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Infographic: Global shipping and emissions
08/11/2015

*Shipping traffic has grown rapidly in the past two decades—and so have its emissions. But what does that mean for the atmosphere?*

Shipping is the lifeblood of globalization and never before have so many container ships, oil tankers, and even recreational cruise ships, chugged across the world’s oceans. Yet their bunker-fuel-propelled engines spew carbon dioxide into the atmosphere, and perhaps worse, toxic sulfur and nitrogen compounds, too. Hakai Magazine breaks down the environmental impact of ship emissions, for the planet and human health.

**Ship Traffic Detected in Global Satellite Survey**

A 2014 study found an increase in shipping traffic of up to 300% between 1992 and 2012.
New study: Contribution of ship emissions to the concentration and deposition of air pollutants in Europe

08/11/2015

Researchers of the Laboratory of Atmospheric Chemistry and Paul Scherrer Institute in Switzerland analyzed the effects of international shipping on the annual as well as seasonal concentrations of ozone, primary and secondary components of PM2.5 and the dry and wet deposition of nitrogen and sulfur compounds in Europe.
The results were published in the discussion paper Contribution of ship emissions to the concentration and deposition of air pollutants in Europe, presently under review for the journal Atmospheric Chemistry and Physics (ACP).

The rise in population and mobility is associated with emissions of pollutants from transport sectors such as road, air traffic and international shipping. These emissions affect the air quality and climate. There have been many studies on the effects of air and road traffic emissions and projections of their future levels. Relatively few studies, on the other hand, have dealt with the impacts of ship emissions in detail.

The marine transport sector, which is one of the least regulated anthropogenic emission sources, contributes significantly to air pollution, particularly in coastal areas. Emissions from maritime transport in European waters constitute a significant share of worldwide ship emissions of air pollutants and greenhouse gases. Shipping is one of the fastest growing sources of greenhouse gas emissions due to transport, and is also a major source of air pollution causing health problems, acid rain and eutrophication.

Abstract

Emissions from the marine transport sector are one of the least regulated anthropogenic emission sources and contribute significantly to air pollution. Although strict limits were introduced recently for the maximum sulfur content in marine fuels in the SECAs (sulfur emission control areas) and in the EU ports, sulfur emissions outside the SECAs and emissions of other components in all European maritime areas have continued to increase in the last two decades.

The researchers used the air quality model CAMx with and without ship emissions for the year 2006 to determine the effects of international shipping on the annual as well as seasonal concentrations of ozone, primary and secondary components of PM2.5 and the dry and wet deposition of nitrogen and sulfur compounds in Europe.

The results suggest that emissions from international shipping affect the air quality in northern and southern Europe differently and their contributions to the air concentrations vary seasonally. The largest changes in pollutant concentrations due to ship emissions were predicted for summer. Increased concentrations of the primary particle mass were found only along the shipping routes whereas concentrations of the secondary pollutants were affected over a larger area. Concentrations of particulate sulfate increased due to ship emissions in the Mediterranean (up to 60 %), in the English Channel and the North Sea (30–35 %) while increases in particulate nitrate levels were found especially in the north, around the Benelux area (20 %) where there were high NH3 land-based emissions.

The model results showed that not only the atmospheric concentrations of pollutants are affected by ship emissions, but also depositions of nitrogen and sulfur compounds increase significantly along the shipping routes. NOx emissions from the ships especially in the English Channel and the North Sea, cause a decrease in the dry deposition of reduced nitrogen at
source regions by moving it from the gas-phase to the particle phase which then contributes to an increase in the wet deposition at coastal areas with higher precipitation.

In the western Mediterranean region on the other hand, model results show an increase in the deposition of oxidized nitrogen (mostly HNO3) due to the ship traffic. Dry deposition of SO2 seems to be significant along the shipping routes whereas sulfate wet deposition occurs mainly along the Scandinavian and Adriatic coasts. The results presented in this paper suggest that evolution of NOx emissions from ships and land-based NH3 emissions will play a significant role in the future European air quality.

[ACP - Atmospheric Chemistry and Physics]

**Renewable energy: Waving good buy?**

07/11/2015

*A hitherto-obscure piece of physics may be the secret to ocean power generation*

THE idea of extracting energy from ocean waves and turning it into electricity is an alluring one. The first serious attempt to do so dates back to 1974, when Stephen Salter of Edinburgh University came up with the idea of “ducks”: house-sized buoys tethered to the sea floor that would convert the swell into rotational motion to drive generators. It failed, as have many subsequent efforts to perform the trick. But the idea of wave power will not go away, and the latest attempt—the brainchild of researchers at Oscilla Power, a firm based in Seattle—is trying to address head-on the reason why previous efforts have foundered.

This reason, according to Rahul Shendure, the firm’s boss, is that those efforts took technologies developed for landlubbers (often as components of wind turbines) and tried to modify them for marine use. The consequence was kit too complicated and sensitive for the rough-and-tumble of life on the ocean waves, and also too vulnerable to corrosion. Better, he reckons, to start from scratch.

Instead of generators with lots of moving parts, Oscilla is developing ones that barely move at all. These employ a little-explored phenomenon called magnetostriction, in which ferromagnetic materials (things like iron, that can be magnetised strongly) change their shape slightly in the presence of a magnetic field. Like many physical processes, this also works in reverse. Apply stresses or strains to such a material and its magnetic characteristics alter. Do this in the presence of permanent magnets and a coil of wire, such as are found in conventional generators, and it will generate electricity.

The core of Oscilla’s design is a bar made from an alloy of iron and aluminium, a mixture that is strongly ferromagnetic. Such bars need be compressed by only one part in 10,000 to have the desired effect. This means, to all intents and purposes, that the generator has no internal moving parts that can go wrong. But compressing a solid metal bar by even this tiny amount
requires the application of a huge force. Fortunately, ocean waves are powerful enough to generate this force. Oscilla’s design, as the firm’s name suggests, does it by oscillation.

Its oscillating generators consist of two large objects connected by cables (see diagram). At one end of these cables, floating on the surface, is a buoy that contains the generating apparatus of alloy bars, magnets and coils, together with sets of hydraulic rams which can squeeze the bars as desired. At the cables’ other ends hangs a structure called a heave plate, which is kept stationary by a combination of inertia and the drag of the surrounding water. This arrangement means that, as the buoy rises and falls with the waves at the surface while the heave plate stays more or less put, the tension on the cables increases and decreases. That changing tension drives the rams. The whole system is kept in place by a second set of cables that moor it to the seabed.

A full-scale device, which Oscilla hopes to build by 2018, will be a foam-filled steel buoy 27 metres in diameter, six metres high and weighing 1,000 tonnes, tethered to a toroidal concrete heave plate 70 metres below the surface. It will carry 12 magnetostrictive generators within. Mr Shendure says that a single such buoy, placed a few kilometres offshore, should deliver an average of 600 kilowatts—about the same as an onshore wind turbine. A prototype four metres in diameter underwent a brief but successful open-ocean trial off the Atlantic coast of America last year.

Oscilla’s generators will, Dr Shendure acknowledges, be expensive to build and install. But their simple design, he says, should allow them to operate for decades with no more maintenance than an occasional scrub to remove accumulated barnacles. He calculates that the cost of producing electricity from them will be around ten cents a kilowatt hour. That compares with 16 cents a kilowatt hour for offshore wind farms and six cents for the onshore variety. A grid-connected fossil-fuel power station would be cheaper still—five cents or less. But ten cents represents a decent start for such a novel way of generating electricity.

[The Economist]
Infographic: 10 ways ocean pollution makes us sick

07/11/2015

Our oceans are very polluted and full of plastic. Roughly 8 million tons of plastic is dumped into the world’s oceans every year, and according to a new study, the majority of this waste comes from just five countries: China, Indonesia, the Philippines, Thailand and Vietnam. Regardless of its source, plastic pollution has a devastating impact on marine life.

At EcoWatch, we’ve highlighted photos of sea turtles killed by ingesting plastic and other debris. And just recently, two whales have been killed from ingesting plastic bags and fishing gear. But ocean pollution affects humans too.

Check out this infographic from DIVE.in, an online scuba diving magazine, to learn how ocean pollution hurts us, too:
But pollution has our oceans on the brink of disaster

And in 2010
215m metric tons
of plastics found their
way into the sea

In 2007
2.12bn tonnes
of waste was dumped in
our planet’s oceans

THE CAUSES

TOXIC CHEMICALS FROM INDUSTRIES

Pollutants from industrial sources include:

- Asbestos
- Phosphates
- Petrochemicals
- Oils
- Lead
- Mercury
- Nitrates
LAND RUN-OFF

This occurs when excess water from rain or flooding flows over the land and into the ocean. When this happens, water picks up man-made contaminants that pollute the ocean.

This includes:
- Fertilisers
- Petroleum
- Pesticides
- Animal waste

36% of oil enters the ocean from land run-off

OIL SPILLS

Crude oil is toxic to marine life, and is extremely difficult to clean up.

1990s: 1,133,000 tonnes of oil lost
2000s: 208,000 tonnes of oil lost
2010-2014: 26,000 tonnes of oil lost

12% of oil entering the ocean each year is from oil spills
LITTERING

Over the last few decades, humans have dumped tons of rubbish into the sea.

*Cardboard 2 weeks*
*Newspaper 6 weeks*
*Styrofoam 80 years*
*Foam 50 years*
*Aluminium 200 years*

Plastic 400 years

In the most polluted places in the ocean, the mass of plastic is more than 6x the mass of plankton.

HOW DOES THAT AFFECT ME?

What you do on land can change the fate of what goes on off shore, and small mistakes in waste disposal can have a large impact on everyone’s health and wellbeing.
Chemicals such as pesticides, lead and other heavy metals found in polluted water can contaminate water supplies and food chains through the marine life affected:

- Hormonal problems
- Reproductive problems
- Nervous system damage
- Kidney damage

Bacteria turn metals like mercury into their most toxic form (i.e. methylmercury) which is then absorbed by plankton, making its way up the food chain until it ends up on your plate.

Mercury exposure can cause:

- Parkinson's disease
- Alzheimer's
- Heart disease

Pollution on the beach can cause severe reactions and illness through physical contact or ingesting the water:

- Stomach aches
- Diarrhoea
- Rashes

From sustenance, natural beauty to economics - the ocean provides plenty for the human race. Respect the ocean by keeping it clean for generations to come.

Source: Dive.in

[EcoWatch]
U.S.: Proposed ocean gas terminal in waters off NY/NJ faces environmental and terrorism concerns

07/11/2015

A company attempting to develop a liquefied natural gas transfer point in the waters off New York and New Jersey has been met by criticism from environmentalists who argue the plan is dangerous and unnecessary.

Liberty Natural Gas LLC has asked the federal government for permission to develop the deep-water docking station known as Port Ambrose. It would be located about 19 miles from Jones Beach in New York and 29 miles from Long Branch, New Jersey.

The company says the docking port is needed to deliver liquefied natural gas to the New York metropolitan area. Liberty's president Roger Whelan says it would mean lower home heating prices. But environmentalists say the port could be dangerous to the environment and a potential target for terrorists.

[The Associated Press]
Shipping’s World Cup: Can Europe get back in the game?

06/11/2015

New Zealand’s Rugby World Cup victory has further cemented the now long-held dominance of the All Blacks in international rugby. But the performance of the European nations in this year’s World Cup was disappointing, and over the long-term in shipping too, focus has gradually shifted from Europe to the other side of the world, with Asia the increasingly dominant player in many parts of the maritime industry.

Another round kicks off

The rise of Asia and especially China as key drivers of seaborne trade growth has over recent decades turned maritime eyes increasingly eastwards. Across many aspects of the shipping industry, Asia has consistently been moving up the league tables, but having slipped behind in the game, how does Europe’s position look now?

A look at overall economic performance suggests not. EU GDP growth is certainly improving after falling to -0.4% in 2012 (see graph), partly owing to low oil prices and the weak euro. But this recovery is far from convincing - growth is expected to remain below 2% this year. As a team performance, the overall impression of regional growth is one of distinct patchiness, with a weak showing in Greece and in countries exposed to difficulties in Russia partly offsetting improved displays in others such as France, Italy and Spain.

Trade struggles to convert

The implication of these trends on seaborne trade is similarly mixed. After notably firmer volumes in 2014, European container imports have slowed in the year to date, with volumes...
on the Far East-Europe route down 5%. Imports even into countries showing improved economic growth this year have declined. Asia remains the focus of box trade expansion, with Europe’s share of global imports set to fall below 14% this year.

In the dry bulk sector, China’s leap up the leaderboard has squeezed the share of EU imports in global iron ore and coal trade to 12% last year. China’s dry bulk imports are now coming under pressure, but the EU has been unable to claw back lost ground. However, in the crude oil trade, Europe has stubbornly stayed in the game, keeping a share of around 24% in global crude trade since 2010. With EU imports set to grow 8% this year, 2015 could see the EU drive a greater share of crude trade growth than China for only the second time since 2005.

_Tackling the leader_

Moreover, an apparent bounce-back is currently being seen in fleet ownership. Asia’s rapidly growing fleet had reduced the share of EU owners in the world fleet to 35.5% in 2013 (see inset graph). However, a 15% expansion in the Greek-owned fleet since start 2014 has helped the EU to begin to even out the scoreline, and the EU’s share of the world fleet is now rising for the first time since 2008.

_But no turnover_

So, some elements of European shipping now seem to be driving forward. But economic difficulties linger on, and in reality improvements have generally been only limited in scope. For now, just as the All Blacks must be feeling secure at the top, in the world of shipping Team Asia still seems well ahead of the European pack.

[Clarksons Research]

**Shipping braced for emissions curbs**

06/11/2015

*Shipping interests are closely following developments in the run-up to the upcoming Paris climate change conference in early December given the possibility that a stricter approach to curbing the industry’s CO emissions might result from the meeting.*

It remains possible that the shipping industry could receive specific mention in the blueprint to be discussed at the conference, known as COP-21, to take place from 30 November to 11 December. The direction the text will take will be known prior to the event but key elements are still unclear, Peter Hinchliffe, general secretary of International Chamber of Shipping, told IHS Fairplay at the Cosco-organised 12th World Shipping (China) Summit in Guangzhou.

“The answer is it’s too early to tell” what the impact on shipping will be from the Paris meeting, he said. “I think that we will have a better idea even in the days that lead up the conference because we’re still not completely sure what the final text will be.”
The key issue isn’t whether or not shipping is mentioned, he said, but the details of whether the International Maritime Organization will be held to specific goals in implementing climate change measures for the shipping industry, or even whether the United Nations Framework Convention on Climate Change (UNFCCC) takes a direct role in reducing CO emissions from shipping, an outcome the chamber opposes.

“What we would be worried about is if the text starts to include a more direct indication of what the expectation is of the IMO to actually do,” Hinchliffe said. “And the reason I say that is that we believe very strongly that the IMO should have the freedom to discuss with the member governments and with all of the stakeholders not just the shipowner side exactly what it is that can be done further to reduce emissions from shipping.

“We don’t think that that conversation is a trivial one,” he continued, “because it involves a pretty high level of knowledge about what the industry can actually do, what is practical, but more importantly it’s about what will the impact be of any measure on world trade ultimately. And there is real danger that if another UN agency, for example like UNFCCC, actually does that then they won’t be able to take into account the impacts on the industry or on world trade and we’ll end up with something that could be damaging to both, and that’s not where we want to be.”

Environmental groups are calling for an emissions target for shipping to form part of the binding agreement to come out of the Paris meeting. Such a target would ensure that shipping plays its part in limiting global warming to below 2°C until 2100. Environmental groups want to hold the IMO more accountable by setting specific CO emission reduction targets and by requiring regular progress reports to the UN.

“In practice the UNFCCC has not tried to stray into the areas beyond its strict remit so that’s very good; in past years of course they’ve fallen back on the Kyoto approach which is just to say to IMO you really ought to deal with this and that ... is a very good way of ensuring that shipping delivers the best efficiency that it possibly can.”

