunch. This has provided ammunition for those who accuse the Navy of being unable to devise strategy. One of the critics is Congressman Randy Forbes of Virginia. Rep. Forbes has been an ardent advocate for the sea services. This writer

attended a U.S. Naval Institute conference last winter in Washington where Forbes and other attending legislators evinced a clear understanding of what America's maritime strategy really is and has been since the start of the Cold War. Simply stated, the United States has encircled Eurasia with forward deployed sea power in order to deter aggression, encourage allies and friends, provide military options during crises and generally support America's role as prime guarantor of global economic system security.

The Navy, as well as all the other Services, have operated within the context of that overall maritime strategy. Any so-called "strategies" that have been published by the Navy and the other Services have been pleading documents or served some other purpose. CS21 is of this ilk. It had a single primary purpose: to cultivate broad international cooperation on maritime security, and in that respect it was successful. By depicting the United States on the strategic defensive ("As our security and prosperity are inextricably linked with those of others, U.S. maritime forces will be deployed to protect and sustain the peaceful global system comprised of interdependent networks of trade, finance, information, law, people and governance.") the document counteracted widespread distrust of U.S. motives in the wake of the Iraq invasion. As a number of foreign chiefs of navy told this writer (who designed and led the Naval War College research project that produced the concepts behind CS21), "Your strategy gave us the political top cover we needed with our government to allow us to move out and engage."

The unstated corporate strategy behind CS21, if only dimly perceived and understood even by those of us crafting it, was to avoid the need for a "home fleet" to protect the U.S. homeland from terrorist smuggling by creating effective international information sharing. Few seem to remember the pressure that was building on the Navy in the wake of the 9/11 attacks to keep forces in home waters. The success of the 2007 document in generating international cooperation gave the Navy preemptive top cover with Congress and the White House in case an al Qaeda attack mounted from the sea did materialize. It could demonstrate a legitimate response to the need for homeland maritime security, and thus allow the Navy to keep sending its forces forward.

The challenge the Navy faces today is how to keep executing the actual maritime strategy with a steadily shrinking force. Whatever technical and operational fixes the Navy comes up with, like the current Optimized Fleet Response Plan, what is needed is a corporate strategy for catalyzing Congressional investment in shipbuilding and readiness. In a time of U.S. preeminence, rather low global threat levels and severe budget deficits, this is a tough challenge to say the least. As I understand it, the new draft “strategy” will attempt to make the case for the strategic importance of forward presence. I applaud this approach, but the fact remains that the document will not be an actual strategy. Rather, it will be a document that supports a Navy strategy of focusing on Congress, which may be the best one to pursue at this time.

The actual U.S. maritime strategy will chug on, with the Navy straining to meet the demands of the individual combatant commands by deferring maintenance and extending deployments, despite brave words from Deputy Secretary of Defense Bob Work, who says we will be going to a supply-side rather than a demand-side naval deployment model. But that threatens to undercut the actual maritime strategy. That strategy will come apart in one of two ways: either a presidential decision to bring forces home or the creeping inability of the Navy to generate sufficient forces to execute the strategy.

In my view, all the hand wringing about the lack of strategy and strategists is overwrought and misdirected, despite the difficult gestation of a follow-on document to CS21. The Navy has actually produced some useful documents since 1980. The vaunted 1980s Maritime Strategy was more accurately a contingent warfighting doctrine, and its reputed effects on the Soviet Union are contestable. However, it did accomplish then-CNO Admiral Thomas Hayward’s goal of busting the Navy out of the defensive mindset it had fallen into after Vietnam (focusing on defense of the “GIUK” — Greenland, Iceland, United Kingdom — Gap) and start thinking offensively. After the fall of the USSR, the “...From the Sea” series of white papers established Navy joint bona fides and prepared it for its incredible performance in the opening moves of Operation Enduring Freedom. The beneficial effects of the 2007 strategy have been previously mentioned. This seems like a pretty good track record.

As Dr. Phil would say, it's time to get real. The Navy's job, like that of the Marine Corps, is to provide ready and capable forces to the joint commanders. It isn't that there is no room for the Services to engage in strategy development; it's just that history shows that when such attempts have been made, their beneficial effects have been focused on the Services' Title X functions more than actual national strategy. The 2007 strategy jumped that fence a little bit; but again, its net effect was to give the Navy political breathing room to execute the actual national maritime strategy. A new Navy "strategy" document oriented on convincing Congress to fund adequate force levels is probably the right thing to do at this juncture, but there will no doubt be plenty of criticism from pundits who will contend that it falls short of being a comprehensive strategy. The new document may succeed (I fervently hope) or it may fail. But either way, it won't be — and can't be — an actual strategy.

Source: [War on the Rocks](#), 6 Jan 2015

The Indian Ocean in 2015 – Analysis

- Vijay Sakhuja

What could be the trend lines for 2015 in the Indian Ocean? A quick survey of events, incidents and trends in the Indian Ocean during 2014 suggests that the region witnessed cooperation, competition and inclusiveness among the littoral states.

Three baskets could be identified: geopolitical, geostrategic and geo-economic, to help forecast trends in 2015. However, a caveat is in order i.e. these baskets can spring a number of surprises, given that 'prediction is a risky business'.

IORA: Moving from Australia to Indonesia

In the geopolitical domain, the region remained peaceful and pan-Indian Ocean multilateral organizations such as the Indian Ocean Rim Association (IORA) and Indian Ocean Naval Symposium (IONS) were proactive and provided the platform and leadership to address issues of common interest among the partner states. The

Perth Communiqué released in September 2014 reinforced the Association's commitment to 'building a more stable, secure and prosperous Indian Ocean region' and promote the IORA's six priority areas of cooperation. The regional navies met under the IONS banner and addressed a number of common security issues confronting the region.

Later in 2015, the IORA baton will pass from Australia to Indonesia who would continue to carry the great work done by the earlier Chair – India. The new government in Jakarta led by President Joko Widodo has endorsed the importance of maritime matters through the establishment of a new Coordinating Ministry for Maritime Affairs and announced the doctrine of 'global maritime axis' (*poros maritim dunia*). In addition, South Africa, the next Vice Chair of IORA, will prepare to take the leadership role in 2017. These provide 'continuity and purpose' to the IORA.

China and the Maritime Silk Road: Increasing footprints in the Indian Ocean

China would continue to make attractive offers to Indian Ocean states and seek support for the MSR. Its forays in the Indian Ocean can potentially sharpen difference between China and India and may even lead to these powers becoming more assertive.

During 2014, the Indian Ocean geostrategic environment, though peaceful, was a bit tenuous. The presence of Chinese submarines in the Indian Ocean created unease in New Delhi. Though predicted, it surprised the Indian strategic community and the Indian Navy is beefing up capabilities to respond to the Chinese forays in the Indian Ocean.

India was also ruffled by the Chinese Maritime Silk Road initiative and its growing popularity among a number of Indian Ocean states particularly Bangladesh, Sri Lanka and Maldives. New Delhi believes that the MSR can potentially help China consolidate its naval / maritime strategy of access and basing in the Indian Ocean in support of PLA Navy's future operations.

Continuing US Anchor

The US will continue to be the strategic anchor and security provider in the Indian Ocean and its role welcomed by the regional countries to 'correct security imbalances, challenge the hegemony of any dominant power and ensure regional stability'. Likewise, the UK decision to permanently position a number of power projection platforms in the Persian Gulf prompted New Delhi to recall the idea of Indian Ocean 'Zone of Peace' and withdrawal of extra regional naval powers from the Indian Ocean.

2015: End of Piracy, Attractiveness of Drug smuggling and Re-emergence of Maritime Terrorism in the Indian Ocean

One of the important positive developments in the Indian Ocean was the near total suppression of piracy in the Gulf of Aden / Somali coast. It took eight years for the naval forces from nearly two dozen countries including a number of UN Security Council resolutions, to send pirates back home.

However, another ugly face of illegal activities at sea i.e. drug smuggling appears to have caught the attention of the Indian Ocean countries. During 2014, the multinational forces operating in the Indian Ocean intercepted a number of dhows/boats carrying narcotics from South Asia bound for destinations in East Africa. Perhaps what is more disturbing is that east coast of Africa emerged popular among drug smugglers from Colombia. Kenyan President Kenyatta's initiative to oversee the destruction of a vessel carrying about 370 Kilograms of heroin worth US\$ 11.4 million in international market exhibited Indian Ocean countries resolve to counter global trade in narcotics.

The rise of the Al Qaeda in the Indian subcontinent (AQIS), the new wing of the Al Qaeda, has already raised a new threat whether Pakistan will become a haven for maritime terrorism.

Will 2015 see the idea of "Blue Economy" leaping forward?

The geo-economic environment in the Indian Ocean witnessed the emergence of a new concept 'Blue Economy' led by Seychelles and Mauritius. The idea is resonating

among a number of Indian Ocean littorals including Australia, Indonesia, Bangladesh, South Africa to name a few. The leaders are committed to the sustainable development of living and non-living marine resources to enhance food and energy security.

Will 2015 ensure better Search and Rescue Coordination?

Perhaps the most traumatic and heartrending events in 2014 were the tragic loss of Malaysian Airlines flight MH 370 in the southern Indian Ocean, which still remains a mystery, and the more recent loss of Air Asia flight QZ 8501 in the Java Sea. These were stark reminders of the need to develop robust search and rescue (SAR) mechanism in the Indian Ocean. Yet, these incidents exhibited the Indian Ocean countries' commitment to provide 'public goods at sea' and a number of navies deployed their navies for SAR.

Source: [Eurasia Review](#), 6 Jan 2015

India Reinforces Maritime Domain Awareness but Challenges Remain

- Vijay Sakhuja

Six years ago, in November 2008, a group of Pakistan-based terrorists landed at unsecured waterfronts in Mumbai, the financial capital of India, and attacked public places such as hotels, restaurants, and a railway station. Although the Indian security forces were quick to respond, the attack, popularly referred to as 26/11, exposed three significant gaps in India's maritime security apparatus: a. the porous nature of India's coastline; b. the poor surveillance of the maritime domain; and c. the lack of inter-agency coordination.

Post the 26/11 attacks, the Indian government undertook a number of proactive measures to restructure coastal security and push the defensive perimeter further away from the coast into the seas. The focus was on building national maritime domain awareness grid via a number of organizational, operational and technological changes. The Indian Navy has now set up the National Command Control

Communication Intelligence network that hosts the Information Management and Analysis Centre (IMAC).

It connects 41 radar stations (20 Indian Navy and 31 Coast Guard) located along the coast and on the island territories, and helps collate, fuse and disseminate critical intelligence and information about 'unusual or suspicious movements and activities at sea'. There are plans for additional coastal radar stations to cover gap/shadow zones in the second phase; these are currently addressed through deployment of ships and aircraft of the Indian Navy and the Coast Guard.

The IMAC receives vital operational data from multiple sources such as the Automatic Identification System and the long-range identification and tracking, a satellite-based, real-time reporting mechanism for reporting the position of ships. This information is further supplemented by shore based electro-optical systems and high definition radars. Significantly, maritime domain awareness is also received through satellite data.

There are 74 AIS receivers along the Indian coast and these are capable of tracking 30,000 to 40,000 merchant ships transiting through the Indian Ocean. The AIS is mandatory for all merchant ships above 300 tons DWT and it helps monitoring agencies to keep track of shipping and detect suspicious ships. However the AIS is vulnerable to 'data manipulation'. According to a recent study, the international shipping manipulates AIS data for a number of reasons, and the trends are quite disturbing.

In the last two years, there has been 30 per cent increase in the number of ships reporting false identities. Nearly 40 per cent of the ships do not report their next port of call to prevent the commodity operators and to preclude speculation. Interestingly, there is growing tendency among merchant ships to shut down AIS, and 'go dark' and spoofing (generating false transmissions) is perhaps the most dangerous. It can potentially mislead the security forces who have to respond to such targets and on finding none, leads to loss and wastage of precious time and human effort which adversely affects operational efficiency of the maritime security forces.

At another level, small fishing boats can complicate maritime domain awareness; however, it is fair to say that they can also be the 'eyes and ears' of the security agencies. Indian authorities have undertaken a number of steps, including compulsory identity cards for fishermen; registration of over 200,000 fishing boats and tracking them through central database; security awareness programmes, etc. Furthermore, Marine Police Training Institutes have been established. They are coordinated by the apex National Committee for Strengthening Maritime and Coastal Security that is headed by the Cabinet Secretary.

The Indian government has also drawn plans to reinforce the NMDA via multilateral cooperation. It is in talks with at least 24 countries for exchanging information on shipping to ensure that the seas are safe and secure for global commerce. India has placed maritime security high on the agenda through active participation in the Indian Ocean Rim association, the Indian Ocean Naval Symposium (IONS), the East Asia Summit, the ASEAN Defense Ministers Meeting Plus. Additionally, it is in talks with other countries to institutionalize intelligence exchange among the respective security agencies.

The Indian Navy and the Coast Guard have been at the helm and have developed a sophisticated strategy that involves joint exercises, hot lines, exchange of intelligence and training with a number of navies. It will be useful to explore if the NC3I is suitably linked to the Singapore-based Information Fusion Centre established at Changi Command and Control Centre, which has received much acclaim as an effective MDA hub.

It is fair to argue that weak legislations can compromise maritime security. In this connection, it is important to point out that the Coastal Security Bill drafted in 2013 is yet to be tabled in the Indian Parliament. Unfortunately, the draft Piracy Bill placed before the law makers in 2012 lapsed due to priority given to other issues.

Source: [ISN ETH Zurich](#) , 6 Jan 2015

'Appetite for Big Ships' Makes It Harder for Box Carriers to Match Supply and Demand

- Mike Wackett

Notwithstanding the scrapping of older ships and a knock-on slippage of new builds, Drewry today forecast global growth of cellular tonnage in 2015 of 7.2%, compared to a 5.3% increase in demand, thus further extending the gap between supply and demand.

According to Drewry's latest *Container Forecaster* report, 2014 was another year of excess supply growth in the container shipping industry, with the total global fleet expanding 6% year-on-year in nominal capacity to 18.1m TEU, versus a 5.2% increase in container traffic.

And with a massive 1.85m teu of deliveries this year, the consultant warned that the supply-demand gap would widen further and prove an increasing drag on freight rates as carriers scratch around to fill their ships.

Moreover, Drewry noted, there was around 100,000 TEU of scheduled deliveries from 2014 that have 'slipped' into this year, thus potentially worsening the oversupply equation – although in practice, vessel scrap page and postponed deliveries should bring the net capacity hike down to around 1.35m TEU.

Drewry said the “appetite” for ordering bigger ships was making it “much harder for carriers to match supply with demand”, although it added that the strategy of lower slot costs provided by more fuel-efficient ships was “entirely sound”.

Nevertheless, there appears to be no solution to the widening disparity between supply and demand across container trades, Drewry added, and the gap has widened each year since the order book frenzy of 2007 and 2008.

The world's cellular fleet has “nearly quadrupled” since the turn of the century when it stood at around 5m teu, and the ‘hyper-inflation’ of tonnage driven by the “current arms race” by carriers to operate the biggest ultra-large containership will add to the supply pressure this year.

Drewry described the evolution of containerships as “staggeringly rapid”, noting that the world’s largest box ship in 2005, the 9,500 teu *Gudrun Maersk*, now looks a “veritable minnow” in comparison with the current holder of the title, the *CSCCL Globe* at 19,100 TEU.

These sentiments were echoed by Yasumi Kudo, president of Japan’s biggest shipping group, NYK, who warned in his new year message that supply pressure in terms of container shipping “remains deeply rooted” and that any prospect of shrinking the gap between supply and demand was “unlikely” in the short term.

Mr Kudo claimed shipping was “becoming increasingly unstable” due to a toxic combination of geopolitical risks, changing climate patterns causing major natural disasters and the instability of exchange rates and oil prices.

Nonetheless, Mr Kudo’s overall outlook for 2015 was generally optimistic, adding that the year would see a “steady increase in the volume of cargo movement” for the Japanese group, which celebrates its 130th anniversary this year.

In fact, Mr Kudo predicted that NYK would end its fiscal year on 31 March with a profit of \$626m and, across its container trades, carry around 3.85m TEU.

Source: [The Load Star](#), 12 Jan 2015

Anti-Ship Missiles: Could they Make Modern Navies Obsolete?

- Alex Calvo

It’s traditionally said that “the sea commands the land.” But the relationship between the maritime and terrestrial domains is more complex than that suggests. Episodes like the attack against HMS Glamorgan in the closing stages of the 1982 Falklands War—the ship was hit by a land-based Exocet missile—show how sometimes the land may command the sea, or at least try to prevent the sea from commanding it. Technological progress over the ensuing decades, coupled with the current maritime tensions in the Indo-Pacific, and more generally the conflict between limited defence

budgets and growing national naval ambitions, have revived the issue of land-based anti-ship missiles and the roles they should play. Interest is especially intense in countries building up their navies from a limited base (like the Philippines) or grappling with the realization that the conventional maritime balance is shifting against them (like Taiwan).

There are four basic questions:

- the degree to which shore-based missiles can prevent an enemy navy from operating freely in a given body of water;
- whether it's more efficient to invest in those systems or in more traditional surface combatants;
- the vulnerability of missile launchers to enemy airpower and other systems, and;
- whether missile launchers should be camouflaged and dispersed among population centres or deployed only in non-built-up areas.

The first and the third are part of the perennial competition between sword and shield, with technological progress at different times favouring both defense and offense, although not always at the same rate. If we compare shore-launched missiles to their predecessors, coastal guns, we may note that one of their key advantages is their mobility. Traditionally, one of the main weaknesses in coastal defence has been the fixed nature of fortifications, and even in the case of mobile guns the limited scope for their redeployment. On the other hand, anti-ship missiles can easily be mounted on all sorts of vehicles, and take advantage of existing road networks, as well as employing the terrain, including mountains and forests, to hide. By doing so, ships lose—in part—one of their greatest advantages vis-a-vis coastal defences, their superior mobility.