The industry opposes other proposals such as a tax on fuel that would create a fund to pay for emissions reductions measures in developing countries. The reason is that any measures that increase the cost of shipping will only serve to undermine global trade and the economic benefits to developing countries.

[IHS Fairplay]

**North Sea container ports: Antwerp overtakes Hamburg**

06/11/2015

*In the first half of 2015 a major change of trend took place in the main North Sea container ports. Antwerp and Rotterdam are now expanding their position at the expense of the German ports.*
The Far East alliances have played a major role in this connection. But the Russia crisis is also having a serious impact on Hamburg. What happened in the big North Sea container terminals in the first half of 2015 really was something of a landslide. While the Antwerp terminals experienced a gratifying 9.5% increase in throughput, Hamburg lost 6.8% of its container volume over the same period.

Antwerp (4.83 million teu) thereby replaced Hamburg (4.5 million teu) as Europe’s second biggest container port. And it did so in an overall market, which includes Rotterdam, Bremerhaven, Zeebrugge and Wilhelmshaven, that remained fairly stagnant, posting growth of one percent.

Stormy waters

So what is happening in the North Sea? «The movement within the shipping alliances was definitely to the advantage of Antwerp,» concluded Luc Arnouts, chief commercial officer of the port of Antwerp. The strategy of the 2M alliance, as part of which the world’s two largest shipping lines Maersk and MSC cooperate, was an important factor for growth. MSC has transferred its activities in the Far East business from the right to the left bank of the Schelde in the Deurgangdock and is now making intensive use of this hub for both transhipment and hinterland traffic operations. It is understood that a second alliance has also substantially stepped up its activities in Antwerp: the Ocean3 alliance, in which CMA CGM, China Shipping and the Arabian UASC cooperate. All three shipping companies are good customers of Hamburg.

Change of trend in transhipment

Above all, transhipment traffic seems to have shifted from north to west, as can be seen from Hamburg’s throughput figures: in the period in question, Hamburg lost 20% of its overall transhipment traffic at the same time as there was an increase of 2.3% in transhipments to the overland transport modes of road and rail. The figures are heightening tension in the Hanseatic city over the deepening of the Elbe on which the Federal Administrative Court is expected to come to a ruling in the next few weeks. «After an enlargement of the navigable channel, a very large containership could carry up to 1,800 loaded containers more on its incoming and outgoing trips,» said HHM chairman Axel Mattern. This would again make Hamburg more attractive for transhipment traffic.

Slump in east European traffic

Another reason for the disappointing development in Hamburg is the crisis affecting Russia. This business alone slumped by more than 35% – the ports of Russia are Hamburg’s most important partners after China.

The development of traffic in the other major container ports was a good deal less dramatic than in Antwerp and Hamburg: the market leader Rotterdam expanded by 3.5% and handled 6.4 million teu in the first six months of the year. The ports of Bremen and Bremerhaven
suffered a contraction of 3.5% to 2.74 million teu. Besides the general economic situation, the position there was aggravated by a major accident in the North Sea Terminal Bremerhaven (NTB) which temporarily reduced its handling capacity. The terminals in Bremerhaven also felt the effects of the appearance on the container terminal map of the nearby facility in Wilhelmshaven with a throughput of 200,000 teu. Zeebrugge lost a substantial volume to the other west range ports.

Unfavourable outlook

In the second half of the year, the development of traffic in all container ports will follow a downward trend. In particular, no port will escape the effects of the weakness in Far East trade, which made itself felt by cuts in sailing schedules, most notably in the summer.

[International Transport Journal]

Marine invasive species benefiting from rising carbon dioxide levels

06/11/2015

Ocean acidification may well be helping invasive species of algae, jellyfish, crabs and shellfish to move to new areas of the planet with damaging consequences, according to the findings of a new report.
Slimy, jelly-like creatures are far more tolerant of rising carbon dioxide levels than those with hard structures like corals, since exposed shells and skeletons simply dissolve away as CO2 levels rise.

The study The impact of CO2 emissions on 'nuisance' marine species, conducted by marine scientists at Plymouth University, has found that a number of notorious 'nuisance' species -- such as Japanese kelp (Undaria pinnatifida) and stinging jellyfish (Pelagia noctiluca) are resilient to rising CO2 levels. Published in Research and Reports in Biodiversity Studies, it notes that in the tropics, coral reefs face a host of interconnected problems (bleaching, corrosion, disease, spreading seaweed, invasive species) that are all caused by rising CO2 levels.

"We are witnessing the spread of marine life that cause problems -- such as toxic jellyfish blooms and rotting algal mats," said Professor Jason Hall-Spencer, lead author of the report. "Based on a synthesis of evidence available to date, we predict the problems associated with harmful marine life will get worse in response to rising CO2. Pathogens like cholera do not recognise national borders so seawater warming is a health issue for cities like London, and it remains to be seen which organisms will spread and cause problems as Arctic shipping routes open up."

The study arose from observations at volcanic sites in the Mediterranean, where Professor Hall-Spencer has led expeditions to record what forms of marine life cope well with higher CO2 levels. They found that invasive species of algae and jellyfish had a tendency to thrive in acidic conditions. Their extensive review of laboratory experiments reveals stand-out cases such as so called 'Killer algae' (Caulerpa taxifolia), which is spreading worldwide, that benefit from higher CO2 but are so toxic that native herbivores die of starvation rather than eat it.

The report highlights the American slipper limpet, Crepidula fornicate, as an example of ocean acidification both helping and hindering a species, with evidence to show it has spread to Europe to become one of the 100 most invasive species, while at the same time, the species' larvae has been placed at greater risk of predation due to reduced shell growth. Similarly, both the Red King Crab, which has invaded the Barents Sea, and the predatory snail Urosalpinx cinera, which has moved from the north west Atlantic to the north east Atlantic and Pacific, impacting upon oyster and scallop aquaculture in the process, have also demonstrated a marked reduction in larval survival and growth.

"Observations show there will be winners as well as losers as CO2 levels ramp up, just as there were in previous mass extinctions," said researcher Ro Allen. "The spread of harmful marine organisms should be factored into risks of rising CO2 emissions."

[University of Plymouth / Science Daily]
Mexico: New container terminal in Lázaro Cárdenas nears completion

06/11/2015

The new terminal will make the port in Michoacán, Mexico’s second largest, the most technologically advanced container terminal in Latin America, said J.D. Nielsen, managing director of APM Terminals in Mexico.

Three of the largest ship-to-shore cranes in the world arrived in Lázaro Cárdenas last month as Terminal 2 at the Pacific coast port edges closer to completion, which is scheduled for next year.

The semi-automated deepwater terminal will have an annual capacity of 1.2 million TEUs, a unit of measurement roughly equivalent to a 20-foot shipping container. It will boat seven of the giant cranes, a rail facility that will be the largest of its kind in Latin America and a 750-meter quay, making it capable of handling the largest container vessels. It will be able to accommodate two 350-meter ships of up to 15,000 TEUs simultaneously, said APM in a prepared statement.

Lázaro Cárdenas handled 1.05 million TEUs of cargo in 2013 of the total 4.87 million handled by all Mexico’s ports. Volume at the port of Manzanillo in Colima, the country’s busiest, was 2.1 TEUs the same year.

Netherlands-based APM Terminals, a container terminal operator, has a 32-year concession for the design, construction and operation of the terminal, an investment of US $900 million.

[Mexico News Daily / Progressive Railroading]
U.S.: States dig deep into wallets in a race to deepen ports

06/11/2015

*Tired of waiting for Congress, states racing to deepen seaports before the opening of the enlarged Panama Canal next year are picking up the cost of what has traditionally been a federal duty.*

With funding for coastal navigation channels at its lowest in a decade, port directors worry that the federal government is abandoning construction and maintenance of U.S. waterways just as builders churn out a new generation of massive container vessels. The so-called post-Panamax class carries loads twice the size of current ships and demand ever-deeper harbors.

At least four ports in Florida, Georgia and Texas have decided to foot the bill to deepen federal waterways, a total of almost half a billion dollars, rather than wait years for funds. To berth post-Panamax ships, ports typically need 50 feet of depth — there are only four on the U.S. East Coast. Smaller facilities are looking for an edge to gain a bigger piece of the $4.6 trillion in economic activity generated at U.S. ports last year, a quarter of the gross domestic product.

“Efficiency’s the name of the game,” said John E. Walsh, chief executive officer of the Canaveral Port Authority in Cape Canaveral, Florida, which is funding a deepening project with state and local money. “You will either be a port that can be a stop or you’re not.”

*Washington adrift*

For more than a century, the U.S. government has been responsible for maintaining navigable waterways, with Congress traditionally authorizing projects overseen by the Army Corps of Engineers and appropriating funds. In recent years, Congress has been at a partisan stalemate over everything from the Export-Import Bank, temporarily shut down in July after lawmakers failed to renew its charter, to highway funding, which has been largely sustained with short-term, last-minute measures.

Federal lawmakers have been similarly slow to approve port work and even slower to appropriate money. President Barack Obama’s fiscal 2016 budget request for the Army Corps’s coastal navigation-channel construction program was $81 million, the least in over a decade, according to Jim Walker, director of navigation policy and legislation at the Virginia-based American Association of Port Authorities.

“The federal government is just funding constrained,” Walker said. “They’re very focused on the deficit and trying to reduce federal spending. The states just see the need to get these investments completed.”

The reason is the end of the “Panamax standard,” which was adopted in 1985 to accommodate the dimensions of the Panama Canal. Panamax ships can fit through the original width of the locks. Post-Panamax ships are wider, and require ports at least 43 feet deep. New generations are even bigger and require depths of 50 feet or more.
In September, Florida’s PortMiami finished dredging its waters to 52 feet, making it the deepest south of Virginia and positioning it as one of the first calls for post-Panamax ships. The $220 million project was funded by state and local dollars after delays in Congress led Republican Governor Rick Scott to say Florida would foot the federal government’s $77 million share and seek reimbursement later.

“We’re still hopeful that we can go back to the federal government and have them reimburse the port,” said Juan Kuryla, director of PortMiami, which is only the nation’s 14th largest by volume of container traffic. “What is the likelihood of that? We have to wait and see.”

At Port Canaveral, 200 miles (320 kilometers) north of Miami, container traffic is tiny compared with its Eastern seaboard brethren, but it has big plans to deepen its waters. Canaveral gets 80 percent of its revenue from cruises. It ranks only 49th in container volume.

The port had planned to apply for federal funding, but quickly realized that it had little chance of securing any in a timely fashion due to its relatively small size and economic insignificance.

“There was no money available in Washington,” said Walsh. “The likelihood of Port Canaveral getting it — it’s sort of like when you’re the last child of six and your older brother isn’t getting a cellphone. Your chance of getting a cellphone is pretty slim.”

Georgia Ports Authority has been working for more than a decade on a $700 million harbor deepening along the Savannah River. The state advanced its entire $266 million share, a cost that normally would have been distributed over several years if federal dollars had been at hand. Now, port officials await federal money to maintain dredging already under way.

“Federal dollars have been hard to come by, and lean,” said Curtis Foltz, executive director of Georgia Ports Authority.

Not all ports are ready to let the U.S. government off the hook. The Port of Corpus Christi in Texas is trying to keep pace with increased activity related to manufacturing and energy production, and has gotten approval from Congress to deepen its port to 52 feet. Even though the appropriations from Congress have yet to materialize, the port’s executive director says he has no other choice but to wait for federal money on a project that will cost more than $300 million.

“We don’t like having the federal government abrogate their responsibility,” said John LaRue. “If everybody starts doing that they’ll just say we really don’t have to do this, we’ll let the ports do it themselves.”

[Bloomberg]
U.S.: President Obama rejects Keystone XL oil pipeline

06/11/2015

On Friday, the U.S. State Department issued a rejection in its permit review for TransCanada’s proposed Keystone XL oil pipeline. The Obama Administration had been widely expected to decline permission to build.

In issuing the decision, Secretary of State John Kerry said in a statement that the project would have had a “negligible impact on our energy security . . . would not lead to lower gas prices for American consumers . . .[and] would facilitate transportation into our country of a particularly dirty source of fuel.”

He continued to add that “the critical factor in my determination was this: moving forward with this project would significantly undermine our ability to continue leading the world in combating climate change.”

In a press conference Friday, President Obama echoed this statement, adding that “the pipeline would not make a meaningful long-term contribution to our economy.”

Environmental groups had called for President Obama to decline TransCanada’s permit request, as had many members of his own party. The pipeline’s cancellation could potentially give the United States an edge in negotiations during the upcoming COP21 climate talks in Paris.

TransCanada had attempted to delay the State Department’s finding by requesting its postponement until after a review by authorities in Nebraska. The procedural request would have pushed any decision back until after the 2016 elections, potentially increasing the odds of green-lighting the project by handing the choice to a future administration.

Keystone XL would have linked existing pipeline networks in Canada and the United States to bring crude from Alberta and also some from North Dakota to refineries in Illinois and, eventually, the Gulf of Mexico coast.

TransCanada and other oil companies said the pipeline would have strengthened North American energy security, created thousands of construction jobs and helped to relieve a glut of oil in the country's heartland.
The newly elected government of Canada sounded a note of reserved disagreement following the announcement. “We are disappointed by the decision but respect the right of the United States to make the decision,” Prime Minister Justin Trudeau said in a statement following Obama’s address.

American Petroleum Institute President and CEO Jack Gerard said the president’s rejection of the Keystone XL pipeline is a clear example of politics coming before the interests of U.S. workers and consumers.

“It’s ironic that the administration would strike a deal to allow Iranian crude onto the global market while refusing to give our closest ally, Canada, access to U.S. refineries,” said Gerard.

“This decision will cost thousands of jobs and is an assault to American workers. . . . Seven years of review have determined the project is safe and environmentally sound, yet the administration has turned its back on Canada with this decision, and on U.S. energy security as well.”

The National Ocean Industries Association (NOIA) also issued a statement condemning the decision, saying that as it comes “just weeks after the Administration cancelled two previously scheduled Arctic lease sales and denied Arctic lease extensions, [the] decision is both ill-timed and illogical.”

Since 2008 the United States has experienced a drilling boom boosting oil production 80 percent and contributing to a slump in domestic oil prices from above $100 a barrel to about $44. Combined with the possibility that much Keystone XL oil would have been exported as refined products, plus the relatively costly extraction methods used for the oil to be transported, this has led some analysts to conclude that the project would not significantly affect American energy security or pricing.

[Maritime Executive]

**Nicaragua: Government issued environmental permit for canal construction**

06/11/2015

*On November 5, the government of Nicaragua issued an environmental permit to Chinese conglomerate HKND for the construction of its proposed trans-Nicaraguan canal.*

The approval comes after an official review of HKND's Environmental and Social Impact Assessment (ESIA), including public meetings with total attendance of about 3,000.

HKND was granted the exclusive right to build the canal in 2013, subject to meeting certain criteria for the ESIA. Prior to the assessment, an economic study was carried out by McKinsey & Co. along with an engineering survey by China Railway Siyuan Survey and Design.
HKND estimates that construction will be underway by the end of this year. Lock construction and bulk excavation will commence by the end of 2016, and it is expected that the Canal will be completed towards 2021. It is designed to accommodate container vessels up to 25,000 TEU, super tankers of 320,000 dwt and bulk carriers of 400,000 dwt.

Environmental scientists have questioned whether its construction would disrupt sensitive land and water ecosystems in Nicaragua. Their concerns center around the waters of Lake Nicaragua, which will be partly filled in as reclaimed land using silt from excavation.

HKND has designed retaining systems intended to prevent this silt from creating excess turbidity in the lake’s waters. HKND Chief Project Advisor Bill Wild has said that total reclamation from excavation spoils could result in the creation of 30,000 hectares of land – over a hundred square miles.

Social activists have expressed concern that the canal would disrupt the lives of those in its path. A resident of Brito, a coastal area that will become the seaport for delivery of canal construction materials and equipment, told a reporter that locals had already been informed by Chinese surveyors that they will have to leave. HKND estimates that a total of nearly 30,000 people will be displaced by construction.

HKND said in a statement that it is “committed to carrying out resettlement of the displaced people completely in compliance with International Best Practice, and has committed that all the relocated people will see improvements in their living standards.”