The fourth question: whether to deploy anti-ship missiles in populated areas, opens up a debate with technical, political, and ethical ramifications. In terms of camouflage, rural areas may offer the advantage of roads and forests, which may also mean better mobility and less likelihood of open-source detection, while cities may restrict the scope for a stronger enemy to conduct a limited campaign aimed at forcing surrender without a full-scale air offensive. At the end of the day, the key question is whether to wage limited war trying to minimize civilian casualties, or to

dare the enemy to escalate a conflict to a level involving widespread civilian casualties. The latter aspect is particularly important in a country like Taiwan, hoping to be assisted by partners and allies in the event of hostilities. A harsh moral dilemma is that such assistance may be facilitated by precisely the kind of damage from which any government is supposed to protect its population.

Another important choice concerns the second issue mentioned above, the balance between surface combatants and shore missiles when it comes to investing in coastal defence. That's a debate currently being conducted in the Philippines, a country striving to build a stronger navy and coastguard with US and Japanese assistance, and where some are arguing that missile launchers deployed in forested areas may provide a better deterrent than warships. That discussion echoes the wider debate, intense in Taiwan and in naval circles about the region, on how to react to China's growing naval power, and in particular whether to abandon pretensions of sea control and conventional parity and go instead for sea denial and asymmetric naval warfare. In this regard, fast craft equipped with missiles are also seen by some observers as a better option than bigger ships, in particular when following an attrition strategy in which shore-launched missiles would be another component.

Finally, we have to take into account that many countries in the Indo-Pacific region considering the deployment of shore-launched anti-ship missiles are facing a range of maritime challenges, including the use of non-lethal force by a complex web of civilian entities (trawlers and oil rigs), state non-military actors (coastguards and similar agencies), and military forces, rather than just traditional navies acting in isolation. That makes procurement and doctrinal decisions even more complex, since it's necessary to prevail in undeclared conflicts where conventional weapons cannot be used to repel aggression—in other words, in the grey area between war and peace now covering much of the region.

To sum up, shore-launched missiles proved their potential in the closing days of the Falklands War, a conflict much studied in the Indo-Pacific region, and later technological developments have ensured that interest in those systems remains high. But the systems engage a range of issues, many of which remain unsettled.

Deeper exploration of those issues must lie at the heart of future decisions relating to procurement, deployment and use.

Source: [nationalinterest](#), 13th Jan 2015

Japan Pushes for Ratification of Hong Kong Convention, Ship Recyclers Agree

- Gopal B Kateshiya

India is likely to get help from Japan to improve the facility at Alang-Sosiya ship recycling yard as the Ship Recycling Industries Association (SRIA) of India on Tuesday agreed to the Japanese condition of adhering to the norms of Hong Kong Convention (HKC), 2009, on the ship recycling industry. The decision was taken at a meeting with a high-level delegation from Japan in Alang, which was also attended by officers of Gujarat Maritime board and other departments of the state government. After around four-hour-long deliberations, SRIA agreed to the offer of help from Japan to help improve facilities at Alang-Sosiya yard, the largest ship breaking yard of the world in terms of number of ships being dismantled.

“Japan can help India if India is ready to ratify the Hong Kong Convention. We can help ship recycling industry of India if India cooperates with the global efforts to put into force the Hong Kong Convention,” said Mitsuhiko Ida, deputy director for maritime bureau in the Ministry of Land, Infrastructure, Transport and Tourism of Japan.

Ida was leading the 14-member Japanese delegation comprising government officials, shipping industry representatives and industry experts. The group was on a two-day tour of Alang as part of the high-level talks between India and Japan initiated after Prime Minister Narendra Modi’s visit to Japan in September last year during which he had showed strong commitment to ship recycling industry.

SRIA secretary Nitin Kanakiya, who was leading the deliberations on behalf of recyclers, responded positively to the proposal. “We have no problem in conforming to the HKC. Majority of norms laid down in the HKC are covered in Ship Recycling Code, 2013 of India. But, in return, we expect technological help from Japan for

decontamination of ships after they are beached,” Kanakiya said. Presently, decontamination is done manually and success rate, Kanakiya said, was around 95 per cent.

Talking to The Indian Express after the meeting, Ida said the two countries would work out modalities of helping the recycling industry in the coming months. “We can help Alang in areas of safety (of workers) and environment protection. India accounts for around 30 per cent of recycling industry in the world and is also an important player in international shipping industry. On the other hand, Japan is a leader in ship building and ship owning. China and Turkey do not have the capacity to recycle ships after a limit. Therefore, we want recycling to happen in India. But at the same time, we believe the recycling should be done as per HKC. Therefore, we want to help India in getting HKC ratified,” said Ida.

Keiji Tomoda, chairman of Ship Recycling Sub-Committee of the Japanese Ship Owners’ Association, said it would-be a great step if India ratifies HKC. “Japanese companies own 2,000 out of the total 3,000 major ships in the world. Most of the Japanese-owned ships go to China for recycling after their life. But we want to sell end-of-the-life ships to India because India offers better prices than China,” Tomoda said.

China has the capacity to recycle all of Japanese ships, but added that more Japanese ships had started beaching in Alang over the last two years due to better price. The European Union member countries do not send their ships to India or other recycling yards in Bangladesh and Pakistan due to what they call low safety standards for workers and environmental pollution. However, many ships change flags to find a way around stringent EU norms and thus find their way to ship breaking yards in South Asia.

Nikos Mikelis, an authority on ship recycling, who was part of the delegation as an expert, said the visit by the Japanese team came at a right time. “SRIA says Ship Recycling Code, 2013 meets the majority of norms laid down in the HKC. If this is so, it is very encouraging as HKC is very important for the survival of global recycling industry. And HKC cannot come into force without the support of India for the sheer reason that India accounts for around 30 per cent of the total recycling,” said Mikelis.

The SRIA secretary said while it was for the Government of India to take a final call on the ratification of HKC, but added that the association would convey its views on the matter to the government. The Japanese delegation had arrived in Alang on Monday and visited a few recycling plots. The group visited a few more plots on Tuesday and hazardous waste disposal facility before the meeting with all stakeholders.

Source: [Indian Express](#), 14 Jan 2015

Benefits of Offshore Wind, Drilling Weighed

- Miriah Hamrick

Harnessing the Atlantic Ocean's offshore wind energy potential, especially off the coast of North Carolina, could provide a better path to energy independence and job creation, a report released by ocean conservation group Oceana states.

Andrew Menaquale, Oceana energy analyst and author of the report, spent about nine months collecting and analyzing data on offshore energy potential along the Atlantic coastline. If government estimates of Atlantic oil and gas reserves are accurate, oil would generate enough energy for less than five months of consumption, while gas would meet less than 10 months of consumption. Wind energy, the report finds, could out-produce oil and gas within 13 years.

"If we commit ourselves to developing offshore wind resources, it could definitely surpass all that we have with oil and gas," Menaquale said. "And also, keep in mind, once that oil and gas runs out, it's gone. Offshore wind, well beyond that, will keep producing energy and will continue to power coastal communities."

North Carolina, which boasts a large portion of the Atlantic Outer Continental Shelf identified by the U.S. Bureau of Ocean Energy Management, could lead a shift to wind energy, Menaquale said, because it offers more potential to produce wind energy than other East Coast states.

Much of the Mid-Atlantic Outer Continental Shelf lies off the coast of North Carolina. Image source: U.S. Bureau of Ocean Energy Management. “That could be the beginning. That could really accelerate the industry,” Menaquale said. About 300,000 acres off the coast of Kitty Hawk and Wilmington could be leased for offshore wind energy development, following an environmental assessment by the ocean energy bureau.

The energy produced by offshore wind farms would stay in North Carolina, Menaquale continued, and contribute to local energy independence. “That’s typically how offshore wind farms work. They’re going to power the communities that are closest to them. ... In comparison, oil and gas drilled off the coast of North Carolina is not going to stay in North Carolina. It’s a global commodity, and it will be bought and sold internationally,” Menaquale said.

Gov. Pat McCrory outlined his strategy for exploring offshore oil and gas during an Oct. 22, 2014 visit to Wilmington. His first priority, he said, is to conduct seismic airgun testing to determine what offshore oil and gas resources exist.

“We’ve got to find out if there’s anything there or not, which hasn’t been done. There hasn’t been seismic testing for 25 years. ... So my first goal is to find out what we have, and then find out the best way to get to it in a safe, environmentally sound way, if there is a market for it,” McCrory said.

Menaquale agreed that seismic testing could show larger reserves of oil and gas, but pointed out harmful effects of airgun blasts on marine animals. “This is just one of those examples where the idea of offshore drilling can harm coastal communities and the marine environment well before a rig is ever put in the ocean,” Menaquale said. Marine vibroseis is a safer alternative to seismic testing, he added

An August 2014 publication from the Bureau of Ocean Energy Management states that no documented scientific evidence links harm to marine animals and seismic testing. McCrory also told a crowd in Wilmington that he would not allow offshore drilling in North Carolina unless federal law enables companies drilling in the Atlantic to share revenue with nearby states, which he promised would be passed on to

coastal communities to help cover the cost of beach renourishment and inlet dredging.

The ocean energy bureau is expected to release a draft of the proposed 2017-2022 OCS Oil and Gas Leasing Program, a blueprint for offshore oil and gas drilling operations, for public comment in the next few weeks. Oceana hopes the new plan will not open the Atlantic or the Arctic to drilling, Menaquale said.