[Maritime Executive]

Maersk profit down 48% on oil and shipping headwinds

06/11/2015

*A.P. Moller-Maersk A/S Friday announced a 48% drop in third-quarter net profit, in line with lowered guidance the company announced just two weeks ago, as the markets in which its shipping and oil units operate continue to face significant headwinds.*

In recent weeks the Danish conglomerate cut both third-quarter and full-year guidance amid weak shipping demand and low oil prices, responding by slashing staff at both its oil and container shipping units, cancelling sailings, and delaying capacity spending.

Net profit for the quarter ended September 30 fell to $755 million from $1.47 billion last year. Maersk Line, the world’s biggest container operator in terms of capacity and the group’s biggest earner, contributed $264 million to group earnings in the quarter from $685 million in the same quarter last year. Maersk Oil contributed $32 million compared with $222 million. Group revenue fell 17% to $10.11 billion.
Maersk Line has struggled with oversupply and decreased imports into Europe, where freight rates declined 19.3% in the quarter to new historical lows. The company estimates that global container demand grew just zero to 1% in the quarter compared with last year, whereas the global container fleet grew by almost 9%, creating a significant market imbalance, it said.

Maersk Oil saw production increase during the quarter to 300,000 barrels of oil equivalent per day from 238,000 last year as a result of improved operational performance and production from new projects, as well as higher share of production from Qatar. However, the average oil price achieved was 51% lower than last year at $50 per barrel.

[MarketWatch]

Container market drama

06/11/2015

Attention is centred on container shipping for this week’s most read stories, with moves from Maersk Line leading the sail.

Cuts to jobs, chartered fleet and services charges have created much “turmoil” in the industry recently. Maersk operations snap up much of the news, while competitor MSC laid out its plans and Liverpool finally received some of the tools it will need to serve its hoped-for container giants.

Maersk’s pullback?

It is big news when the world’s largest container shipping company announces workforce cuts, new vessel investment deferrals and cancels options to buy larger ships in reaction to a duller demand outlook. Maersk Line axes jobs and scales back fleet expansion as demand fails to live up to expectations from Katherine Espina and James Baker takes a detailed look into the continued supply-demand imbalance and shares Maersk chief executive Søren Skou’s thoughts on the bold move.

Charters under fire

The same day Maersk announced the reduction of its workforce, competitor Mediterranean Shipping Co was still pressing ahead with its containership newbuilding programme, albeit with a change of strategy. In Janet Porter’s MSC to cut chartered fleet but no order cancellations, MSC confirmed it will remove chartered tonnage from its fleet as the current market conditions are not quite desirable.

Maersk again, this time in China

It is now cheaper to ship out a container! Effective November 1, Maersk Line and CMA CGM have cut charges for documentation and telex services and scrapped a customs clearance fee
at loading ports altogether. Cichen Shen brought Chinese exporters the good news Maersk Line and CMA CGM cut service charges in China, which might save them costs of up to Yuan92m ($14.5m) in shipping their cargoes abroad.

**Striding away**

The container shipping market has apparently lost some of its charm. World top container port operator APM Terminals is now diversifying its cargo base and starting to handle a wider range of freight. Janet Porter spoke to APMT’s chief executive Kim Fejfer right after the signing ceremony and outlines the rationale behind the plans in APM Terminals diversifies into non-containerised cargo.

[Lloyd’s List]

**Italy: Chinese invest in container terminal development at Vado**

06/11/2015

*APM Terminals plans to integrate its recently purchased perishables facility with a new terminal development at Vado*

Chinese investors have agreed to pour an undisclosed sum into a new container terminal set to be run by APM Terminals at Vado, in north-western Italy. Representatives from Qingdao Port Group and APM Terminals met earlier this week in The Hague to set sail on a new joint venture that will invest in the new port development while working with other partners.

Due to open in January 2018, operations at the Vado hub are expected to dovetail with the 275,000 annual TEU capacity at nearby Vado Reefer Terminal facility, which APM Terminals acquired from Italian fresh produce company GF Group in August of this year as part of the latter’s well-publicised restructuring. The Italian government is providing €300m for civil works on the new Vado project, with APM Terminals itself investing €150m.

In 2014, ports along northern Italy’s Ligurian coast, including La Spezia, Genoa and Savona/Vado, handled a combined 3.5m TEUs, representing an increase of approximately 6 per cent compared with the previous year, APM Terminals reported.

The Port of Qingdao, located in the Shandong Province on the Yellow Sea, is one of northern China’s major ports – the seventh-busiest container port in the world and the fifth-busiest in mainland China, with reported throughput of 16.6m TEUs in 2014.

Since 2003, APM Terminals has been a minority shareholder in the Qingdao Qianwan Container Terminal (QQCT), which handled 7.9m TEUs in 2014. A major expansion of facilities at the port is now underway.

[Fruitnet]
**Top 20 global terminal operators: Number of terminals and throughput (2011 – 2014)**

06/11/2015

<table>
<thead>
<tr>
<th>Terminal Operator</th>
<th>No. of Terminals</th>
<th>Throughput in million TEU</th>
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<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2013</td>
</tr>
<tr>
<td>1. APM Terminals</td>
<td>73</td>
<td>79.0*</td>
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<tr>
<td>2. Dubai Ports World</td>
<td>65</td>
<td>59.9</td>
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<tr>
<td>3. Hutchison Port Holdings</td>
<td>52</td>
<td>82.9</td>
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<tr>
<td>4. PSA International</td>
<td>40</td>
<td>63.0*</td>
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<tr>
<td>5. Ports America</td>
<td>36</td>
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<tr>
<td>6. COSCO</td>
<td>33</td>
<td>65.8*</td>
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<tr>
<td>7. NYK Terminals</td>
<td>32</td>
<td>12.7*</td>
</tr>
<tr>
<td>8. Terminal Investment Limited (TIL)</td>
<td>29</td>
<td>20.0*</td>
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<tr>
<td>9. China Merchants</td>
<td>27</td>
<td>80.8</td>
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<tr>
<td>10. ICTSI</td>
<td>27</td>
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<tr>
<td>11. SSA Marine</td>
<td>20</td>
<td>13.5*</td>
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<tr>
<td>12. China Shipping Terminal Development</td>
<td>15</td>
<td>9.0*</td>
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<tr>
<td>13. Terminal Link</td>
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<td>14. Hanjin</td>
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<td>15. Eurogate</td>
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<tr>
<td>16. MOL</td>
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<td>4.1*</td>
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<tr>
<td>17. APL</td>
<td>9</td>
<td>6.5*</td>
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<tr>
<td>18. K-Line Terminals</td>
<td>8</td>
<td>4.0*</td>
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<tr>
<td>19. Gulftainer</td>
<td>6</td>
<td>6.4</td>
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<tr>
<td>20. HHLA</td>
<td>4</td>
<td>7.5</td>
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</tbody>
</table>

* Terminal throughput estimates based on gross rather than equity basis.
Sources: Annual reports, investor notifications, presentations.

[AJOT – American Journal of Transportation]
UK: Port of Felixstowe opens Berth 9 extension to enhance capacity
06/11/2015

UK’s largest container port, the Port of Felixstowe, has opened a new Berth 9 extension to enhance the capacity at the port.

The 190m-long extension will enable the port to handle two large containerships at the same time. Port of Felixstowe CEO Clemence Cheng said: "The Berth 9 Extension represents the latest phase of development at the Port of Felixstowe. Our programme of continued investment has ensured that the UK remains a destination for direct calls by the latest generation of mega-ships."

The extended terminal, with quay length of about 920m, will be equipped with three new ship-to-shore gantry cranes capable of working vessels with containers stacked 10-high, and 24-wide, on deck.

The entire port currently has 36 cranes and both Berths 8 and 9 combined have ten cranes. The port’s Berths 8 and 9 opened in 2011 and features of 730m of quay. The Port of Felixstowe handles 44% of all UK container traffic with nearly 80 ships of 18,000 handled this year.

The UK Government’s National Infrastructure plan includes investments to enhance both road as well rail connectivity to the port. Additionally, the port authority plans for a new £200m Berth 10 at the port to increase the capacity further to handle mega-ships operating on world's major trade routes.

The port targets to deliver container handling capacity of 6 million TEUs in a year by 2020 and an additional 2 million TEUs within the Harwich Haven by 2030.

[Ship Technology]

Germany: Hapag-Lloyd flounders in tepid market debut
06/11/2015

Shares in Hapag-Lloyd hovered around their issue price in their stock market debut as investors gave the German shipping group a lukewarm reception reflecting uncertainty over the resilience of stock markets and the shipping industry.

The shares started trading at 20.05 euros ($21.81) but fell to their issue price of 20 euros apiece within minutes. Weak demand had prompted Hapag-Lloyd to postpone the initial public offering, trim the number of shares on offer, lower the price range and then to price at the bottom of the revised 20-22 euros range.
“It was a tough fight,” Chief Executive Rolf Habben Jansen said after ringing a ship’s bell on the trading floor of the Frankfurt stock exchange to mark the company’s market debut. The IPO values Hapag-Lloyd at about 0.5 times its book, compared to multiples of 0.8-1.2 times that peers like Maersk, Hanjin Shipping or Neptune Orient Lines trade at.

Several large investors had cancelled share orders after a profit warning from peer Maersk rocked already jittery markets. Like its rivals Hapag-Lloyd is facing a slowdown in global trade, but it is less exposed to the Asia-Europe route than Maersk and others such as China Shipping, Cosco and Hanjin because it does more business on Europe-North America routes, which have benefited from a strong U.S. dollar.

Against a backdrop of volatile equities markets, several other German groups recently curbed their capital-raising ambitions, including plastics maker Covestro and automotive supplier Schaeffler.

Hapag attracted orders worth less than twice the amount on offer, which is usually regarded as a minimum for any IPO to be successful, a person familiar with the deal said. “It was a restructured deal, so buyers could be sure to get shares and did not put in inflated orders,” the source said, adding that more than half of the shares were sold to Germany-based investors, significantly more than in most other IPOs.

Part-owner Klaus-Michael Kuehne and Chilean partner CSAV bought shares worth $30 million each, while shareholder TUI is offering a small amount of shares in an overallotment option. Hapag-Lloyd reaped $300 million in proceeds from a capital increase. “That suffices to realise our plans,” Habben Jansen said. Hapag plans to buy new ships and containers.

[Reuters]

Argentina: Concession for terminal operator TRP at the Port of Buenos Aires in doubt
06/11/2015

The head of Argentina’s tax authority (AFIP), Ricardo Echegaray, has asked the courts to withdraw the concession awarded to Terminales Río de la Plata (TRP) for container berths 1, 2 and 3 at the Port of Buenos Aires.

It is claimed that the company owes the state $10.5m in unpaid taxes. Echegaray has also written to the US Securities and Exchange Commission to keep them abreast of developments.

TRP's tax evasion was carried out through “two manoeuvers that aim to erode the tax base for the payment of income tax on the use of non-deductible expenses and deductions not practiced on payments to foreign recipients”.
The AFIP said it had challenged “exchange differences and interest deducted of approximately 150 million pesos for a financial loan in foreign currency applied to the purchase of shares”. TRP, it stressed, had tried to hide the move as part of a package of loans worth Pesos270m negotiated with international agencies.

[Port Strategy]

**Australia: Subsea mega-pipeline complete**

05/11/2015

*Australia’s Ichthys LNG offshore pipeline has been successfully completed by Inpex. The 890-kilometer (550 mile), 42-inch diameter gas export pipeline is the longest subsea pipeline in the southern hemisphere and the third longest subsea pipeline in the world.*

Construction began in June 2014, and the pipelay was carried out by Saipem’s Semac-1 barge and the Castorone pipelay vessel. The Ichthys LNG project is a large-scale LNG project by global standards and is expected to be operational over a period of 40 years. The project involves LNG lifted from the Ichthys gas-condensate field 200 kilometers offshore from Western Australia. The export pipeline will deliver gas from the Ichthys gas field to the onshore facilities at Bladin Point near Darwin, Australia, for processing.

The project includes some of the world’s biggest and most advanced offshore facilities, massive onshore processing facilities near Darwin and the 890 kilometer gas export pipeline to unite them. Each of these three components is itself a mega-project and work is progressing for all, with production scheduled for the end of 2016.

The field has the capacity to produce approximately 8.9 million tons of LNG and approximately 1.6 million tons of LPG per year, along with approximately 100,000 barrels of condensate per day at peak.
“Completion of the offshore pipelay marks a significant milestone for the project,” Managing Director Ichthys Project Louis Bon said. “It means we are one step closer to physically connecting our onshore plant near Darwin to the Ichthys Field where our offshore facilities will be permanently moored for the 40-year life of the Project.”

The Ichthys LNG Project is a project led by Inpex (Operator, participating interest: 62.245 percent) alongside Total (30 percent), CPC Corporation Taiwan (2.625 percent), Tokyo Gas (1.575 percent), Osaka Gas (1.2 percent), Kansai Electric (1.2 percent), Chubu Electric Power (0.735 percent) and Toho Gas (0.42 percent).

Inpex will now start preparing the pipeline for operational start-up. The Ichthys central processing facility was floated out from the offshore floating dock at the Samsung Heavy Industries shipyard in Geoje, South Korea, in September. Currently under construction in South Korea, the CPF and FPSO, once completed, will be towed to the Ichthys field in 2016 where they will be moored by 40,000 tons of chain secured to about 20,000 tons of foundation piles.

The onshore processing facilities near Darwin will cool gas from the pipeline and transform it into liquid to reduce its volume for transport. Onshore facilities will include: two LNG trains, LPG and condensate plants, product storage tanks, administration facilities, utilities and a jetty. A peak workforce of about 8,000 onsite on any given day is needed to complete the onshore facilities at Bladin Point, which are currently under construction.

The Ichthys LNG Project will require three LNG carriers and one LPG carrier to export product from Darwin Harbour each week as well as one or two condensate carriers each month.

[Maritime Executive]

**Canada: TransCanada to build only one Energy East oil export terminal**

05/11/2015

TransCanada Corp said on Thursday it has scrapped plans to build a port in Quebec and will have only one crude oil export terminal for its proposed Energy East pipeline, a possible setback for the controversial project.

The move comes days after TransCanada asked the U.S. State Department to pause its review of the company’s long-delayed Keystone XL pipeline, a request that Washington turned down amid speculation President Barack Obama will ultimately reject the pipeline.

Like Keystone, Energy East is opposed by environmentalists who want to stop expansion of the oil sands industry. The 1.1 million-barrel-per-day project is intended to carry crude from Alberta across Canada to New Brunswick, where it could be shipped abroad.
Calgary-based TransCanada had originally planned to build two ports for shipping crude overseas by tanker - one at the pipeline terminus in Saint John, New Brunswick, and the other in Cacouna, Quebec.

However, the company abandoned the Cacouna location in April after environmentalists raised concerns about the impact on beluga whales in the St. Lawrence River. It had been looking at the feasibility of other Quebec locations.

Quebec Premier Philippe Couillard said the absence of a Quebec terminal made it harder to calculate the economic benefits, one of its criteria for supporting the pipeline. But his spokesman later noted the province has not decided on the project because it has not seen the final proposal.

CIBC World Markets analyst Paul Lechem said scrapping the second export terminal did not affect the financial viability of Energy East as Saint John had always been intended as the primary port.

TransCanada said it had reached the decision after listening to local communities, stakeholders and customers, and it will be amending the Energy East project application before the National Energy Board.

Canadian Natural Resources Ltd Chief Executive Steve Laut, whose company would be a customer of the pipeline, said he accepted the decision but would have preferred to have a Quebec export terminal since it would create more options and Quebec jobs.

[Reuters]

**Australia: New container terminal planned for Burnie**

05/11/2015

*Tasports considers Burnie to be the natural gateway for container freight in and out of Tasmania.*

A new $20 million international container terminal is being planned for the Port of Burnie in northwest Tasmania. Australia's largest stevedore, DP World Australia, and the Tasmania Ports (Tasports) Corporation have agreed to develop the new facility. The new international container terminal will be able to handle 200,000 20-foot containers a year.