Source: [Lumina News](#), 14 Jan 2015



Royal Navy Warship Embarks on Mission to Combat Piracy

One of the Royal Navy's most advanced warships embarked on a five-month counter-piracy operation on Friday. HMS Dauntless left Portsmouth Naval Base on a routine deployment to the Gulf, where it will be “detering piracy and keeping the sea lanes open for free and safe passage of merchant vessels,” the Royal Navy said.

The Type 45 destroyer will make several stops in the Mediterranean for training as well as visiting ports in a number of Gulf States to “strengthen ties in the region.”

“This will be a high-profile deployment for Dauntless during which we will provide reassurance to the UK’s allies in the region, while conducting maritime security and counter-piracy patrols,” said the warship’s Commanding Officer, Commander Adrian Fryer. “HMS Dauntless has been through intense training to be in a position to undertake this deployment and I am immensely proud of my ship's company.” HMS Dauntless will also visit the Dardanelles to take part in centenary commemorations of the ill-fated Allies’ 1915 Gallipoli campaign in World War I. The warship returned to the UK on December 5 after a seven-month deployment in the Arabian Gulf and Indian Ocean.

HMS Dauntless had reportedly been involved in maritime security operations, including counter-piracy, counter-drugs, escort duties and international exercises. All missions were aimed at disrupting illegal use of the sea and ensuring freedom of navigation and trade, the Navy said.

On its mission, the warship’s personnel investigated vessels for narcotics, weapons and intelligence. The Royal Marines on board also performed joint training drills with the US Marine Corps in Bahrain and a joint anti-submarine exercise with the US Navy. On its last deployment, the ship visited Gibraltar, Crete, Bahrain, Dubai, Fujairah, India, Oman, Malta and Portugal over seven months.

In October 2013, an international counter-piracy task force including Royal Navy personnel stopped a group of Somali pirates. It came after pirates attacked a supertanker and a Spanish fishing vessel off the Somali coast. In January 2012, the Royal Navy captured 13 Somali pirates and seized weapons in the Indian Ocean.

After the successful operation, Defence Secretary Philip Hammond said: “The Royal Navy and Royal Marines are playing a crucial role in securing and protecting international sea lanes that are vital to global trade. This operation off the coast of Somalia is a clear demonstration of Britain's ability to tackle piracy that threatens our interests.”

Even civilians have decided to take matters into their own hands to combat piracy. In June 2013 four Britons, who sailed a converted former navy warship to Africa on an “anti-piracy” mission, were arrested off Senegal. Former Royal Navy submariner Chris Enmarch, who set out with his “business venture” to combat piracy, led the group.

Spanish authorities before their arrest had already impounded their 127-foot Defender, a former Oman Navy fast-attack gunboat. They were reportedly headed to the Gulf of Guinea, where piracy is widespread, to offer security to oil rigs.

Source: RT.Com, 2 Jan 2015

Pakistani Boat with Explosives Blows up off Gujarat Coast, Says Government

A fishing boat from Pakistan with four people on board went up in flames and sank off the Gujarat coast in what appeared to be an attempt to evade investigation by the Indian Navy on New Year's Eve, the government said today.

So far, no survivors have been found from the vessel which set sail from near Karachi in Pakistan for what the government described as "an illicit transaction" in the Arabian Sea. Sources said the boat had ammunition that was meant to be passed onto another boat about 350 kms southwest of Porbandar in Gujarat.

However, no details were provided about the recipient boat in the government statement that was headlined "not elaborate on the nature or quantity of explosives."

The government said that on the morning of December 31, Indian security agencies picked up phone intercepts from Keti Bunder near Karachi about "expensive cargo" that was to be delivered near India. The Indian Navy was then alerted; Coast Guard ships and aircraft were used to locate and intercept the boat near the maritime border with Pakistan.

"However, the boat increased speed and tried to escape away from the Indian side of maritime boundary. The hot pursuit continued for nearly one hour," the statement said.

Although the boat did eventually stop after warning shots were fired by the Coast Guard in an hour-long chase, the four-man crew then hid themselves below deck before setting the boat on fire, which triggered a large explosion. "The boat was cornered by our team, but it continued sending signals of non-compliance. We followed all protocol to send warnings to the boat," said KR Nautiyal, the Deputy Director General of Operations of the Indian Coast Guard.

In 26/11, a Pakistani boat sailed into Mumbai with 10 terrorists on board who then split into pairs and struck the city's landmarks; 166 people were killed in India's worst-ever terror attack.

Source: [NDTV](#), 2 Jan 2015

Rogue Pakistani Boat Puts Focus on Coastal Security

A "rogue" boat entering into the Indian maritime boundary has brought the focus on coastal security network that is undergoing major up gradation after the 26/11 Mumbai attacks. In the latest case where the Coast Guard patrol vessel managed to intercept a suspicious vessel, it was the specific intelligence input that helped in tracking the boat.

One of the highlights of the new maritime security domain is to put in place the Information Management and Analysis Centre (IMAC) which was commissioned by Defence Minister Manohar Parrikar in Gurgaon last year.

It is the single point agency interlinking the coast radar chain that was formed after the Mumbai attacks. The officials explained that IMAC works on filtering out regular fishing boats operating in the Indian waters from the rogue vessels. The way it has been planned, IMAC will become the backbone of the national maritime domain awareness in the coming months. It has to be complemented with other measures like installing transponders on all the fishing boats operating in the Indian waters and identifying every fisherman who ventures out in the sea.

The IMAC links 20 naval and 31 Coast Guard station, including the joint operation centres. It has 51 nodes across the coastline and also in the Andaman and Nicobar islands. There are seven major nodes of maritime security in Delhi, Gandhinagar, Mumbai, Kochi, Chennai, Vishakhapatnam and Port Blair. The Centre also has a comprehensive database of world registers of shipping for the analysis of traffic.

The officials said that the nerve centre of maritime security domain is a work in progress. But it has reached a stage where the high technology institution is all set to take off to become a potent tool in checking dangers from the sea.

The technological advancements are being backed by an increase in the coastal surveillance patrols by navy and the coast guards ships.

The navy carries out an extensive defence of Gujarat exercise as part of this effort. It is a mobilization of all the naval resources under western command. The Indian Air Force and the Coast Guard also take part in the exercise. The Gujarat coast is crucial for the country's economy as it has a number of key oil installations. The officials admit that maritime security continues to be a major challenge despite some urgent measures and procurement of latest assets.

Source: [India Today](#), 3 Jan 2015

More 'Chinese Aegis' Warships to be Built In China In 2015

A massive number of Type 052 destroyers also known as the "Chinese Aegis" have been launched in recent years, as the PLA Navy plans to establish its own carrier battle groups, according to a report by the Fujian-based Quanzhou Evening News on Dec. 31.

The Jinan, a Type 052C guided-missile destroyer, was the latest of the ships to be launched, on Dec. 22. The PLA Navy currently has five Type 052C and five Type 052D destroyers designed to accompany the Liaoning, China's first aircraft carrier, and future carriers from ballistic missile attacks by enemy aircraft. Equipped with an active electronically scanned array multi-function phased array radar system, the destroyer is considered the last line of defense for China's carrier battle group.

China plans to build another Type 052C ship and seven more Type 052D ships. PLA Navy Admiral Yin Zhuo told the paper that the Type 052C is similar to the US Navy's Arleigh Burke-class destroyer; however, the 9,000-ton Arleigh Burke-class destroyer is much bigger than the Type 052C. This means the US destroyer can carry more missiles and other weapons systems than the Type 052C.

Yin said that the destroyer enhances the combat capability of the PLA Navy at sea. As more Type 052C and Type 052D destroyers enter service, China will get closer to its goal of a blue water navy. With a powerful navy, Yin believes that China can contribute more to maintaining peace and stability around the world. Yin said that China's next generation destroyer known as the Type 055 will be even more similar to the Arleigh Burke-class.

Source: [Want China Times](#), 4 Jan 2015

High Alert along Kerala Coastline

The Navy, the Indian Coast Guard (ICG), and the State police are on a heightened vigil along Kerala's 570-km coastline following the suspicious ingress of a Pakistan-

based fishing boat into Indian territorial waters, off the coast off Mumbai on New Year's Eve.

The incident, which evoked traumatic memories of the 2008 seaborne terrorist attack in Mumbai, has prompted security agencies to activate their 'mainland and maritime assets on the Western seaboard.' In Kerala, the Sagar Prahari Bal, a special force trained in maritime military operations and equipped with fast-interceptor gunboats capable of operating in littoral waters, was on alert at the Naval base in Kochi, one of the four anti-terrorist joint operations centers in the country, for the past four consecutive days.

Security has also been upped at the LNG terminal, Special Economic Zone, and oil refineries in Kochi and the Vikram Sarabhai Space Centre and Techno park campus in Thiruvananthapuram. These facilities which lie close to the sea have been deemed 'all-time high-value targets for terrorists.' Coastal vigilance committees, comprising seagoing fishermen and shore dwellers, have been alerted. Officials said 34 more coastal radar stations would be set up along the Western coast to enhance the country's 'maritime situational awareness to better plan for a fast response in the event of a terrorist ingress through sea.'