It is expected to start operations in January 2017, employing 40 to 60 people and injecting $10 million into the local economy each year. "The proposed enhancement will not only increase capacity at the port but will provide new options for the Tasmanian import and export industry to access the world's major markets," Tasports chief executive Paul Weedon said on Thursday.
Tasports said it would work with DP World Australia to investigate supporting port infrastructure requirements including channels, berth capacity and upgrades to navigational aids and technology. Tasports considers Burnie to be the natural gateway for container freight in and out of Tasmania. Containerised freight can be moved to Launceston and Hobart by rail.

Development of the new terminal at Burnie depends on federal parliament passing the Coastal Shipping Act 2015, which would permit international shipping lines to carry domestic freight in containers between Australian ports.

[SBS News]

**Carriers face a sea of green**

05/11/2015

*While ocean carriers and ports scramble to cut their greenhouse gas emissions to comply with various regulations, international organizations want them to do even more — by paying a carbon tax.*

For example, as the nations of the world prepare for the major climate change summit COP21 in Paris later this month, the International Transportation Forum, an intergovernmental body of the Organization of Economic Cooperation and Development, is calling for a carbon tax on ocean shipping of about $25 per ton of CO2 to curb emissions in the coming decades. On top of that, the ITF says operators should reduce their carbon emissions by one-half over the next 35 years, and get to zero emissions by 2080.

"The impact on maritime trade would be marginal if the tax were set at around $25 per ton of CO2," ITF said in a report. The forum added that the receipts of a carbon tax could provide a "substantial source" of financing – about $26 billion – for the UN’s Green Climate Fund, and also return a portion of that money to poorer nations.

The ITF tax proposal is not exactly popular in shipping circles. In a statement last month, the International Chamber of Shipping, which represents ship operators worldwide, said the tax would be "almost three times higher than the carbon price paid by shore-based industries in developed nations."

ICS Secretary General Peter Hinchliffe added, "While shipping may currently have CO2 emissions comparable to a major OECD economy, it is inappropriate for the ITF to propose that the industry should be treated like an OECD economy."

ICS emphasized that that the shipping community is "committed to reducing CO2 and has a responsibility to contribute to the achievement of the United Nations’ '2 degree' climate change goal." But the UN Framework Convention on Climate Change (UNFCCC) has recognized that "developed and developing nations should accept differing commitments, and shipping is no
different, especially in view of its vital role in the movement of about 90 percent of global trade."

However, ITF’s report noted, "It would be odd if countries are expected to adhere to emission targets but not the shipping sector, especially since it would be impossible to apportion shipping emissions to countries."

"We do expect that sooner or later shipping will be regulated on CO2," said John Kornerup Bang, lead advisor on climate change with Maersk Group, owner of the world’s largest container shipping fleet. "Some carriers would be better at managing it than others," he said in a Reuters article. Maersk says it plans to reduce vessel CO2 emissions 60 percent by 2020.

According to the International Maritime Organization, shipping reduced CO2 emissions to 2.2 percent of the world’s total from 2.8 percent in the five-year period to 2012. But the IMO study projects CO2 shipping emissions could grow about 50 percent by 2050 depending on the pace of world trade and what actions are taken to curb emissions.

Ship emissions were omitted from national commitments under the UN’s 1997 Kyoto Protocol, which ceded control over the sector’s emission reductions to the IMO at that time.

Until recently, nations have generally been reluctant to take on the shipping sector on emissions in a unified way, fearing that regulations would be unwieldy to administer while potentially impacting the majority of the world’s global trade. Those days appear to be over, however.

It’s time for Plan B and maybe more. One such plan became apparent recently as 190 containerships, totaling more than 2 million TEUs, were ordered by operators during the first nine months of this year — more than the annual amount ordered in each of the last seven years, according to an Alphaliner report.

The reason? Ship orders must be placed before the implementation of the IMO’s new Tier III regulations on ship emissions. Ships with keels laid before January 1 are not required to face costly compliance mandates under new UN regulations, which cover NOx emissions.

[Cargo Business News]

**Canada: US$217 million expansion of intermodal yard at Port Metro Vancouver**

05/11/2015

*WORK has begun on the CAD285 million (US$217 million) expansion of the intermodal yard at Global Container Terminal - the largest container facility - at Port Metro Vancouver in Canada.*
The project will expand the railyard’s annual capacity at GCT's Deltaport Terminal by 50 per cent so that it can maintain a speedy transfer of 1.9 million TEU annually between the docks and intermodal trains even when larger ships begin calling at the facility in the next few years, according to IHS Media.

Maintaining the roughly two-day dwell time even when the size of the typical ship calling GCT Deltaport jumps from 9,000 TEU to 14,000 TEU is vital because US shippers are increasingly moving cargo through the terminal, GCT CEO Stephen Edwards said.

The terminal risks losing US-bound cargo to the ports of Seattle and Tacoma if it is unable provide fast and reliable transits to the US Midwest.

The volume of US-bound cargo moved via rail through Deltaport rose by 35 per cent annually between 2009 and 2014, and Mr Edwards sees no sign that growth will slow down. More and more US shippers are switching to routing through Vancouver and the Port of Prince Rupert to diversify their supply chains after the US west coast congestion debacle in late 2014 and early 2015.

Not having to pay the US Harbour Maintenance Tax, a 0.0125 per cent duty on the value of imports moving through US ports, makes Canadian ports more attractive, but competitive rail service to Chicago and beyond is the main driver.

The volume growth at Deltaport, some of which is tied to the domestic market, helped push container traffic at Vancouver up 5.7 per cent to 2.3 million TEU in the first nine months of the year compared to the same period in 2014.

The rail expansion at Deltaport will increase the terminal's total annual capacity from 1.8 million TEU to 2.4 million TEU. Improved intermodal rail fluidity is aimed at handling the 10,000 container moves generated by the larger vessels. About 7,000 container moves are generated by the 9,000-TEU vessels calling at Deltaport.

The expanded yard, set to be completed in the second half of 2017, will allow Canadian Pacific and Canadian National railways to raise the number of daily double-stack intermodal services serving Deltaport from four to six.

[Hong Kong Shipping Gazette]

**China: Qingdao Port working with AP Moller-Maersk in tug and bulk business and Italian port project**

04/11/2015

*Qingdao Port has entered into various cooperation agreements with the giant AP-Moller Maersk Group.*
The first is a joint venture (JV) with the Asian unit of Maersk tug arm Svitzer to operate and manage a port tug business. Qingdao Port will own 55% of the JV, while Svitzer Asia will take up the remaining 45%.

In addition, Qingdao Port and Maersk's terminals arm APM Terminals will look into setting up a JV company to operate and manage the Vado Ligure Port terminal project in Italy with other strategic partners.

And in exchange APM Terminals, through its bulk handling unit APM Terminals Bulk Qingdao, will get a 20% stake in Qingdao Port’s multi-purpose berth project in Dongjiakou, which is set to become one of the biggest bulk port terminals in China. The agreements would expand the strategic cooperation between Qingdao Port and Maersk Group in China from the container terminals in Qianwan to bulk cargo terminals in Dongjiakou as well as the port tug business in the Port of Qingdao, the company said in a stock market announcement.

Meanwhile cooperation on the Vado Ligure Port terminal project will boost “the implementation of the internationalization strategy of the company, improving the operation and management level of container terminals, bulk cargo terminals and port tug business of the company to international advanced standards, so as to achieve satisfactory economic and social benefits as well as powerful combination and win-win progress,” it added.

[Seatrade Maritime News]

Industry shows no surprise to Maersk lay-offs, lay-ups and cost cutting

04/11/2015

*First came the $600m profit warning. “The container shipping market has deteriorated beyond the group’s expectations,” Maersk groaned on October 23.*

Then came the news that one of Maersk Line’s 18,000-teu Triple-E containerships had been laid up. And today the Maersk Group announced 4,000 redundancies, plus another 200 and further lay-ups at Maersk Supply Service, and a cost-cutting programme that will aim to reduce the group’s annual sales, general and administration (SG&A) cost run-rate by $250m over the next two years.

And how have industry experts reacted to the news today? With complete and utter lack of surprise.

The imbalance between supply and demand for container slots is here to stay for the foreseeable future. Container shipping is a cycle of boom and bust, and revenues will be hit hard while companies weather the low point of the cycle. SG&A costs represent less than 15% of a line’s total spend, but they can also be an easy target that can return fast gains in cost efficiency.
“Maersk Line has for several years been working hard on improving their internal productivity, and the logical consequence of improved productivity and low growth in container volumes is a reduction in the need for employees,” Lars Jensen, CEO of SeaIntelligence Consulting, told Splash today.

“Of course it can look drastic when it is announced the way it is, and they have also stated that they are implementing it at a faster pace than originally envisioned, but this is in reality a development that was to be expected,” Jensen continued.

Andy Lane, a partner at CTI Consultancy, said Maersk’s technological savvy and focus on improving processes and productivity puts the group in a good position to scale back staff and spending without the measures affecting its customer relationships.

“Maersk has a process, IT and service center maturity, which allows them do this without negatively impacting customer experience,” Lane told Splash today. “It means that they can further lower the cost bar, allowing them to make a 10% return on lower revenues that are loss-giving for the competition – it’s the Dell vs HP model.

“The service centers and overall cost leadership strategies are not new, they date back to 2002 and process excellence really took off in 2007 – all prior to the global financial crisis, which has subsequently crippled the industry, whilst the competition was sleeping.”

That brings us to Maersk’s competitors – how will they be affected by the grand measures implemented by the world’s biggest container carrier by volume?

Andy Lane says the competition should remain concerned, especially if they have not yet begun programmes similar to Maersk’s that put cost-efficiency at the centre of their operational processes.

“The big money, albeit harder to reach, is how a line or, more to the point, an alliance can further optimise its vessel network – that’s where 70% of the costs are,” Lane continued.

“2M has maybe a reasonably cost-efficient network – in alliances with more members, it becomes more difficult to optimise due to silo thinking and behaviour, an inability to share (regulatory) and a wish not to share (confidentiality). This is however where the big bucks are hiding and can be realised with the right approach and determination,” he said.

Jensen said Maersk’s swinging cuts are simply “a development that we should also expect to see from other container carriers as they start improving their own internal productivity”.

Maersk is lowering its cost bar even further below its competitors’ cost levels, and its rivals should be running scared – today’s news is a wake-up call for Maersk’s rivals to streamline, strip out the deadwood, save money and save themselves.
In fact, many container lines already seem to be in a state of disarray. Hapag-Lloyd has reduced the target of its initial public offering by €200m since it was first announced. APL is up for sale. China Shipping and Cosco have long been rumoured to be planning a merger, and Korean lines Hyundai Merchant Marine (HMM) and Hanjin Shipping could well follow suit. Something’s gotta give.

It looks like 2016 will be a year of consolidation, which will shake up alliances too. China Shipping looks likely to quit the Ocean3 if it merges with Cosco, while Hanjin’s and HMM’s continued participation in the respective CKYH and G6 alliances remains unclear.

Today’s news from the Maersk group has thrown fuel on a fire that was already burning, but for the real fall-out you ain’t seen nothin’ yet.

[Splash 24/7]

Maersk Line to eliminate 4,000 jobs and cut capacity and costs as market falters
04/11/2015

The world’s largest container shipping company will reduce network, postpone investments, and accelerate plans to simplify organisation, with 4,000 job losses by 2017

In response to a weaker short-term and long-term market outlook, Maersk Line today announced it is going to reduce its network capacity and postpone investments in new capacity, while the same time accelerating a number of already-announced cost and efficiency initiatives and plans to simplify the organisation.

It said: “In light of the lower demand, these initiatives will allow Maersk Line to deliver on the ambition to grow at least in line with the market to defend the market leading position.”

Over the next two years, Maersk Line expects to lower its annual Sales, General & Administration (SG&A) cost run-rate by US$250 million with an impact of US$150 million in 2016. SG&A savings will be derived from already-initiated transformation projects and the standardisation, automation and digitalisation of processes, the line said.

It will also not exercise options to order six of its flagship mega-vessels, called Triple Es, which have a capacity of holding about 20,000 20-foot containers and are 400 metres long. The order would have gone to Korea’s Daewoo Shipbuilding and Marine Engineering Co.

Overcapacity - more ships than goods to carry - has long been a problem and has led to freight rates on the world’s busiest sea routes, from Asia to Europe, to drop to below commercial levels for weeks at a time in the past year.
Nevertheless, large shipping companies, including Swiss-based Mediterranean Shipping Company (MSC) and France’s CMA CGM, continue to order larger ships to supersede smaller ones, which will make their fleets more efficient.

CEO Søren Skou said: “We are on a journey to transform Maersk Line. We will make the organisation leaner and simpler. We want to improve our customer experience digitally and at the same time work as efficiently as possible.”

He said the organisational transformation and on-going automation and digitalisation will enable Maersk Line to reduce the global organisation by at least 4,000 positions by the end of 2017 from its current level of 23,000 land-based staff globally, with the aim of minimising redundancies through managing natural attrition.

“We are fewer people today than a year ago. We will be fewer next year and the following year. These decisions are not taken lightly, but they are necessary steps to transform our industry,” concluded Skou.

As a response to the current market outlook, network capacity will be reduced in Q4 2015 and throughout 2016. As already announced, the closure of four services (ME5, AE9, AE3 and TA4) has already been initiated over the last two months and plans are in place to further cancel a total of 35 sailings in Q4.

On the postponement of new vessel orders, it said: “Maersk Line will continue to manage capacity and does not plan to exercise the previously announced options for six 19,630 TEU vessels and two 3,600 TEU feeders, and will postpone decision on the optional eight 14,000 TEU vessels.”

[Lloyd’s Loading List / Reuters]

Costa Rica: Why transport infrastructure is so terrible
04/11/2015

The head of the State Comptroller has denounced serious management problems that are hindering the construction of public works, or which multiply execution times, wasting money and causing substantial cost increases.

The findings of the Comptroller General of Costa Rica, Marta Acosta, in his report to the Legislative Assembly of Costa Rica, outlined the causes of the endemic delay in the execution of public infrastructure projects:

- Lack of an effective public pre-investment system and public investment plan.
- Poor project planning.
- Insufficient maturation of projects to start procurement procedures
- Limited capacity to expropriate and revive services in a timely manner.

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- Delays in recruitment and in forming the executing units.
- Extensive periods for compliance with preconditions.
- Weak stewardship of Ministers who regulate the Sector and inter institutional coordination.
- Lack of environmental and soil studies.
- Delay in provision of counterparts.
- Weak monitoring and evaluation of projects.
- Lack of institutional support.
- Abuses by contractors

An article on Nacion.com reviews the presentation of the Comptroller General to the legislative committee of control of revenues and expenditures, which is described as "... a horror story about infrastructure in Costa Rica".

Costa Rica ﹇s transport related infrastructure (e.g., ports, railroads, roads, information technology) ranked 106 among 160 countries in the Logistics Performance Index (LPI) 2014 of the World Bank.

{CentralAmericaData}

**U.S.: Project delayed to raise the Bayonne Bridge for 'post-Panamax' ships**

04/11/2015

The Port Authority of New York-New Jersey (PANYNJ) has revised the timeline for the raising of the Bayonne Bridge putting back navigational clearance for 'post-Panamax' ships until late-2017 - more than a year later than expected.
It said the delay in the $1.3 billion infrastructure development was "due to construction challenges and the harsh 2014-2015 winter." The project focuses on raising the 151-foot-high road bridge to 215 feet, allowing vessels in the 12,000-14,000 teu capacity class access to the port, compared to a maximum of around 9,000 teu currently.

Last year, the PANYNJ had projected that 'post-Panamax' ships would be able to clear the Bayonne Bridge from the middle of next year, only several months after the scheduled opening of the expanded Panama Canal. Construction of the raised roadway is being carried out by the Skanska Koch/Kiewit Infrastructure Co. joint venture.

"We are confident that we will complete the Bayonne Bridge's 'Raise the Roadway' project within the revised timetable. This has been a challenging project, but we have committed the resources to complete it successfully, with full awareness of how vitally important it is for the regional economy," said Michael Cobelli, president & CEO of Skanska Civil Inc. The delay will push up total project costs by approximately 15%.

"The Bayonne Bridge's 'Raise the Roadway' project is one of the most innovative and challenging projects the Port Authority has ever undertaken, and will help maintain our position as the East Coast's premier port for international trade," said executive director Pat Foye.

"Although a number of challenges have impacted the project's timetable, we continue to monitor the Skanska JV's construction progress and, together with Skanska JV, anticipate completion within the (revised) schedule announced."

The Port of New York and New Jersey set a new first-half year record for container traffic in the period January-June 2015, throughput totalling almost 3.1 million teu - up 13.4% on the first six months of 2014 when the previous record was set.

"We're reaping the benefits of a strong regional economy and labour uncertainty on the West Coast," said now-retired port commerce director, Richard Larrabee. "Our challenge now is to find ways to more efficiently handle the record volumes we have seen all year, and we've been working collaboratively with all port stakeholders to meet this goal."

[Lloyd's Loading List]

**Cargo crime ‘alive and well’**

04/11/2015

_Cargo crime is ‘alive and well’ and remains firmly among the top five causes of freight claims, despite the increasing focus on the emerging risk of cybercrime, reports freight insurance specialist TT Club._
TT Club’s experience is that theft accounted for about 13% of cargo claims, by number and value, over the last five years. It said much recent attention has been focused on the emerging risk of cybercrime, as internet capabilities are increasingly used to identify, track and intercept cargo. However, case studies abound for the more traditional vulnerabilities, even if potentially aided by electronic means.

Peregrine Storrs-Fox, risk management director at TT Club, said these days it may not be entirely accurate to focus on a ‘peak’ season in cargo movements, but it is certainly timely to reflect on the state of freight crime, whether or not ‘Black Friday’ (the day after US Thanksgiving) presents a particular exposure globally - not least as the risks around this retail event certainly extend to other geographies.

He said that, unsurprisingly, information published by others concerned with freight security, such as Freight Watch International (FWI), “corroborate in large measure the Club’s findings concerning the continuing exposure to ‘traditional’ thefts, while adding some interesting colour to the trends. For example, FWI identify that food and drink cargoes are becoming more exposed to theft, and particularly, it would seem, in winter months when perishable cargo is not quite so vulnerable.”

He noted that FWI describes the attractiveness to thieves of such lower specified cargo types because they have no unique serialisation to hinder the reselling of these products, with criminals weighing the pros of easy obtainability and liquidation against the cons of perishability and medium-value density as they determine where to focus their efforts.

“However, as expected, the usual electronics, clothing and pharmaceuticals also remain attractive to criminals,” said Storrs-Fox. “Essentially, any goods that can with relative ease be resold are seen as fair game.

He said that where the supply chain had been strengthened in relation to security, criminals would inevitably seek to exploit new opportunities. “Nevertheless, attention to the basics in security apply regardless of cargo type,” he added. “The most vulnerable part of the supply chain is whilst cargo is in transit, although standard site security measures continue to prove critical to reduce theft.”

Storrs-Fox said many thefts are by nature opportunistic, targeting unsecured parking areas and soft-sided trailers. Noting that FWI reports that there is a growing willingness to use violence against drivers, although many cases still involve the driver, directly or indirectly.

“TT Club has frequently raised this exposure, exacerbated during peak seasons where there may be a limit of available truckers, advising that due diligence in subcontractor selection and control is a significant mitigation,” he added. “The elevated risk at this time of year should be highlighted to all personnel, particularly those closely involved in booking and subcontracting freight movements.
“Specifically, train personnel to be alert to identify and escalate such issues through your organisation as appropriate. Encourage personnel to ask questions where activity or requests are made beyond what could be considered the normal course of business.”

Site security measures should also not be neglected. “While CCTV and fencing may seem passé, properly used their value is considerable,” said Storrs-Fox, noting that a recent case involving the theft of a number of trailers from a single large facility illustrates certain risks well.

Organised criminals broke through the chain link fencing under cover of darkness and avoided camera and guard detection while removing the trucks. “Notwithstanding the initial success, rapid action by the operator and tenacious law enforcement was able to track the majority of the stolen goods and apprehend a number of suspects,” Storrs-Fox said.

“While further post-incident investigations are continuing, the case is a sober reminder to ensure that CCTV is fully operational and actively monitored, together with a review of guard force contracting arrangements. While there is no evidence in this case, guards have been found to be a weak link, being poorly paid, having unsociable hours and often lower level of skills and education.”

As ever, part of an effective management of these risks requires the rigorous implementation of procedures to identify, investigate, report and address unauthorised acts by anyone who is reasonably accessing the site, including guards, visitors and third parties, Storrs-Fox noted.

“In the same way as treating anything that is identified as unusual with a reasonable level of suspicion, so being deliberately unpredictable may also be part of your armoury. Criminals will go to any lengths to track how you do things; outwit them by being both careful and considered.”

[Lloyd’s Loading List]

**Australia: 30-year master plan for the ports of Botany and Kembla**

03/11/2015

_NSW Ports has launched a 30-year master plan, Navigating the Future, for the Port of Botany and Port of Kembla._

Over the next 30 years Port Botany and Port Kembla will be required to cater for growing trade numbers. Container volumes are expected to triple from 2.3m teus to 8.4m. Motor vehicles could more than double from 390,000 to 850,000 and dry bulk products are predicted to grow from 20.3m to 30m tonnes.
NSW Ports’ 30-year Master Plan “Navigating the Future” identified five main objectives it needs to need in order to sustainably cater for the forecasted growth within the ports over the next thirty years:

1. Provide efficient road and rail connections to the ports and intermodal terminals
2. Grow rail transport of containers
3. Use land infrastructure efficiently
4. Grow port capacity
5. Protect the ports and intermodal terminals from urban encroachment

The first objective will be met by providing efficient road connections to the ports and intermodal terminals. This will be essential in catering for the growing NSW freight task.

Increasing the moment of containers by rail to the port will maximise throughput capacity in a cost-effective, efficient and sustainable manner. NSW has a target of moving 3m teus per year by rail by 2045.

The third objective is related to using land and infrastructure efficiently. Optimising the utilisation and productivity of existing land and infrastructure before investing in new land will aid the company’s approach to sustainable asset management.

With this greater land utilisation the port’s fourth aim is the need to grow in capacity, but this increased capacity will depend on trade volumes, productivity improvements and wider market developments.

Finally, the fifth objective is to protect the ports and intermodal terminals from urban encroachment. The port will need to be operated 24 hours a day in order to meet the demand of the businesses and maximise productivity. But it will also require protection from residential, retail and commercial uses.

[Port Strategy / NSW Ports]
Ghana: First power barge on its way to the Port of Tema
03/11/2015

The first power ship, which will help alleviate the shortage of electricity supply in Ghana, is now en route to the port of Tema.

The Turkish built power barge will provide 240 megawatts shortly after arrival in the Ghanaian port in about 15 days. Operating with the name AYSEGUL SULTAN after the sister of the chairman of Karadeniz Holding, the Turkish company responsible for producing the floating power station ships, the ship will feed the power directly into the Ghanaian national electricity grid. This is about 15 MW more than what was originally planned.

A ten-year power purchase agreement with the Electricity Company of Ghana (ECG) was signed by Karpower Ghana Company Limited, a subsidiary of Karadeniz Holding, in June 2014. Under the deal, the company is expected to build two electricity-generating vessels to produce over 450 MW of power, which will contribute about 22 percent of Ghana's electricity needs for 10 years. The 450MW electricity supply will help to resolve the perennial power cuts (loadshedding) in Ghana while providing a substantial cost advantage as the country's cheapest thermal energy resource.

[Ports & Ships]

Angola: Plans for deepwater port at Porto Amboim
03/11/2015

Angola has plans to build a new deepwater commercial port at Porto Amboim in Kwanza Sul province.
Announcing this last Thursday was the deputy director for the technical area of the Maritime and Port Institute of Angola (IMPA), Manuel Arsenio. Armenio was speaking at the Porto Amboim Business and Investment Forum. He said the port will be built by a consortium made up of Sonangol Holding and Sogester, which will have a 70 percent stake with the remainder as private investment.

The port will be built in three phases between 2017 and 2024 and will be located in the Torre-do-Tombo area, on the outskirts of the city, in an area of 80 hectares. In an initial phase investment will be US$500 million, which will increase to US$1.8 billion when the project is fully completed.

The port will have an available draught of around 12 metres and will have a quay 500 metres long, with a depth alongside of 14.5 metres. In an initial stage it will be able to receive two ships at the same time and in the final phase this will have increased to about seven ships.

The deputy director of IMPA added that the port would facilitate exports of cotton and coffee from Angola.

[Macauhub]

**Nicaragua: Interoceanic canal, a nightmare for environmentalists**

03/11/2015

*The international scientific community’s fears about the damage that will be caused by Nicaragua’s future interoceanic canal have been reinforced by the environmental impact assessment, which warns of serious environmental threats posed by the megaproject.*

The report “Canal de Nicaragua: Executive Summary of Environmental and Social Impact Assessment” was carried out by the British consulting firm Environmental Resources Management (ERM) and commissioned by the Hong Kong Nicaragua Canal Development (HKND Group), the Chinese company that won the bid to build the canal.

The 113-page executive summary sums up the study, whose unabridged version has not been made publicly available by the government, ERM or HKND. In the study, ERM says the megaproject could be of great benefit to the country as long as best international practices on the environmental, economic and social fronts are incorporated at the design, construction and operational stages, for which it makes a number of recommendations. But it spells out specific risks and threats to the environment in this impoverished Central American country of 6.1 million people with a territory of 129,429 square kilometers.

The canal will go across the 8,624-sq-km Lake Cocibolca, also known as Lake Nicaragua – the second largest lake in Latin America after Venezuela’s Lake Maracaibo. The route will be nearly four times longer than its rival, the Panama Canal.
The 276-km canal will link the Atlantic and Pacific oceans; of that length, 105 km will cross Lake Cocibolca.

Salvador Montenegro, former executive director of the Aquatic Resources Research Centre of the National Autonomous University of Nicaragua (CIRA/UNAN), stressed that the executive summary suggests additional studies on Lake Cocibolca, to fully assess the risks to the environment and to recommend actions to mitigate them.

"These are the same observations that I have been making, which were never taken into account," Montenegro told IPS. "On the contrary, they accused me of being a traitor to the government and of being in the opposition, when the only thing I was doing was trying to preserve the health of Lake Cocibolca."

The scientific researcher was dismissed from his post in the university allegedly due to pressure from the government of left-wing President Daniel Ortega, in office since 2007, who backs the canal project driven by the government investment promotion agency, Pro-Nicaragua, headed by his son Laureano Ortega.

Now Montenegro forms part of the Grupo Cocibolca, a group made up of scientists, academics, environmentalists and activists openly opposed to the future canal.
Mónica López, an activist who belongs to the group, summed up for IPS the main findings in the ERM study which she believes make it clear that the project would open the doors to an unprecedented environmental catastrophe for Latin America.

She said ERM concluded that neither HKND nor the government have the experience to carry out a project of this magnitude.

The report says “the government would be wise to consider engaging with international development agencies such as the World Bank or the Inter-American Development Bank,” to avoid damage in sensitive areas like the Mesoamerican Biological Corridor, the Indio Maíz Biological Reserve, the San Juan River, Lake Cocibolca and surrounding nature reserves.

“The study says that in normal situations, these areas would generally be considered untouchable due to their social and ecological fragility,” López noted. ERM says that if further studies are not conducted and “mitigation and offset measures” are not successfully implemented, “biodiversity impacts would be significantly worse than described.”

It recommended further studies to identify seismic risks posed by construction of the canal; gauge the impact of dredging in the lake; identify the threats from the introduction of saltwater into the lake; and assess the risk of a reduction of the outflow of water from the lake to the San Juan River.

It also concludes that without the implementation by HKND and the government of the environmental and social mitigation measures recommended in the report, not even Route 4 – the one that was selected and the only one considered viable – would have the positive net impact for the environment that could justify construction of the canal.

Based on the ERM executive summary and the considerations of local and international scientists and other experts, the Grupo Cocibolca sent a letter to the president on Oct. 26 asking for the repeal of the law that made the canal project possible.

Ortega has not responded. But HKND, through its officials outside of Nicaragua, announced further studies with a view to moving ahead on the project that will have a projected cost of 50 billion dollars – the largest megaproject that the world has seen in the last few years.

HKND’s chief project adviser, Bill Wild, told the local media that the company had made some “optimisations, with a higher cost to the project, to avoid and reduce environmental and social impacts and keep the risks to a minimum.” According to Wild, the studies that began to be carried out in 2013 will continue until 2016 and will be complemented by additional topographic and hydrological research, to be conducted by the Australian consultancy CSA Global.

The executive vice president of HKND Group, Kwok Wai Pang, told the local newspaper El Nuevo Diario that now that the ERM study has been presented, “more in-depth studies will be carried out along the route. During the feasibility study we conducted topographical, seismic,
hydrological and archaeological research and we collected a large volume of seismic information and data on water levels, salinity intrusion and other questions, to draft a conceptual design.”

Telémaco Talavera, spokesman for the president’s Great Interoceanic Canal of Nicaragua Commission, downplayed the concerns expressed by ERM and environmentalists.

Speaking with IPS and three other journalists, he expressed confidence in HKND’s capacity “to work out, with great wisdom, any inconvenience that may emerge, and which are normal in projects of such magnitude.”

Not just environmental problems

But despite the government’s and HKDN’s upbeat attitude about the project, it is overshadowed by factors other than environmental issues. On one hand, specialised media outlets reported in September that because of China’s current financial crisis, HKND magnate Wang Jing had lost as much as 84 percent of his fortune, previously estimated at more than 10 billion dollars, which has shrunk to some 1.2 billion dollars.

On the other hand, growing resistance by peasant farmers along the projected canal route has hurt the international business climate for the company, according to López, the activist.

So far, 55 demonstrations against the project have been held in Nicaragua. The latest, held Oct. 27 in Managua by rural residents from different parts of the country along with other protesters, made the international headlines because of the violent clashes between the demonstrators and supporters of the megaproject. In its executive summary, ERM says the social opposition affects the project’s viability.

“The land expropriation and involuntary resettlement process to date has not met international standards,” the ERM report states. “The Project risks losing its social license to operate and may jeopardize the viability of the Project by not following international standards.”

So far, the government has given HKND permission to expropriate 2,909 square kilometres of land along the projected route.

The canal law was approved in 2013. But small-scale work on the project along the Pacific Ocean did not officially get underway until December 2014. HKDN projected that the work would take five years, and the canal would be operating in 2019. But ERM predicts that it will not meet that deadline.

[IPS – Inter Press Service]
Nicaragua: New cracks in canal plan

03/11/2015

Nicaragua’s government has long claimed that an economic feasibility study by blue-chip US consultancy McKinsey & Co is crucial to enticing Western investors to its USD40-50 billion canal project.

However, IHS Fairplay has confirmed that McKinsey has not worked on the Nicaragua Canal project since 2014, raising new questions about the Nicaraguan government’s public statements as well as the project’s chances of attracting Western investors.

A feasibility study concluded last year would not incorporate the effects of the canal route changes decided since then, nor would it encompass the huge shifts in global economies, trade flows and commodity prices that have emerged in 2015 – all of which are pivotal to any investment decision on a transoceanic shipping canal.

The HKND Group, led by Chinese businessman Wang Jing, was awarded the concession to develop and operate the Nicaragua Canal in June 2013. HKND subsequently hired McKinsey to conduct an economic feasibility study and continues to list the consultancy as a ‘project partner’ on its website.

The marketing coup from the McKinsey contract was highlighted by Dr. Paul Oquist, the private secretary of national policy for Nicaraguan President Daniel Ortega, during an in-depth interview with IHS Fairplay in October 2014. Oquist is also the executive director of the Nicaragua Grand Canal Commission.