They said identifying every Indian fishing boat putting out to sea and plotting their course and position, with the help of onboard transponders, on a digital map of the country's seaboard, mainly to single out and identify 'alien craft,' was perhaps the most daunting task in ensuring the nation's maritime security.

Source: [Hindu](#), 5 Jan 2015

Iranian Navy Rescues Oil Tanker from Pirate Attack

The Iranian Navy's 32nd fleet has foiled an attack on an Iranian oil tanker in international waters in the northern parts of the Indian Ocean and Gulf of Aden.

According to the navy's public relations department, a group of pirates on speedboats moved towards the tanker near Yemen's Al-Mukalla port, but turned away after the fleet launched an attack. "Iranian warships have been performing anti-

piracy patrols in the Gulf of Aden since November 2008." The 32nd flotilla is part of the Iranian Naval units, comprising the Jamaran and Bushehr destroyers.

The vessels returned to the region after taking part in the Mohammad Rasoulallah (PBUH) war games in Iran's territorial waters and Northern Indian Ocean last month, the Fars News Agency reported.

Corresponding to international efforts to fight piracy, Iranian warships have been performing anti-piracy patrols in the Gulf of Aden since November 2008, in the wake of an attack on chartered cargo vessel MV Delight by Somali pirates off the Yemen coast.

According to the Iran Navy's rear admiral Habibollah Sayyari, the country's naval forces have prevented more than 150 pirate attacks on merchant vessels and oil tankers in recent years, and have escorted approximately 2,000 commercial vessels. The latest attack comes after a group of sailors on a fishing boat, believed to be from Pakistan, reportedly sank their vessel after the Indian Navy intercepted them in a high-speed chase in the Arabian Sea near the Indo-Pak maritime boundary.

Source: [Naval-Technology](#), 6 Jan 2015

Putin Makes His First Move in Race to Control the Arctic

In November, the Russian K-550 nuclear ballistic submarine Alexander Nevsky, submerged in the Barents Sea between Russia and the North Pole, successfully launched a missile that travelled its prescribed course to Kamchatka in Russia's Far East. The Alexander Nevsky thus joins two other Russian nuclear submarines, which have, in the course of the autumn, conducted successful ballistic missile tests.

Russian nuclear submarines have long been based in Arctic waters, just as the United States keeps its fleet in the Atlantic and Pacific oceans. Still, the missile tests from the icy region sent a chilly message. The Alexander Nevsky and its brothers – the Vladimir Monomakh and the Yuri Dolgorukiy – belong to Russia's new Borei-class nuclear submarine fleet, which can carry up to 20 of the country's new Bulava nuclear missiles. With its payload of 10 nuclear warheads capable of travelling up to 8,000 kilometres – the distance between, say, Moscow and Chicago – the Bulava is

a fearsome weapon. “Because of the Ukrainian situation, the West is reluctant to take into account that Russia is a nuclear power that’s investing heavily in its nuclear arsenal,” says Pavel Baev, a professor at the Peace Research Institute in Oslo and a former researcher at the then-Soviet Ministry of Defence.

Mighty though they may be, the Borei-class submarines aren’t much larger than the ageing vessels they’re replacing. “You could argue that a few new nuclear submarines don’t make a difference,” says Baev. “But Putin is engaging in nuclear brinksmanship. It’s a dangerous game that the West is reluctant to get involved in, and he seems to be betting that that will give him the upper hand.” Though all five official nuclear weapons states – United States, Russia, France, Britain, China – are modernising their arsenals, Russia’s overhaul of its vast Soviet-era range is particularly ambitious.

Nuclear brinksmanship aside, the military giant has embarked on a mission to leave footprints in the Arctic. In October, defence minister Sergei Shoigu announced that Russia will deploy military units along its entire Arctic coast, “from Murmansk to Chukotka” (a distance of 4,700 kilometres). The armed forces have begun building military facilities on Cape Schmidt in Russia’s far east and on the country’s Arctic Wrangel Island and Kotelnny Island; next year the country is scheduled to open an airport at Cape Schmidt. Earlier this year it reopened its northern Alakurtti military base near the Finnish border (featuring 3,000 soldiers), and on 1 December President Vladimir Putin announced that Russia’s Arctic command has become operational.

Here’s the catch: if one country makes military moves, its competitors respond. Norway, Russia’s closest Arctic neighbour and home to NATO’s first Arctic military operations centre, has been moving troops and equipment north, and prime minister Erna Solberg recently announced that Arctic concerns have caused the country to keep its fighter jets at home rather than sending them on ISIS - fighting missions. In December, Norway introduced an extremely advanced spy vessel that will patrol its Arctic waters.

Source: [newsweek](#), 6 Jan 2015

China Sends Bigger Boat to Help Woody Island Settlers

A new supply ship set sail Monday from Hainan island for Woody island in the Parcels, on its maiden voyage to China's newest created city in the South China Sea, Sansha. Sansha I is the largest and most advanced vessel to supply the islets in the South China Sea, helping with efforts to defend what China claims is its "blue territory."

"The Sansha I can cover all of the South China Sea and reach more islets and reefs in the remote Zhongsha and Nansha (Spratly) islands," said Feng Wenhai, vice mayor of Sansha. Sansha I, 122 meters long and 21 meters wide, has a displacement of 7,800 tons. The rollon-rolloff vessel can accommodate up to 456 people and carry 20 standard container trailers, cover 6,000 nautical miles without docking and has a top speed of 19 knots. It has a helicopter pad to help in rescue missions.

Sailing time between Wenchang on Hainan Island, the seat of the Sansha government, will be reduced from 15 hours to about 10. Sansha I will make a round trip once a week. Before the new ship was commissioned, the supply vessel Qiongsha III was the only lifeline to the disputed island on behalf of the Chinese government which administers it. The ship will bring basic necessities like fresh water, food, diesel and building materials.

The capacity of Sansha I is four times that of Qiongsha III, which will continue to shuttle between Hainan and the islets in the South China Sea. Sansha was established in July 2012 to further Beijing's claims to the more than 200 islets, sandbanks and reefs in the Parcels, Macclesfield Bank and Spratly islands as well as the 2 million square kilometers of resource-rich waters surrounding them.

There is good reason for the attempt at claiming the area. The potential amount of catchable fish in the waters there adds up to 5 million tons. Also, the sea's oil reserves are estimated to be as much as 30 billion tons, with gas reserves believed to total about 20 trillion cubic meters.

Since China has been scrambling to try and lay its claims to the area, Beijing has been building infrastructure on the islets and reefs there. Woody Island, the administrative seat of Sansha, is currently the largest population center and the number of residents, workers and visitors there is increasing steadily. The city relies heavily on supplies shipped from Hainan and the mainland, more than 300 kilometers away.

Home to about 1,000 residents, Woody Island has taken the shape of a small city after over two years of construction. There are roads, hotels, restaurants, bars, a coffeehouse and a hospital on the once desolated island. Four desalinates provide about 200 tons of water each day. A school is under construction. Lured by favorable land and fiscal measures, over 60 companies have been convinced to operate there, covering finance, logistics, entertainment, agriculture and fisheries.

The islands and islets of the South China sea are disputed and claimed in part or completely by Vietnam, Malaysia, China, Taiwan, Brunei and the Philippines.

Source: [Want China Times](#), 7 Jan 2015

Marine Task Force Deployed along Gujarat Coastline

The Gujarat police have deployed, for the first time, 170 commandos of the newly-formed Marine Task Force along the 1,600 km coastline of the State. Senior police officials said the deployment will strengthen coastal police stations. "Patrolling at sea will become more effective and enhance security," added a senior police official.

The marine task force is first in India and was raised from within Gujarat Police. "Commandos of the force have been trained to respond to any emergency situation at sea or land," added a police official. The commandos have been trained at Gujarat Police Academy at Karai and at the marine training centre at Porbandar. "Various central agencies, Indian Navy and BSF have also played their part in the training process of the task force," said a police source.

Eight groups of the task force have been formed which will each be headed by a DIG-rank officer designated as Marine Task Force commander. The commander will be assisted by an SP-rank officer and will have deputy SPs, police inspectors and

sub inspectors below him. Recently, the coast guard had claimed to have chased a Pakistani boat about 365 kms from Porbandar. The then reportedly self-destructed. "The Coast Guard said there were suspected terrorist elements on the boat," said a senior police officer.

Source: [Times of India](#), 8 Jan 2015

China-US rivalry fuels tensions in South China Sea

China is set to step up investments in off-shore oil-fields, but its nuclear strategy towards the United States, rather than demand for energy security, maybe at the heart of its assertion in the South China Sea. Shanghai's National Business Daily is reporting that the state-owned China National Offshore Oil Corporation (CNOOC) has accelerated oil exploration, especially in the western region of the South China Sea.

The goal is to construct a big off-shore oilfield that would have an output of 10 million tonnes. The focus on off-shore exploration follows the depletion of existing on-shore oilfields. By 2020, yearly output from Daqing — China's largest oilfield — is expected to drop to 32 million tonnes, 8 million tonnes lower than the current production level. Other fields are also expected to suffer a similar fate. China's burgeoning energy demand does appear to be a factor fuelling its assertion in South China Sea, and sharpening its disputes with littoral states, especially Vietnam and the Philippines, along with Taiwan, Malaysia and Brunei.