Asked about the prospects for securing non-Chinese funding for the canal, Oquist answered in October 2014, “The first step is for McKinsey & Co to file the financial and economic feasibility report. That will be sent to the financial community. McKinsey is ‘top of the line’ in terms of prestige in the financial economic consulting business. That is a big benefit, because the creditability of McKinsey & Co with Wall Street investment banks, those in The City of London and Frankfurt, and with private equity firms and institutional investors becomes very important. The answer to your question [on international funding] is to be found in the reactions of these different groups of investors to the McKinsey financial and economic feasibility study.”

According to Oquist, the ability to obtain non-Chinese funding via the completion of the McKinsey study was important to the canal project because “we need the ‘body language’ that everyone’s in the deal”. In other words, it would be more challenging to Nicaragua from a diplomatic and geopolitical perspective if the project was a wholly ‘China Inc’ affair.

During the October 2014 interview, Oquist said that the McKinsey study was scheduled be completed within weeks. In December 2014, Reuters reported that the McKinsey report would be delayed until April 2015 due to a change in the canal route. Oquist again specifically
mentioned the still-unreleased McKinsey report very recently, during a 22 September 2015 Council of the Americas-sponsored forum in Washington, DC.

IHS Fairplay was told a very different story about the economic feasibility study by a confidential source who claimed to have inside knowledge of McKinsey’s work with HKND. According to the source, McKinsey did initially consult on the project, made repeated requests for payment, and ultimately received payment from HKND around June 2014. Shortly after being paid, McKinsey informed HKND in writing that it would discontinue working on the project, said the confidential source.

Asked about the confidential source’s claims about McKinsey’s business relationship with HKND and the timing of that relationship, McKinsey spokesman Ed Kolodziej responded, “It’s our firm’s long-standing policy not to comment on who our clients are or the work we did for them.”

When IHS Fairplay asked HKND about the confidential source’s claims regarding the McKinsey work, HKND confirmed that it is no longer working with McKinsey. “HKND retained McKinsey to do economic analysis for the Nicaragua Canal and McKinsey completed the contracted work last year [2014]. Currently, there is no ongoing work with McKinsey. Further co-operation is possible when opportunities arise,” said HKND spokesperson Virginia Zhang.

Asked whether HKND was pursuing a supplemental economic feasibility study following the conclusion of its work with McKinsey in 2014, Zhang replied, “The economic analysis for the Nicaragua Canal has been completed by McKinsey last year.” Asked whether the McKinsey study would be publicly released, Zhang answered, “This economic analysis for the project is a commercial secret and is not available for the press.”

IHS Fairplay made over a dozen attempts to contact Oquist by phone, speaking to several assistants at his office during the past week, and sending multiple emails to Oquist’s business and personal addresses, specifically asking him whether there had been a miscommunication between the Nicaraguan government and HKND, given that public statements by Oquist have implied that the consulting contract with McKinsey had continued. Oquist has yet to reply to IHS Fairplay.

When Oquist addressed the Council of the Americas-sponsored forum in September, he conceded that the project has been further delayed by the need to do additional environmental mitigation studies. He said that the latest schedule called for construction bidding proposals to go out in early 2016.

However, this revised timetable assumes the project can actually be funded. There has still been no announcement on how USD40-50 billion – roughly equivalent to the entire annual GDP of Panama – can be raised to pay for the Nicaragua project amidst today’s slowdown in China and the ‘risk off’ financing environment for developing countries. According to the Bloomberg Billionaires Index, HKND founder Wang had an estimated net worth of USD10.2
billion in June, but this had plunged by 84% to USD1.1 billion in October – the steepest collapse in net worth of any of the world’s billionaires.

[IHS Fairplay]

**Tanker safety record tarnished by several incidents**

03/11/2015

*The tanker sector’s good safety record has suffered a blow with a spate of incidents/accidents in the past couple of weeks.*

In one, the Tb Marine managed 2003-built Handysize tanker 'Alia' carrying a cargo of fuel oil from Malta to Gothenburg caught fire in the North Sea 64 miles west of Hvide Sande, Denmark following an explosion in its engine room on October 20, according to TankerOperator. There were no injuries to the crew, nor any oil spills reported at the time. According to Marine Traffic, she is currently under tow to Rotterdam having been disabled by the fire.

One day earlier, the 6,285 dwt chemical tanker 'Jo Spirit' ran aground in the South Shore Canal of the St Lawrence Seaway, near Montreal resulting in shipping traffic being blocked for several hours before the tanker was refloated. The vessel was said to have sustained minimal damage and there were no injuries or pollution reported.

In another incident, the 1994-built 3,229 dwt chemical tanker 'Pazar' lost power and suffered water ingress about 70 nautical miles off Varna in the Black Sea. The crew tried to pump out the water and informed the shipowner, who requested assistance from Bulgarian authorities. A containership, which was in vicinity, sent a pump and assisted in de-watering but the salvage operation was unsuccessful and the crew was forced to close the flooded engine room. The vessel was due to be towed to Turkey and according to the authorities there were no injuries or pollution during the accident.

Earlier, the Suezmax 'Tokyo Spirit' was refloated following her grounding off Cascais, near Lisbon while in ballast. She was towed to a repair yard and there was no environmental damage reported from the incident.

In Japan, the 4,965 dwt chemical tanker 'Sulphur Garland' collided with 3,394 dwt product tanker 'Wako Maru No 2' about 10 miles off Shimonoseki, Japan. Both ships suffered damage during the incident and there was oil leak from 'Wako Maru No 2', which was contained by oil booms to restrict pollution. No one was hurt.

[Hong Kong Shipping Gazette]
Plenty of sellers but few takers in weak container market

03/11/2015

Hapag-Lloyd is pushing ahead with its proposed initial public offering despite the weak market reception, slashing its offer price from €23-€29 per share to a lowered range of only €20-€22.

The company’s existing shares are now valued at only €2.01 Bn, based on the low end of the revised IPO price range, compared to a book value of €4.66 Bn as at the end of August 2015, implying a 55% discount to book value for Hapag-Lloyd’s existing shares. Hapag-Lloyd shares are now due to begin trading on 6 November, just ahead of the release of the carriers 3rd quarter financial results on 11 November when the company is expected to report substantially weaker quarter-on-quarter operating results.

Meanwhile, the planned merger of the two Chinese state-owned carriers, COSCO and China Shipping, remains in limbo. Shares in the two groups’ publicly listed subsidiaries have been suspended since 10 August pending an official announcement on a corporate reorganization.

The process is taking much longer than initially anticipated due to the complex web of cross shareholdings and alleged mismanagement, as well as the poor performance of the dry bulk and container shipping units. China COSCO, which includes the COSCO Group’s container shipping, container leasing, dry bulk and terminals business, reported a net loss of RMB 1.708 Bn ($273 M) in the third quarter while CSCL posted a net loss of RMB 1,048 Bn ($167 M).

[Alphaliner]
Vietnam: Vinalines looks to offload port stakes

03/11/2015

*Vietnamese state-run shipping line Vinalines is trying to offload its stakes in two ports it runs with foreign firms, as it looks to get its finances in better shape.*

The transport ministry has revealed Vinalines is looking to sell its 15% stake in SP-PSA, one of seven deepwater ports in the Cai Mep-Thi Vai complex in the southern province of Ba Ria-Vung Tau. The port is run with partners Saigon Port and Singaporean terminal operator PSA, who have 36% and 49% stakes respectively.

Vinalines also wants to get rid of its 51% stake in Cai Lan International Container Terminal, a port in the northern province of Quang Ninh, which it operates with SSA Marine, an American company. Both terminals have been posting huge losses since they opened, leading analysts to wonder who would buy into them.

Vinalines is the Vietnam’s largest shipping line with more than 100 vessels and a total tonnage of 2.5m dwt. Its huge debts, and rampant corruption, which were unearthed three years ago have seen senior management sentenced to death and huge restructuring get underway. This year Vinalines has offloaded ship repair firm Vinalines Dong Do, Ben Dinh-Sao Mai Port Development and Vinalines’ maritime training college.

[Splash 24/7]

Finland: Greenpeace activists prevent coal ship from entering Port of Helsinki

03/11/2015

*Greenpeace activists have attempted to block Alppila, a bulk carrier transporting coal to Hanasaari coal power plant in central, from entering Port of Helsinki, Finland.*

The environmental organisation was joined by activists from Finland, Denmark, Austria and Spain, who demanded to close its oldest coal-fired power plant in Helsinki and to adopt renewable energy completely. One of the activists managed to climb onboard and was detained by the Alppila crew.

Greenpeace Nordic Climate and Energy campaigner Laura Meller said: "Right now, people all around the world are taking action to stop climate change so we can all breathe clean air. "In Finland, this starts with closing down the decrepit Hanasaari power plant and starting the transition to renewable energy just as other Scandinavian capitals are already doing."

"Political leaders around the world promise again and again that they will keep the world from catastrophic climate change. As the whole world is gearing up to the climate summit in Paris,
starting the coal phase-out for real is a perfect chance to show that Finnish politicians are serious about these promises."

According to a recent poll commissioned by Greenpeace, the majority of Helsinki citizens favour closing down the Hanasaari coal power plant this year. The poll additionally revealed that 77% of the respondents want Helsinki to shift to completely renewable energy.

Black coal Hanasaari and Salmisaari power plants in Helsinki produce roughly 50% of the district heating in the entire region, which results in carbon emissions amounting to two million tonnes. The plants are responsible for nearly two million tonnes of carbon dioxide released every year.

[Ship Technology]

**Implications of IMO Ballast Water Management Convention on ports**

03/11/2015

*This time last year, the New Scientist ran an article under the rather alarming headline "Five reasons to worry about a quagga mussel invasion", after the Port of London Authority reported that this invasive species had been discovered in the River Wraysbury, and then in the tidal Thames.*

Meanwhile in the US, this ‘invasive and aggressive’ species, which can cover boat hulls and smother native mussels, is even displacing the notorious zebra mussels which themselves have clogged up the Great Lakes. Originating from Eastern Europe, the quagga is one example of a species that most likely hitched a lift abroad in a ship’s ballast water.

The Global Ballast Water Management Programme (GloBallast), a joint project co-ordinated by the IMO to help prepare for the new Ballast Water Management (BWM) Convention, has described the introduction of invasive marine species into new environments by ships’ ballast water as ‘one of the four greatest threats to the world’s oceans’, with the potential to cause severe environmental, economic and public health impacts.

For example, the zebra mussel can reduce native biodiversity and alter freshwater ecosystems by filtration; the ‘killer shrimp’ carries parasites that can reduce fish stocks; and the Chinese mitten crab undermines riverbanks through burrowing, leading to increased risk of erosion.

*Edging closer*

It’s now 11 years since the BWM Convention was first adopted by member states and, at the time of writing, it had been ratified by 44 states representing 32.89% of world merchant tonnage; 35% is the magic figure required for the Convention to enter into force.
Needless to say, shipowners are at the front line; the new regulations will require them to install ballast water treatment systems onboard and to keep detailed records of all operations of the system, with the information to be made readily available to appropriate authorities on request.

Marine biologist and ballast water expert Dr Stephan Gollasch, who runs the Hamburg-based consultancy GoConsult, has been involved in the development of the BWM Convention and a number of related projects. He says: "Ports may not be as aware as the shipping industry is of this Convention but there are obligations for ports – and not only the larger ones."

Ports and terminals, where cleaning or repair of ballast tanks takes place, should have adequate reception facilities for sediments, he says. Port states are encouraged to identify, assess and designate areas where ships may conduct ballast water exchange in accordance with the Convention; and they can conduct risk assessments to exempt low-risk ships from the requirements, or to impose more stringent measures to high-risk ships. They are also encouraged to monitor the waters where ships may take on ballast water, and to inform ships’ officers when they should not – because, for example, of an outbreak of harmful organisms or pathogens.

All ports

“The essence of what ports need to be considering would be valid for all ports involved in international shipping,” says Dr Gollasch. “Provided a port is handling international shipping and the cleaning of ballast tanks, there are guidelines on what should be done. The sediment should not be disposed of in the sea, but disposed of on land and suitably treated.”

If a port makes the decision to not provide what ships really need, the risk is that the ships could then make the decision to call elsewhere. “That’s always the possibility and that is not in the interest of the port,” he says. A few ports in Europe with shipyards within their perimeters already have facilities, but they are few and far between.

As for accepting the whole tank of ballast water, facilities for this would be rarely available, he says. “A large tanker could carry 100,000 tonnes of ballast water – it is huge amounts of water we are talking about.”

While the vessels themselves would be expected to have organised treatment systems, there are various projects and prototypes underway for mobile onshore treatment facilities, where the treatment system could be mounted on a barge or truck, which would then connect to the vessel.

Dr Gollasch says his database contains approximately 100 different types of ballast water treatment systems, with the vast majority involving mechanical separation of larger organisms and items and then treatment using chemicals similar to those used in a swimming pool, or chlorination treatment by electrolysers. “But after that you have to neutralise that treated
water before you discharge; so you make sure the organisms are killed by chlorine, but you also make sure you don’t chlorinate the port.”

He also warns that one of the key problems with the BWM Convention is that it isn’t in force. "If it was, that would drive the momentum and make it an urgent issue, motivating people to act. But so many people have put this on hold until it’s in force. They don’t want to invest in a system or facilities that they are not sure they will need for another five years.”

The IMO says that reception facilities provided by ports should operate ‘without causing undue delay to ships’ and should provide for the safe disposal of sediments that does not impair or damage the environment, human health, property or resources.

**High-tech**

Reception facilities are "not an easy business", says Sunil Shastri, who heads up Hull University’s Centre for Environmental and Marine Sciences. “It is high-technology, but a port has to be capable of dealing with this waste,” he says. “Talking to the Domesday philosophers, they say everything is too late already, but that can’t be an excuse for inaction. If you just do nothing about it, then things are going to get rapidly much, much worse. If we start trying to reverse the trend – boosted by much ingenuity and technical developments – we can decelerate that growth rate.”

There is huge uncertainty around the Convention as far as ports are concerned, and port reception facilities are something the industry brings up as a matter of concern, says Anne Carnegie, secretary of the International Harbour Masters Association. “There are a lot questions surrounding exactly what is going to happen; it hasn’t been ratified yet and, until that happens, people are just holding back,” she says.

While creating such a Convention involves the complexity of finding words accepted by everyone, the actual implications are at grass roots level, she points out – and often it is much more difficult to know exactly how it is going to work out there.

“We could also end up with tensions between what ships require and what ports are going to offer. Eventually it will come down to national legislation and how different countries implement the BWM Convention.”

**Flexibility needed on rule application**

A big concern around the BWM Convention is the way that its requirements apply to international shipping, that is, ships that cross international boundaries on their voyage.

If a ship remains within a country’s territorial waters, then the Convention doesn’t apply. That means a vessel travelling thousands of miles from west to east Russia via the north, without leaving Russian territorial waters, doesn’t have to comply, even though it is moving between
clearly different ecologies. The same would apply to a vessel going via the Kiel Canal from the North Sea into the Baltic Sea, as long as it stayed in German waters.

A ship heading from the US East Coast to US West Coast via the Panama Canal would not be considered domestic traffic because it goes into non-US waters, so would have to comply; yet a ship going all the way from Alaska to San Francisco would be a domestic voyage, although again the ecologies would be very different.

A shortsea service hopping between ports within Europe or across the English Channel would be judged to be an international service to which the regulations apply, although the ecology would be very similar. That creates concern that once again shipping will be penalised compared with road transport in Europe.

“In general we are quite happy with the BWM Convention and agree it is an important issue certainly for long distance/deepsea traffic,” says Isabelle Ryckbost, secretary general of the European Sea Ports Organisation. “But the problem is that for shortsea shipping there is not really a risk and yet it will be very difficult to get an exemption. Apparently the procedure for having an exemption requires you to do an Environmental Impact Assessment – and then to do it again every couple of years.

“This is again an additional burden on shortsea shipping and another challenge as it competes with other modes. That is what we see as a big problem. A vessel which regularly functions on a voyage between Zeebrugge and Gothenburg is not such a risk. There needs to be a balance here.”