Countering the energy argument, several analysts assert that China's long term strategic contest with the United States, based on its nuclear doctrine, rather than a grab for oil and gas, better explains Beijing's maritime assertion in the South China Sea. Protection of naval assets, especially a select group nuclear submarines, which give China its second strike capability and assured deterrence vis-à-vis the U.S. seem to be compelling Beijing to keep out rivals from the South China Sea.

China has only recently acquired the JL-2 missiles, with a 7350 kilometer reach, which have been mounted on the JIN class of submarines. China's second strike capability is also being reinforced with the development of the 11,000 kilometer range missiles, which will be mounted on the 096 Tang class nuclear submarines,

says a Russian military website. In order to have a credible deterrent, these platforms and weapons, with an intercontinental strike range, need to be deployed closer to fully protected home shores.

Writing in *The Diplomat*, Japanese academic Tetsuo Kotani points out that precisely because it now needs protection of its naval crown jewels from a closer range US strike, especially from a dedicated antisubmarine force, that China is driven to dominate of the South China Sea. The protection of its underwater submarine naval base at Hainan Island, through layered defences and air cover, is now critical.

Source: [thehindu](http://thehindu.com), 8 Jan 2015

Coastal Security a Challenge: Navy Chief

The Chief of the Naval Staff, Admiral R.K. Dhowan, said here on Saturday that “coastal security is a big challenge” and patrolling has been stepped in coastal areas in the past few months.

“In the last few months, we are on high state of alert and have deployed Navy units, ships, aircraft and unmanned aerial vehicles in the coastal areas,” he said. Speaking on the sidelines of the second Admiral R.L. Pereira Memorial Lecture function here, Admiral Dhowan said dealing with non-state actors was always a difficult situation.

Asked about the boat allegedly carrying explosives for a possible terror attack near the Gujarat coast recently, he said: “Coastal security is a big challenge and we have a huge coastline of 7,516 km and extensive economic zone of over two million sq km. There are nearly 5,000 merchant ships operating and over 2.4 lakh fishing boats in the area.”

To maintain surveillance, the Navy had put in place the National Command and Control Communication System and Intelligence System, Admiral Dhowan said. “Threat perception in the Indian Ocean region is wide and varied. There is threat of asymmetric warfare and other maritime threats that could emanate from the region for the country. India is fully concerned and is ready to defend its seas,” he said.

The entire blueprint of Navy was planned around the sole mission of self-reliance.

Source: [Hindu](#), 11 Jan 2015

Navy Chief, Coast Guard DG Meet Days after Terror Boat Incident

Indian Navy chief Admiral Robin Dhowan will on Wednesday meet Coast Guard Director General Vice-Admiral Anurag Thapliyal. The meeting assumes significance in view of the interception of a Pakistani terror boat off Gujarat coast on the intervening night of December 31 and January 1.

Just day ago, Admiral Dhowan had said that the Indian Navy has been in a heightened state of alert for the last two months with its entire fleet, including warships, aircraft carriers, and Unmanned Aerial Vehicle deployed.

The Navy had already stepped up patrolling in coastal areas much before the recent Pakistan terror boat sinking incident off Gujarat coast, he had said. In the mid-sea operation on New Year's night, the Indian Coast Guard off the coast of Gujarat intercepted a Pakistani fishing boat, said to be carrying explosives,, but the vessel exploded and caught fire before sinking along with four occupants. While the government has said the occupants of the boat were 'suspected terrorists', there have been questions over authenticity of this claim.

Source: [Zee News](#) 14 Jan 2015



Indonesian Maritime Industry Looks Bullish

Indonesia's shipyards may see a silver lining to what has been a cloudy past as the government's focus on the maritime sector is reinforced by steps to improve the national logistics system, states a report in Jakarta Globe.

President Joko Widodo has declared his intention to develop the long-neglected maritime sector. Many parties in the shipping industry and related businesses are confident that the time has finally come for Indonesia to redefine its logistics systems to provide greater opportunities for shipping companies while at the same time lowering the cost of shipping goods.

According to industry players, the first key step is for the government to free the shipyard business from the tariffs that add 25% to production costs. Indonesia long ago realized the importance of the shipping business in the country's logistics systems, but it has been painfully slow in acting to create efficiencies. Shipyards sit idle, without work to keep them busy, since shipping companies prefer to import ships rather than buy from local manufacturers.

Lack of incentives and no specific shipping policies in the past have caused inefficiencies in the industry, industry observers said. While the introduction of the cabotage principle has seen the number of ships — operated by 1,200 shipping companies — increase to 13,244 in 2014, compared with only 5,000 ships seven years ago and total capacity increase to 19m gt from 5.6m gt scale is not everything, said INSA head Carmelita Hartoto.

Indonesia needs more than just the cabotage principle. Issues related to port development and shipbuilding management as well as infrastructure need attention too, she said. Despite growing demand, national shipyards are not able to meet the market demand because of a range of problems.

As the situation currently stands, high costs at Indonesian yards mean their ships are 30% more expensive than Chinese products. Taxes discriminate against local shipyards by charging about 30% on imported components and value-added tax, while ship imports are tax-free.

Source: [Marine Link](#), 5 Jan 2015

Prospects for Korea's Shipbuilding Industry In 2015

Out of the country's three major players, only Daewoo Shipbuilding & Marine Engineering hit its order target last year. It received orders for 68 ships and an offshore plant.

Korea's other major players, Hyundai Heavy Industries and Samsung Heavy Industries, both failed to hit their targets. Hyundai Heavy Industries had orders for 98 vessels, worth more than 15 billion U.S. dollars, but this was way below its goal of 25 billion dollars.

Market experts partly attribute last year's weak performance to falling global oil prices, which negatively affected demand for offshore plants and drill ships. Market uncertainties are expected to hamper business this year as well. The Export-Import Bank of Korea forecasts vessel and marine plant orders to drop twelve percent this year compared to last year.

Source: [Hellenic Shipping News](#), 6 Jan 2015

Ericsson Maritime Platform Targets Shipping Connectivity

Looking to bring the shipping industry into the 21st century, Ericsson launched its Maritime ICT Cloud platform designed to provide an end-to-end solution targeting connectivity and tracking needs for the maritime industry.

The telecom infrastructure giant claims the platform's managed cloud solution with industry applications, service enablement, connectivity management, and consulting and systems integration services will allow shipping companies to update legacy manual services that typically send traffic, cargo, port, weather and safety information point-to-point rather than being made available to all ships at once.

"This is a time-consuming process and the lack of access to real-time data significantly increases the margin for error," Ericsson noted.

Ericsson said the Maritime ICT Cloud service connects ships at sea with "shore-based operations, maintenance service providers, customer support centers, fleet/transportation partners, port operations and authorities." This allows for the monitoring of engines and fuel consumption, navigation and the health of the ship's crew. Ericsson explained that through the platform it will provide all necessary components, including satellite connections to application support and will manage the offering for clients.

"Vessels at sea do have systems in place that allow them to monitor critical functions and fuel usage, set and maintain an optimal course and ensure the welfare of their crew, but they are not particularly well integrated with fleet management systems onshore and they do not maximize the potential of real-time data," explained Orvar Hurtig, head of Ericsson's industry and society division. "As the driving force behind the Networked Society and the world leader in telecommunications, Ericsson is the right partner to help connect these disparate systems and enable them to share information with low latency."

Ericsson added that the platform will also help ship owners comply with the 2006 Maritime Labor Convention that requires broadband connectivity for crew communication, entertainment, training and telemedicine.

Source: [Rcr wireless](#), 6 Jan 2014

'Green Ship Technologies' in Asia Investigated

Despite ships being by far the most efficient form of transport, there is growing concern about climate change, the environmental state of the world's oceans and the air quality close to major shipping routes and ports which has led to ever more stringent legislation on emissions to both sea and air.

As such, the Institute of Marine Engineering, Science and Technology together with the UK Science & Innovation Network Southeast Asia are seeking opinions to investigate 'Green Ship Technologies' within Asia.

The survey should take no longer than three minutes to complete, and is aimed at gauging views on the "Green Agenda" from across the maritime sector. "The 'Green Agenda' attempts to address environmental issues by introducing ship designs, equipment, products and operating procedures that reduce harmful emissions, but these measures often come at a cost to ship owners, operators and ultimately the end users of the goods carried by sea. However, there are also financial incentives introduced by Administrations, such as Singapore, to encourage a positive environmental response" says Dr Bev MacKenzie, Technical and Policy Director at the IMarEST.

"These, for example, incentivize ship owners to adopt energy efficient ship designs that reduce fuel consumption and carbon dioxide emissions by a 50% reduction of Initial Registration Fees and a 20% rebate on Annual Tonnage Tax (ATT). Greater incentives are also afforded to vessels under the Singapore flag which adopt environmental protection measures that go beyond IMO legislative requirements."

In addition to the incentives offered by Administrations, and with fuel being both the most expensive component of a ship's operating costs and the main source of air emissions, any reduction in consumption brings a direct financial as well as an environmental benefit. This can also be a positive in relationships with shippers, who are themselves demonstrating environmental concerns and setting themselves sustainability targets.

However, how can ships comply with, or even go beyond legislative requirements and reap the benefits? What technologies, products and operating measures currently exist to meet this challenge, what is on the horizon and are ship owners and operators truly engaged in the Green Agenda in Asia?

An invitation-only roundtable discussion will be held in Singapore in March 2015 to debate the survey results and the issues raised. The roundtable will be followed by an open workshop to provide the opportunity for further discussion and a wider attendance.

Source: [Maritime-Executive](#) , 7 Jan 2015

World's Largest Container Ship Arrives at Port of Felixstowe

The world's largest ship, with a massive cargo so big it could supply everyone in the country with something, has arrived in Britain. The Chinese-owned CSCL Globe, which is longer than The Shard is tall, left Shanghai on its maiden voyage on December 8 carrying 19,100 containers.

Four thousand of the containers - with a total of 57,000 tons of cargo of food, drink, clothing, electrical goods and furniture - are being unloaded at Felixstowe in Suffolk. The massive ship, built by Hyundai Heavy Industries in South Korea, weighs 184,000 tons and is 1,312ft long, compared to The Shard's 1,014ft height. The carrier - the size of four football pitches - will be returned to Asia with goods from Britain.

The CSCL Globe is also calling at Rotterdam, Hamburg and Zeebrugge in Belgium before heading back to the Far East. Guests from across the shipping industry and community were invited to a quayside lunch and VIP tour of the ship at Felixstowe. The ship is carrying such a variety of goods, including millions of razors, it is likely everyone in the country would buy something from it.

Source: [telegraph](#), 7 Jan 2015

Shipping Industries Boom as Oil Prices Continue Nose-Diving

Following downward trends in the oil prices in the global markets, the shipping operation costs have gone down, as demand for oil tankers have gone up due to moves by some countries to stockpile oil, taking advantage of the lower oil prices.

A ship owner and Chief Executive Officer, Dubai-based United Arab Chemical Carrier, Mr Per Wistoft, who operates a fleet of tankers in the Middle East and the Indian subcontinent, said this development was having a positive effect on the shipping industry and expecting the profits of companies to go up this time.

Oil prices have been sliding for the past few months. From a peak of \$115 in June, prices have dropped to around \$50. Analysts have predicted the trend to continue till the second quarter of this year. According to Wistoft, bunkering costs have almost halved since last year and the demand for oil tanker has gone up.

Bunkering costs of very large crude carriers, also known as super tankers, have come down from \$40,000 per day to \$20,000. "This has been a substantial help for shipping companies to overcome the cost. Bunkering is one of the major expenses of the shipping companies." He predicted floating storage to increase due to low oil prices. Floating storage is a method by which oil companies hire large vessels to store oil and sell when the price increases.

The capital utilization to procure oil is much less than before due to falling oil prices, Bounty Marine Services that is involved in bunkering of oil said. "Buying of diesel has become cheaper due to the market situation. Entire shipping industry is going to benefit," said Sudai Jallad, the owner of Bounty Marine Services.

He said they used to spend \$80,000 for buying 100 tonnes of diesel earlier. "We now get the same quantity for \$50,000. It is 40 per cent less." Meanwhile, an analyst said China was in an oil buying spree due to lower oil prices but it is unlikely to prop up global oil markets.

"In this time of low oil prices, it comes as no surprise that China is stockpiling fuel," said Daniel Ang, investment analyst from Phillip Futures. He added that China was

one of the biggest consumers and importers of crude oil, and taking advantage of oil when prices are low is a strategic move.

“However, we see the big uptake of crude oil by China to not be reflective of China’s crude oil demand. These stockpiles would likely remain unused in the short term and thus, giving only an artificial boost on crude demand,” Ang said. According to shipping consultancy Drewry, container shipping profitability is expected to improve in 2015, despite record vessel deliveries, driven by lower unit costs.

It said more carriers were expected to be profitable in 2015, provided that a number of tailwinds prevail. These include continuing carrier focus on vessel deployment; fuel costs remaining low; recovering demand; successful outcome of annual BCO (Beneficial Cargo Owner) contract negotiations; and new operational alliances delivering greater market stability.

Source: [Hellenic Shipping News](#), 14 Jan 2015

Japan to Help Boost Indian Ship Recycling

The Ship Recycling Yard at Alang located near Bhavnagar in Gujarat State on the western coast of Gulf of Cambay is claimed to be the largest ship recycling yard in the world, in terms of number of ships being dismantled.

The Ship Recycling Industries Association of India on Tuesday agreed to the Japanese condition of adhering to the norms of Hong Kong Convention, 2009, on the ship recycling industry

Indian Express, a prominent newspaper in the country quoted Mitsuhiro Ida, deputy director for maritime bureau in the Ministry of Land, Infrastructure, Transport and Tourism of Japan, saying that Japan can help India if India is ready to ratify the Hong Kong Convention. Japan can help ship recycling industry of India if India cooperates with the global efforts to put into force the Hong Kong Convention.

SRIA secretary Nitin Kanakiya said that the association has no problem in conforming to the HKC. Majority of norms laid down in the HKC are covered in Ship

Recycling Code, 2013 of India. But, in return, SRIA expects technological help from Japan for decontamination of ships after they are beached.

Japan has a huge shipbuilding industry but due to environmental concerns, it sends its decommissioned ships to China. Given the change in diplomatic environment, this visit by the Japanese delegation is important to India.

Ship Recycling Industries Association India is an organization for Ship Recyclers in Alang/Sosiya, Bhavnagar, Gujarat. Alang is the world's largest ship demolition or ship breaking yard. Vessels that are no longer capable for plying reaped/recycled/demolished at Alang

Source: [Marine Link](#), 14 Jan 2015



How Much Plastic is in Our Oceans?

Considering the fact that just 5% of the world's plastic is currently recycled, it's safe to assume that at least some of this waste has ended up in our oceans. But up until now, we've only had a vague idea of the scale of the problem.

Expanses such as the Great Pacific Garbage Patch - a sprawling 'soup' of micro plastics - suggest that plastic in our oceans is a major problem. But the oceans cover 70% of our planet, so this is just a small part of the puzzle. In reality, how much plastic is in our oceans?

5.25 trillion pieces!

Thanks to a six year research mission by scientists in Australia, New Zealand, the US, France and Chile, we now have a much better idea. Between 2007 and 2013, twenty four expeditions set off across the globe, resulting in the first study of its kind to take a comprehensive look at how much plastic is in our oceans. So what did the project reveal?

Alarmingly, the research shows that there is a minimum of 5.25 trillion pieces of plastic in our oceans - mainly comprised of micro plastics measuring 5mm or less. That's the equivalent of 269,000 tones - the same as eight hundred and seven Boeing 767 jumbo jets.

Where does it come from?

The plastic found in our oceans comes from all kinds of places. Much of it is old fishing equipment. A significant amount is old packaging - including food and drink wrappers, plastic bags and Styrofoam cups. Then there's debris from offshore oil rigs, products from dropped shipping containers, and other obscure objects. Plastic doesn't only originate from direct deposits into the ocean; it can also travel down streams and rivers to reach the sea.

Should we be worried?

The problem is that the majority of plastics are not biodegradable. Instead, they break into smaller and smaller pieces - a process encouraged by the sun, known as photo degradation. In most cases, once plastic has reached the ocean, it is there to stay.

Plastic is a threat to both marine life and humans. Large pieces including fishing nets can strangle or entangle animals such as seals and dolphins. Extensive swathes of plastic can block sunlight for algae and plankton, which are vital for the survival of other species. As the first crucial step of the food chain, a threat to these microorganisms is a big concern for the future of marine ecosystems.

Fish - allowing harmful substances to travel up the food chain, and ending up on our plates, can ingest smaller pieces. In reality, we do not know how this is affecting our health. This first full-scale research project has revealed the true extent of how much plastic is in our oceans. Now, it's up to us to make a change.

What else can we learn from our oceans?

For the last three years, Dr. Intan Suci Nurhati has gone on expeditions to collect small samples of coral to facilitate a range of subsequent geochemical analyses. With her colleagues in other universities and institutions in the region and around the world, Dr. Intan and her collaborators have been working together and sharing their collections of coral samples from the Indian Ocean and Southeast Asia. The analyses have enabled them to precisely date past environmental events that occurred in the last centuries.

Source: [Pollution Solutions](#), 7 Jan 2015

Ship Ballast a Major Source of Pollution

The Chesapeake Bay Foundation was gracious in giving the polluted waters of the Chesapeake Bay a D-plus. It should have been an F-minus ("Bay grade remains D+

despite improvements," Jan. 5). A major culprit involved with the bay's increased pollution is the shipping industry.

They bring thousands and thousands of gallons of their possibly polluted waters from abroad in the form of ships' ballast that is dumped in the Chesapeake Bay before their departure in order for them to lighten their loads.

When the various ships are inspected, water samples should be taken to help identify the culprits who add to this present dilemma the bay is experiencing.

Source: [Baltimore Sun](#), 7 Jan 2015

Ocean Conditions Caused by Pollution Threatens Development of Coral Reefs

Scientists revealed that the lowering pH level of oceans caused by pollution is preventing coral reefs from developing a strong and health skeletal structure, Science Daily reported. According to a study conducted by scientists from the Woods Hole Oceanographic Institution (WHOI), this could lead to coral reefs eroding at a faster rate.