East Coast of South America under the microscope

03/11/2015

A new review of the port system along the East Coast of South America sees it continued maturation.

Dynamar’s East Coast South America Trades 2015 publication comes at an interesting time of structural change for these trades. New container line consortia arrangements are in evidence, the number of deep-sea and regional shipping lines continues to reduce, larger vessels continue to appear, container terminal capacity in key locations is under pressure and just around the corner is the start of operation of the new Panama Canal locks in turn opening the door to larger vessel sizes making direct calls from Asia.

And as if all that isn’t enough there are all the widespread industry challenges in play not the least of which is freight rates that are in many cases below survival level.
With this daunting scenario at hand, albeit that there are still new opportunities, it is extremely important to understand the current and potential future characteristics of major and minor East Coast South America Trades.

With larger vessels already cascading down into the main ECSA trades there has been growing pressure on a number of ports, gateway and transhipment or a combination of both.

[Port Strategy]

**Ireland: Trafficked people abused in fishing industry**

02/11/2015

*After a year-long investigation, the Guardian has revealed that African and Asian migrant workers are being abused on Irish fishing trawlers.*

The vessels involved are reportedly working out of some of the country’s most popular tourist ports including Cork and Galway. The Guardian reports some of the men on board have suffered physical and mental abuse and sleep deprivation as a result of very long work hours. They have also been denied shore leave, having to hide when the vessel comes to port, and have been paid less than half the minimum Irish wage.

Some migrant workers claim to have been deceived and appear to have been trafficked on to trawlers specifically for labor exploitation. Agents and vessel owners appear to be using a loophole designed for international merchant shipping, which allows non-E.U. seafarers to transit through the U.K. for up to 48 hours if they immediately move on to join vessels working in international waters, reports the Guardian.

The majority of Ireland’s high value prawn and fish catch is exported to supermarkets, restaurants and fish markets across Europe, the Americas and the Far East.

The Guardian story, including video and first-hand accounts is available [here](https://www.theguardian.com/uk/2015/nov/03/trafficked-seafarers-abused-irish-fishery).

[Maritime Executive]

**Antarctic: Mass gains of ice sheet greater than losses**

02/11/2015

*A new NASA study says that an increase in Antarctic snow accumulation that began 10,000 years ago is currently adding enough ice to the continent to outweigh the increased losses from its thinning glaciers.*

The research [Mass gains of the Antarctic ice sheet exceed losses](https://www.nasa.gov/feature/goddard/2015/mass-gains-of-the-antarctic-ice-sheet-exceed-losses) challenges the conclusions of other studies, including the Intergovernmental Panel on Climate Change’s (IPCC) 2013 report, which says that Antarctica is overall losing land ice.
According to the new analysis of satellite data, the Antarctic ice sheet showed a net gain of 112 billion tons of ice a year from 1992 to 2001. That net gain slowed to 82 billion tons of ice per year between 2003 and 2008.

"We’re essentially in agreement with other studies that show an increase in ice discharge in the Antarctic Peninsula and the Thwaites and Pine Island region of West Antarctica," said Jay Zwally, a glaciologist with NASA Goddard Space Flight Center in Greenbelt, Maryland, and lead author of the study, which was published on Oct. 30 in the Journal of Glaciology.

“Our main disagreement is for East Antarctica and the interior of West Antarctica – there, we see an ice gain that exceeds the losses in the other areas.” Zwally added that his team "measured small height changes over large areas, as well as the large changes observed over smaller areas.”

Scientists calculate how much the ice sheet is growing or shrinking from the changes in surface height that are measured by the satellite altimeters. In locations where the amount of new snowfall accumulating on an ice sheet is not equal to the ice flow downward and outward to the ocean, the surface height changes and the ice-sheet mass grows or shrinks.

But it might only take a few decades for Antarctica’s growth to reverse, according to Zwally. “If the losses of the Antarctic Peninsula and parts of West Antarctica continue to increase at the same rate they’ve been increasing for the last two decades, the losses will catch up with the long-term gain in East Antarctica in 20 or 30 years — I don’t think there will be enough snowfall increase to offset these losses.”

The study analyzed changes in the surface height of the Antarctic ice sheet measured by radar altimeters on two European Space Agency European Remote Sensing (ERS) satellites,

Zwally said that while other scientists have assumed that the gains in elevation seen in East Antarctica are due to recent increases in snow accumulation, his team used meteorological data beginning in 1979 to show that the snowfall in East Antarctica actually decreased by 11 billion tons per year during both the ERS and ICESat periods. They also used information on snow accumulation for tens of thousands of years, derived by other scientists from ice cores, to conclude that East Antarctica has been thickening for a very long time.

“At the end of the last Ice Age, the air became warmer and carried more moisture across the continent, doubling the amount of snow dropped on the ice sheet,” Zwally said.

The extra snowfall that began 10,000 years ago has been slowly accumulating on the ice sheet and compacting into solid ice over millennia, thickening the ice in East Antarctica and the interior of West Antarctica by an average of 0.7 inches (1.7 centimeters) per year. This small thickening, sustained over thousands of years and spread over the vast expanse of these sectors of Antarctica, corresponds to a very large gain of ice – enough to outweigh the losses from fast-flowing glaciers in other parts of the continent and reduce global sea level rise.

Zwally’s team calculated that the mass gain from the thickening of East Antarctica remained steady from 1992 to 2008 at 200 billion tons per year, while the ice losses from the coastal regions of West Antarctica and the Antarctic Peninsula increased by 65 billion tons per year.

“The good news is that Antarctica is not currently contributing to sea level rise, but is taking 0.23 millimeters per year away,” Zwally said. “But this is also bad news. If the 0.27 millimeters per year of sea level rise attributed to Antarctica in the IPCC report is not really coming from Antarctica, there must be some other contribution to sea level rise that is not accounted for.”

“The new study highlights the difficulties of measuring the small changes in ice height happening in East Antarctica,” said Ben Smith, a glaciologist with the University of Washington in Seattle who was not involved in Zwally’s study.

“Doing altimetry accurately for very large areas is extraordinarily difficult, and there are measurements of snow accumulation that need to be done independently to understand what’s happening in these places,” Smith said.

To help accurately measure changes in Antarctica, NASA is developing the successor to the ICESat mission, ICESat-2, which is scheduled to launch in 2018. “ICESat-2 will measure changes in the ice sheet within the thickness of a No. 2 pencil,” said Tom Neumann, a glaciologist at Goddard and deputy project scientist for ICESat-2. “It will contribute to solving the problem of Antarctica’s mass balance by providing a long-term record of elevation changes.”

[NASA /GREEN4SEA]
Earthquakes, superstorms ... and other little-known perils of climate change

02/11/2015

Author: Matthew Blackett, Senior lecturer in physical geography and natural hazards, Coventry University

We are all aware that a number of controversies surround the concept of climate change. But if we put the possible causes to one side, there is a general scientific consensus that the climate is changing.

A changing climate might, obviously, have a significant impact on us all but in a world of differing environments and, indeed, of inequalities, some societies seem set to be adversely affected more than others.

As a means of representing those countries which may be more disproportionately affected, a block of 20 of these vulnerable countries has been formed: the “vulnerable20”, or “V20”. In this block, are countries that you might expect, such as the low-lying Pacific island states of Vanuatu and Tuvalu, but others may come as more of a surprise, including Bangladesh, Ethiopia and the Philippines.

This demonstrates that the effects of climate change are both complex and far-reaching, so let’s look at some potential, lesser-known problems we have in store.
With a warming climate, we can expect rising seas as the ice caps in the Arctic and Antarctic regions begin to melt. This stands to affect all low-lying regions of the globe without prejudice: from London, Amsterdam and Miami, to the precariously positioned Pacific Ocean atoll states.

Forgotten victims

But one country that may be overlooked in this context is Bangladesh, the nation ranked number one in the 2015 Climate Change Vulnerability Index (CCVI).

This country of 168m people is located on the fertile but low-lying Ganges-Brahmaputra delta. Annual floods are normal here during the monsoon seasons but, with rising oceans, scientists fear that whole swathes of the country (up to 17%) may be permanently inundated by 2050, forcing the displacement of 18m people and causing the destruction of the country’s prime agricultural regions.

Rising sea levels also will certainly affect many of the world’s low-lying island nations – and those of the Pacific have been particularly vocal in their concerns of the potential impacts. But while we shouldn’t in any way belittle the justifiable concerns of these nations, some recent studies actually suggest that rather than being engulfed by a rising Pacific, the underlying coral of many reef islands – and the rubble they produce – actually appears to adjust to the prevailing conditions, including the possibility that they may adjust to a rise in sea level.

The coral question

Climate change could lead to more of the most destructive storms NOAA/NASA GOES Project/flickr, CC BY
Where problems are more likely, however, are on the more heavily developed reef islands, such as Malé, the capital city of the Indian Ocean state of the Maldives and an island in its own right. There, urbanisation has led to the construction of artificial sea defences, including piers and harbours, which prevent the natural processes of coral growth, rubble accumulation and consequent island adaptation, arguably making this the most vulnerable reef island. Fortunately, urbanised reef islands are the exception and not the rule.

There have been conflicting findings over recent years, but a number of studies have attempted to demonstrate that with a warming climate, storm patterns and frequencies are changing, too. One hurricane study, for example, shows that while we don’t seem to be experiencing any real increase in the overall number of storms, we are seeing more hurricanes in the most intense and destructive categories, that is in the four and five categories.

The cause of these observations appears to be higher sea-surface temperatures (anything above 27°C) which aid the development of hurricanes and tropical storms. Countries at risk from these potential superstorms include those which border the Caribbean and those within the tropics, particularly in the Pacific Ocean.

The Philippines is one such vulnerable country, ranked eight in the CCVI, partly as a result of this potential climatic impact but augmented by inequality and a perceived lack of governmental capacity for climate change adaptation.

*A double-edged sword*

One irony of a warming climate is that it also acts as a double-edged sword in terms of how it affects global precipitation patterns. Over recent decades, for example, rainfall in the drought-prone region of the Sahel in Africa has increased by 10% over the past few decades. This appears to be good news for the region, and models suggest this trend will continue if the climate continues to change. But too much rain may also be a problem, potentially leading to flooding and the associated problems of displaced people and water-borne disease, so we cannot see climate change as a purely good thing for Africa.

In contrast, other parts of the world, such as California, are experiencing severe droughts which are predicted to intensify if global warming continues.

It is also important to remember the possible relationship between climate change and tectonic activity. It is well-established that the construction of dams has, in the past, stimulated earthquake activity, a result of their heavy mass destabilising faults while providing plentiful water for lubrication of the underlying fault systems, allowing them to move more freely.

*Climate change earthquakes*

The weight and lubricating properties of water have been attributed to earthquakes throughout the globe and even to the recent devastating earthquake in Nepal. Researchers
have suggested that the redistribution of weight on the Earth’s surface as ice melts, oceans deepen and rainfall increases, may all add up to an increased seismic risk globally; indeed, seasonal earthquake patterns associated with monsoon rains have been noted.

No one can predict what the full implications of climate change may be, but all the evidence points to a more hazardous world, a world of new interrelations that we cannot hope to understand – perhaps not until it is too late.

Some parts of the world may get off lightly, others may bear the brunt of the impact; the key will be adapting to these changes and, unfortunately, it is likely to be the most vulnerable places that are least able to evolve in time.

[The Conversation]

**U.S. and Indonesia: There’s probably garbage in your fish**

02/11/2015

*In Indonesia and the United States, fish are contaminated with human debris.*

Human rubbish, especially plastic, is increasingly finding its way into the ocean, and into fishes’ bellies. But in a twist of not-so-delicious irony, that garbage seems to also be finding its way onto our own dinner plates—trapped in the stomachs of fish. In new research, scientists report how they found human trash, including plastic and textile fibers, in a quarter of fish purchased from markets in the United States and Indonesia.

Though the prevalence of trash in the ocean is well known, few researchers have specifically looked for it in animals meant for human consumption. In their study, a team of researchers led by conservation biologist Chelsea Rochman describe how they purchased 76 fish from a
market in Makassar, Indonesia, and 64 from local fishermen and fish markets in Half Moon Bay and Princeton, California.

In the digestive tracts of 28 percent of the Indonesian fish and 25 percent of the Californian ones, they found human trash. There was rubbish in 6 species of fish out of 11 purchased in Indonesia, and in 8 of 12 species sampled in California. Overall, three times as many pieces of debris were recovered from fish in Indonesia, with the number of pieces per fish ranging from 0 to 21, compared with 0 to 10 in California. The researchers didn’t count trash smaller than 0.5 millimeters.

Though the rates of contamination were similar, the types of trash were different: all of the fragments recovered from the guts of Indonesian fish were plastic, while 80 percent of the trash in Californian fish were textile fibers.

“The results seem to be in line with differences in waste management practices,” says Rochman.

In Indonesia, waste management is poor and rubbish is often dumped along the coast, and into rivers and drainage channels. But California has its own issues: roughly 200 wastewater treatment plants discharge into coastal waters, pumping fibers from washing machines into the sea. Some of these fibers are eaten by fish, and some of these fish are caught in fishermen’s nets.

This kind of finding is no longer a surprise, says Kara Lavender Law, an oceanographer who studies marine debris. “We use plastics in nearly every aspect of our daily lives, so it should not be surprising that we find bits of this essentially non-biodegradable material everywhere we look.”

Plastic is ubiquitous, including in the fish at the market. Yet whether the waste in a fish’s gut makes it into yours depends on how the fish is prepared, says Rochman. You would only ingest the plastics and fibers in a fish’s gut if you eat it whole—a practice that is common in Indonesia, or in American cuisine with smaller fish such as anchovies.

Much more research is needed, says Rochman, to understand the actual health risks posed by this plastic—both from consuming it directly, and from the toxins that may leach into the meat. She thinks the health benefits of eating seafood outweigh potential risks, but does stay away from long-lived animals at the top of the food chain, such as sharks and swordfish, where contaminants might concentrate.

While researchers continue to look at the risks posed to marine life by human debris, it’s also important to consider that at least some of this trash will make its way right back to shore.

[Hakai Magazine]
Southeast Asia: Piracy crackdown is ‘bearing fruit’

02/11/2015

Despite an overall global reduction in serious pirate attacks this year, there remains no room for complacency in the global fight against piracy on the high seas, the International Maritime Bureau’s Piracy Reporting Centre (IMB PRC) warned in its 2015 report for the year to 30 September.

In Southeast Asia, a piracy crackdown “appears to be bearing fruit”, with only two hijackings reported in the third quarter of the year, the IMB said. Indonesian and Malaysian authorities have also arrested and in some cases prosecuted, members of product tanker hijacking gangs, notably those behind the MT Sun Birdie and MT Orkim Harmony attacks.

“The robust actions taken particularly by the Indonesian and Malaysian authorities – including the arrest of one the alleged masterminds – is precisely the type of deterrent required” commented P Mukundan, IMB Director.

The two hijackings, on a small product tanker in the Straits of Malacca and a fishing vessel 40-miles west of Pulau Langkawi, were among 47 incidents the IMB PRC recorded globally between July and September.

To date 190 incidents of piracy and armed robbery against ships have been officially counted this year, the greatest number in Indonesia, which tallied 86 mainly low-level incidents, followed by Vietnam with 19 low-level reports.

While only one new incident of an actual attack was reported for the last quarter in the Gulf of Guinea, IMB believes the real number to be considerably higher.
No incidents have been noted off Somalia or in the Gulf of Aden this year, previously a piracy hotspot. IMB says the positive development reflects the combined efforts of navies in the region, along with greater compliance with the Best Management Practices guidelines against Somali piracy, the employment of private security contractors and a stabilizing government. Suspected Somali pirates continue to hold 29 crew members for ransom, however.

The report urges vessels to maintain vigilance, noting the “increasingly fragile” situation ashore Somalia, with the threat of piracy not “eliminated”.

In all, this year has seen 154 vessels boarded, 21 attempted attacks and 15 vessels hijacked. A total of 226 crew were taken hostage, 14 assaulted, 13 injured, 10 kidnapped and one killed, the report showed.