They explained that as part of their development, coral reefs form skeletons that could be as big as cars or houses. In turn, various small marine organisms create holes into the skeletal frame of the reefs for their shelters. Eventually, this will lead to the complete erosion of the skeleton.

This process, dubbed as bio-erosion, is considered natural as long as the rate of skeletal growth and the burrowing activities of the marine organisms are in balance. "A healthy coral reef ecosystem exists in a constant and often overlooked tug-of-war," lead researcher Thomas DeCarlo said in a statement. "As corals build their skeletons up toward the sea surface, other organisms - mollusks, worms, and sponges - bore into and erode the skeletons to create shelters."

However, due to pollution caused by various man-made factors, the pH level of oceans is beginning to decrease. This then increases its acidity. The acidification in the water then eliminates carbonate ions, one of the important elements used by corals in the development of skeletons. This prevents corals from building structures

fast enough to replace those destroyed by the marine organisms or bio-eroders. To prevent a total mass erosion of coral reefs, the scientists advised members of the public to limit their activities that contribute to the pollution of oceans.

Source: [Christianity Daily](#), 8 Jan 2015

China's Manned Sub Discovers New Active "Chimney Vents" in Indian Ocean

China's deep sea manned submersible Jiaolong discovered lots of new active "chimney vents" in southwest of Indian Ocean on Monday. "Chimney vents," also known as hydrothermal sulfide, is one kind of sea-bed deposit containing copper, zinc and precious metals such as gold and silver. Those metals formed sulfides after chemical reactions and came to rest in the seabed in "chimney vents."

"While Jiaolong navigating for about three kilometers, we saw lots of active chimney vents with hydrothermal fluid blowing out, which are higher and sharper than the ones we had found in other areas." Tao said. "Some chimney vents are as high as 20 meters, so it is very hard for the pilot to operate the sub to reach there." Tao said. "And it's difficult to measure temperature of hydrothermal fluid blowing out of chimney vents and to take samples as well."

The temperature of one active chimney vent, which Jiaolong measured with a special probe in its iron-hand, was 379 degree Celsius, said Tang Jialing, who piloted Jiaolong and managed to collect some hydrothermal fluid, hot deep-sea water and sulfide for scientists.

Having investigated this area before the dive, Chinese scientists had collected some sulfide but had discovered no active chimney vent aboard a scientific vessel, according to Tao. "It's better to go and have a look with manned sub if you are really interested in some deep-sea areas, and you will have astonishing discoveries." Tao said.

After Liu Xiaohui, a 26-year-old pilot trainee of Jiaolong, returned to the support ship on Monday, all six pilot trainees of Jiaolong have finished their first dive as copilots.

"When they finish three dives in oceans as copilots, they will be asked to pilot Jiaolong under instructions of experienced pilots." said Yu Hongjun, chief commander of the expedition. Reaching its deepest depth of 7,062 meters in the Pacific's Mariana Trench in June 2012, Jiaolong is on a 120-day expedition in southwest of Indian Ocean.

Source : [Xinhua Net](#), 13 Jan 2015

Scientists Reveal Which Coral Reefs Can Survive Global Warming

Scientists have identified which parts of the Great Barrier Reef and other reefs are most capable of recovering from mass bleaching events, which will become more frequent due to global warming.

The information should help conservationists to target their efforts to protect the portions of reefs that are most capable of survival, they say. Previous studies have shown coral reefs as they exist today will be largely wiped out by climate change in the long term, but the new work by an Australian team shows for the first time which reefs in the short term can be expected to bounce back from bleaching events.

A major bleaching event is currently under way in large parts of the North Pacific, including the Marshall Islands and Hawaii, which experts have warned could be on a 'historic' scale akin to the record bleaching of 1998 that saw mass coral die-off around the world.

Nicholas Graham, lead author of the study published in Nature on Wednesday, looked at the 1998 bleaching's impacts on reefs in the Seychelles, and found 12 of 21 sites had recovered afterwards. Looking at just two of 11 factors – water depth and the physical complexity of the coral – the team were able to use modeling to 98% of the time correctly predict whether a reef would recover or not. Deeper water and a more complex structure made a recovery more likely.

Graham, who works on coral at James Cook University in Australia, told the Guardian that the results bought time for authorities to better manage climate-

resilient reefs while bigger picture problems such as greenhouse gas cuts were addressed.

“If emissions continue as they are, the longer term future is likely to still be bleak, even for those recovering at the moment [from bleaching], because the projections are coral bleaching will become more and more frequent. In a way it’s [the study’s findings] buying us time to keep as many reefs in good shape as we can, while we tackle some of these global, bigger issues.” The study’s findings suggest the parts of the Great Barrier Reef that are still relatively pristine, in the north and further offshore, are also those best placed to recover from bleaching events brought about by global warming.

Graham said the findings also raised concerns about the logic of dumping sediment from planned major port projects to expand coal exports along the Queensland coast, a local impact which could harm coral otherwise capable of surviving the global impacts of climate change.

“If you have these big dredging projects, such as at Abbott Point, if we’re dumping a lot of spoil and sediment into the Great Barrier Reef lagoon, a lot of that will settle in deep water, a lot of which might be coral and a lot of which will do better under climate change. If we’re not actually doing enough to reduce local impacts, we’re doing ourselves a disservice under climate change.”

The research could help organizations such as the reef’s marine park authority to better pinpoint which areas should avoid anchor damage from boats, which reduces physical complexity and thus the ability to recover from bleaching, Graham added. It could also help other coral nations, such as Kenya, to pinpoint where to limit damage by fishing gear.

By carefully managing reefs with conditions that are more likely to recover from climate-induced bleaching, we give them the best possible chance of surviving over the long term, while reduction of local pressures that damage corals and diminish water quality will help to increase the proportion of reefs that can bounce back.”

Source: [Guardian](#), 14 Jan 2015

Artificial Reef off Barakah Nears Completion

New reef in waters surrounding the Barakah nuclear power plant is in final stages. An artificially constructed reef near the UAE's nuclear energy project has reached its final stages of completion, the Emirates Nuclear Energy Corporation announced on Wednesday.

The reef is located 3.8km from the shoreline of Barakah, home of the UAE's peaceful nuclear energy programme, an ENEC press release said. The almost 6,700 square metre reef, roughly the size of a football field, was constructed using recycled moulded concrete core-locs originally used in the assembly of Barakah's coastal breakwater. Almost 1,800 of the large concrete units were carefully positioned on the ocean floor using a GPS-aided crane to create the underwater reef structure.

The lattice formation of the reef is designed to replicate a natural coral reef, and works to stimulate the local ecosystem by improving the existing seabed habitat, providing additional shelter for marine life, and encouraging biodiversity. The enhanced habitat is expected to attract a range of marine species including algae, invertebrates such as barnacles, corals, and oysters, and a variety of small and large fish.

ENEC has also rolled out a number of other sustainability initiatives in recent months, including an intensive water conservation campaign which has seen the installation of water-efficient faucets at the plant, the development of an innovative car washing facility that recycles more than 80 per cent of the water it uses, and the application of recycling methods to reuse water from the project for uses such as irrigation.

Collectively, these efforts have helped reduce Barakah's water consumption by up to almost 100,000 gallons per day - the equivalent of more than 55 Olympic-sized swimming pools over the course of a year. Mohammad Al Hammadi, Chief Executive Officer of ENEC, commented on the development of the project: "The completion of the Barakah Artificial Reef Project is an excellent example of the positive measures we are implementing in line with our Environment and Sustainability Charter."

The project has been developed in partnership with the National Marine Dredging Company, and in line with guidance from ENEC 's environmental regulator, the Environment Agency - Abu Dhabi .

ENEC has outlined its commitment to operating in an environmentally conscious manner in its Barakah Environment and Sustainability Charter- an agreement co-signed by ENEC and its prime contractor, Kepco. The charter sets out a series of obligations for both parties to ensure that environmental protection, habitat preservation, water and energy conservation, and sustainable waste management best-practices are consistently applied at site.

By 2020, ENEC's four nuclear energy reactors will provide approximately 25 per cent of the UAE's electricity needs, saving up to 12 million tons of greenhouse gas emissions each year. Unit one is already more than 60 per cent complete and due to connect to the grid in 2017, with one additional unit coming online each year up to 2020.

Source : [Yahoo News](#), 15 Jan 2015

Floating Marine Debris Can Be Deadly for Cetaceans

Ingesting plastic can be very dangerous for marine mammals, even deadly. A fragment of a plastic DVD case killed one whale in Virginia last August, one of many casualties caused by plastic. According to the Marine Pollution Bulletin report, some species of cetaceans ingest plastic at rates as high as 31 percent. Up to 22 percent of cetaceans that swallowed plastic were at an increased risk of death. Plastic can rupture the stomach lining of these animals, causing them to starve to death. Sperm whales are especially vulnerable to plastic debris, because it bears a strong resemblance to squid, their main prey. Frances Gulland, who works at the Marine Mammal Center in California, said that almost every sperm whale she autopsied had a piece of plastic in its stomach.

Source: [techtimes](#), 15 Jan 2015