[gCaptain / IMB]

EU: Parliament approves national pollution caps and removes proposal to offset international shipping emissions
02/11/2015

MEPs voted to remove a Commission proposal that would allow member states to offset reductions in emissions from international shipping.

Members of the European Parliament (MEPs) last week said it had approved European Commission (EC) plans for national caps on emissions of six key pollutants, including those created by international shipping.

"MEPs approved the proposed caps for sulfur dioxide (SO2), nitrogen oxides (NOx), non-methane volatile organic compounds (NMVOC), methane (CH4) ammonia (NH3), and fine particulates (PM, less than 2.5 micrometers), to be achieved by 2020 and 2030," explained the report.

MEPs also voted to remove an EC proposal that would allow member states to offset reductions in emissions from international shipping, and are instead urging the EC to consider measures and possible legislative proposals to reduce emissions from international shipping in member states' territorial waters and exclusive economic zones.

Lead MEP Julie Girling (ECR, UK), speaking on the overall initiative, said "air pollution imposes enormous human and economic costs. It also damages the natural environment, through eutrophication and acid deposition, and it doesn't stop at EU member states' borders."

"This legislation will help at all levels of governance in the member states, including the regional and sub-regional authorities who have engaged so vigorously in the process. There is a real bottom-up demand for action."
MEPs are reported to be entering into negotiations with the EC in order to reach a first-reading agreement on the proposed national emissions caps.

Last month, the European Community Shipowners' Associations (ECSA) called the request by MEPs for the International Maritime Organization (IMO) to develop a global emissions reduction framework by the end of 2016 "unrealistic."

[Ship & Bunker]

**UK: DP World takes over ABP’s stake in Southampton’s container terminal**

02/11/2015

*DP World has taken full control of the container facilities at Southampton after acquiring the 49% stake owned by Associated British Ports.*

There has been speculation for years that one of the two partners would ultimately become sole owner of the facility, which began life as Southampton Container Terminal in a joint-venture between P&O Ports and ABP.

P&O Ports’ stake was transferred to DP World after the Dubai-headquartered company acquired the British terminal operator in a $6.9bn deal in 2006, and the Southampton facility was later renamed DP World Southampton. However, DP World’s long-term commitment to the terminal has been under scrutiny in recent years. After ploughing huge investment into its new London Gateway development, observers questioned whether it could operate two ports that seemed to be in direct competition, particularly for Asia-Europe services.

Other observers noted that Southampton’s most recent box development, the £100m Berth 5 at the box terminal, which opened last year, was financed by ABP, with the ship-to-shore gantry cranes bearing its distinctive navy blue logo, rather than DP World’s. Today’s agreement, for an undisclosed amount, was accompanied by a 25-year extension of the terminal lease until 2047. DP World group chief executive Mohammed Sharaf indicated that the company could develop a unified strategy for its two UK container facilities.

[The Loadstar]

**China: CSCL to acquire up to 11 ships of 21,000 teu**

02/11/2015

*China Shipping Container Lines (CSCL) has announced plans to lease up to 11 Ultra Large Container Vessels (ULCVs) of 21,000 teu via a wholly-owned subsidiary under a bareboat charter.*
In a filing to the Hong Kong Stock Exchange, the shipping line, which is China’s second largest carrier after COSCO, said that it will bareboat charter six of the ships with an option to charter an additional five.

The carrier said that it will operate the six ships for six months of the charter agreement and then decide whether to order the additional five, adding that it was following an industry trend of operating larger vessels. CSCL will pay a daily charter hire of US$41,000 for each vessel during the charter period of 12 years on a monthly basis with the first instalment on the date of delivery, which will between April 2018 and December 2018. According to the company, the plans would enable it to decrease fuel emissions and optimise its fleet.

Commenting in the filing on the reasons for entering into the charters, a company statement said: “The group adheres to low-carbon environmental protection initiatives, positively responds to the current development trend for large-scale container vessels in the shipping market, and is committed to adjusting and optimizing the structure of its fleet.”

On the same day of its charter announcement, CSCL reported a 256% drop in its net profit from January to September 2015 to a loss of US$163m compared to a profit of US$105m in the same period last year.

Commenting on the drop, the company said in its statement: “The decrease in net profit attributable to equity holders of the parent company by 255.80% during the Reporting Period as compared with the corresponding period of last year was mainly due to the decrease in operating profit of the Company.”

The company reported a US$82m loss in from July to September 2015 compared to a US$26m profit in the third quarter last year. The carrier’s revenue went down by 11% from US$26.7bn in the first nine months of 2014 to US$23.9bn in the same period this year.

CSCL is one of several carriers which have already invested in ULCVs. The company’s current largest ship is the CSCL Globe, which, with a capacity of 19,100 teu, was the world’s largest ship in November 2014.

COSCO reported a US$267m loss in the third quarter ended September 30, 2015 against a profit of US$256m in the same period last year.

[Container Management]

**Container shipping lines cutting costs in sinking freight market**

02/11/2015

*Container ship operators report losses, declining demand as slowdown in China, Europe hits earnings*
Container shipping lines are turning more emphatically toward cutting costs and capacity as weak market conditions take a bigger toll on bottom lines. Singapore-based Neptune Orient Lines Ltd. (NOL) said in reporting a deeper third-quarter loss that the traditional surge in shipping heading into the fall never arrived and that carrier would focus on efforts to “drive cost and yield optimization.”

The statement followed the announcement by Maersk Line, the shipping unit of A.P. Moeller-Maersk A/S last week that it would idle one of its “Triple E” megaships for at least six weeks amid poor demand and falling freight rates.

NOL, the parent of APL — the world’s 12th largest container ship operator, according to Alphaliner — lost $96 million in the quarter ending Sept. 30, more than four times the $23 million loss the company showed in the same period a year ago. At the same time, two of Japan’s big three shipping lines reported disappointing results and pointed to deteriorating demand. Mitsui O.S.K. Lines Ltd., also known as MOL, reported profit nearly 16% below what the company had earlier forecast for the April-to-September period. Income at Kawasaki Kisen Kaisha Ltd., the Japanese liner known as “K” Line, was off 38% for the six months ending Sept. 30 from the same period last year.

Executives and analysts attributed the losses to industrywide overcapacity, which has hammered freight rates world-wide, as well as weaker demand in amid slowing exports out of China and weaker demand in Europe.

MOL, pointed to a global “mood” of slowdown. Declining exports from North America, largely attributed to the strength of the dollar and uncertainties in global markets, also drove volumes down. Like other shipping lines, MOL tried reducing the number of vessels to prop up rates and make the remaining services more profitable. “K” Line, too, said it was cutting costs in various ways, including “rationalizing service capacity in line with market demand.”

Nippon Yusen Kabushiki Kaisha, known as NYK Line, which also has reduced routes to make its operations more profitable, said its net profit more than doubled in the six months ending Sept. 30 from the same period in 2014. The company said cargo on routes from Asia to North America was “robust,” despite falling freight rates. But those low rates drove losses for most ocean liners. “APL’s average freight rates fell 21% amidst pressure from overcapacity in the industry,” NOL said. Asia-to-U.S. West Coast freight rates were down 30%, NOL said, despite strong ship utilization of 93%.

The latest report from the Shanghai Shipping Exchange, which measures freight rates on the major lanes to and from China, suggested carriers may be gaining ground in their push to raise prices to shippers. The Shanghai Containerized Freight Index jumped 41% last week from the week before, although such spikes have proven short-lived this year. Alphaliner, a Singapore-based maritime research group, said Maersk’s decision to “lay up” one of its largest vessels would leave what the group calls the idled fleet at its highest level since the recession.

[The Wall Street Journal]
Container shipping wakeup call

02/11/2015

Maersk Line profit downgrade confirms Drewry’s prediction that the industry downturn would worsen in the third quarter. Will it trigger the action needed to turn things around?

On 23 October the A.P. Møller – Maersk Group announced that it was downgrading its 2015 profit expectation due to a worse than expected performance from Maersk Line, the world’s largest container carrier. The Danish group said that all of its business units achieved a positive result in the third quarter, but that deteriorating conditions in the container sector from the latter part of the quarter and October, and with no expectation of a recovery before the year’s end, forced it to downgrade its guidance.

Nils S. Andersen, A.P. Møller — Maersk Group CEO, 23 October 2015: "It is regrettable that we have to adjust our expectations for the 2015 result... Maersk Line has over the years taken steps to ensure a cost effective and resilient operation, but the current deterioration in the container shipping market is impacting also our business."

The last sentence of Andersen’s statement above when he says general market conditions are also impacting Maersk is perhaps the most telling. In recent years Maersk has weathered dips in the market far better than others, routinely outperforming its peers in the financial stakes. The Danish carrier’s superior economies of scale have helped it to surpass its peers in terms of operating margins (EBIT to revenue) in 24 of the last 26 quarters (see Figure 1). But now it feels compelled to say that it too is not immune to the worsening general conditions, which could be interpreted as passing the blame, but nonetheless should serve as the wake-up call for the industry to get its house in order.

**Figure 1: Difference between Maersk Line quarterly operating margin and rest of the container industry** * (%)

* Drewry estimate

Source: Drewry Maritime Research, A.P. Møller - Maersk Group
Expectations for all of the other Maersk group units remain the same as given when the second-quarter results were released, but the guidance for Maersk Line’s “underlying result” (net income excluding the net impact from divestments and impairments) has been lowered from “above $2.2 billion” to “around $1.6 billion”. At the halfway stage of the year Maersk Line’s underlying result stood at $1.2 billion, so there remains around $400 million the group expects to collect for the final six months. This is a critical point. The company is not saying that Maersk Line will lose money this year, but that its profits will be seriously diminished.

Maersk’s downgrade is in line with our prognosis for industry profitability given in the Container Forecaster, published in October, when we said that operating margins would shrink with each passing quarter before turning negative in the final period.

Neil Dekker, Drewry’s director of container shipping research, 8 October 2015: ”The container shipping industry is in the midst of an overcapacity crisis which will worsen next year...Shipping lines will need to idle a much larger portion of the fleet than they have hitherto been prepared to do. Otherwise, short of an unexpected recovery in traffic volumes, container shipping is set for several years of overcapacity and mounting financial losses.”

Carriers have thus far been able to stay in the black despite rapidly decreasing freight rates because they have managed to cut costs even harder, but the extent of the pricing decline seen recently will exceed any cost savings and tip many carriers towards the red zone, some quicker than others. For example, Chinese carriers Cosco and CSCL have just reported net losses for the third quarter.

Maersk Line’s average freight rate for the third-quarter 2015 slipped by 19% year-on-year, the largest such decline in at least five years. It was a similar story for OOCL, the first carrier to publish rate information for the third quarter, which saw its average revenue per teu carried fall by 14% Y/Y (see Figure 3).
Maersk’s latest rate slide followed a 14% Y/Y drop in the second quarter, which was very nearly matched by a fall in unit costs (see Figure 4). The company will give details of its unit costs when it releases the third quarter results on 6 November, but it seems unlikely that they will have repeated the trick of reducing costs faster than rates.

For both Maersk and OOCL rates are now very close to the nadir witnessed in 2009 when a cash-drain forced lines to lay-up vessels on a big scale that contributed to the recovery in 2010. The difference between 2009 and now is that the cost pressures are working in carriers favour and with fuel prices expected to remain relatively constant we do not expect to see sustained negative cash flows. However, the idle fleet is rising fast – including one of Maersk’s
Triple-E 18,000 teu units – as carriers realise that drastic action is required to jolt rates upwards during the slack season.

Maersk’s downgrade and idling of flagships is a stark reality check for an industry teetering on the edge of a return to heavy losses that has thus far only been avoided because of low fuel costs, and could be the trigger for action that is required to stop the rot.

**Our view**

Maersk Line has a long history of leading the container market – from ordering the biggest ships to setting standards for service reliability – so it is good news for the industry that it has decided to try and restore ailing profits by laying up large ships as there is a very high likelihood that others will follow.

[Drewry Container Insight]

**U.S.: Shipowner seeks exoneration or limitation of liability in El Faro sinking**

02/11/2015

*TOTE Maritime alleges it exercised due diligence to supply the ill-fated cargo ship with suitable and working engines, personnel, and other necessary equipment, according to recent court filings.*

TOTE seeks exoneration or limitation of liability in El Faro sinking  The owners of the TOTE Maritime Puerto Rico container and roll-on/roll-off cargo ship El Faro, which sank in Hurricane Joaquin on Oct. 1, filed a request for exoneration or limitation of liability in U.S. District Court in Florida on Friday.

In the court filing, TOTE and sister companies say prior to the commencement of its last voyage and at all times, they exercised due diligence to supply the ship with “suitable engines, machinery, apparel, appliances, personnel, and other appropriate and necessary equipment, all in good order and condition and suitable for their intended operations.” They say the captain of the ship monitored Hurricane Joaquin and altered the course of the ship to account for the hurricane’s expected track.

The filing seeks to take advantage of the Shipowners Limitation of Liability Act of 1851, a law that was enacted to help U.S. shipowners compete with companies based in other countries such as Great Britain, and allows shipowners to seek exoneration from or limit their liability in the event of a maritime accident.

One advantage of limitation of liability proceedings is that the court sets a period of time for claims to be filed and orders a “concursus of claims” that forces all claimants into a single
proceeding in federal district court rather than making the company subject to litigation in multiple jurisdiction.

Also over the weekend, the National Transportation Safety Board announced that the U.S. Navy has located the wreckage of a cargo ship believed to be the El Faro in more than 15,000 feet of water near the vessel's last known position off the Bahamas.

According to the court filing, the value of the El Faro is zero and the pending freight onboard was worth about $2.1 million. However, the law also creates a supplemental limitation fund to be used for personal injury and death claims that is based on the gross tonnage of the ship. The TOTE companies say that amounts to another $13.2 million and that the combined $15.3 million “is expected to be substantially less than the amount which will be claimed for losses and damages.”

At least three lawsuits — two in state court and one in federal court — have already been filed against the company by the families of seafarers who perished when the El Faro sank on Oct. 1. The actual complaints filed against companies associated with TOTE do not specify an exact dollar amount other than the $15,000 needed for jurisdiction in Florida state court or $75,000 for jurisdiction in federal court, but flamboyant attorney Willie Gary said at a press conference at the time of filing a lawsuit in Circuit Court in Duval Country, Fla. he would seek $100 million in restitution for his client.

Given there were 28 regular crew members on the ship and five Polish shipyard workers preparing the vessel for a drydocking, the ability of the families of the men and women who perished in the El Faro accident to recover more than the amount of money in the limitation fund may depend on whether their attorneys can “break” the limitation of liability by proving TOTE was negligent or the ship was unseaworthy, and whether the shipowner had “knowledge or privity” of that negligence or unseaworthiness.

The lawsuits that have been filed have made just such allegations. The lawsuit filed by the family of Jackie Jones in federal court, for example, claims the ship was overdue for deferred repair work, that there were “known issues with the steel of the vessel,” that the ship was “routinely overloaded with cargoes,” that “dangerous weather conditions were known,” and that there were “clear opportunities to reasonably alter the vessel’s route” that were disregarded.

“The key in any limitation action is whether the owner of the vessel had privity or knowledge of the cause of the failure of the vessel prior to the commencement of the voyage,” explained Vince DeOrchis, an attorney at Montgomery McCracken Walker Rhoads.

A paper authored by Miami-based attorneys Keith Brias and Richard Rusak in 2006 explained “judicial interpretation of this term has held that privity or knowledge means the shipowner’s personal participation in, or actual knowledge of, the specific acts of negligence or unseaworthiness which caused or contributed to the casualty." The article notes that because
“limitation proceedings are considered admiralty proceedings, there is no right to a jury trial” in such cases.

"When examining privity or knowledge in the corporate owner context, one must determine whether the person with knowledge of the negligence or unseaworthy condition ranks high enough in the corporate structure to make his awareness that of the corporation," the attorneys wrote. For example, shore-based corporate managers who oversee the vessel’s operations usually have sufficient ranking in the corporation to create privity or knowledge. Captains and crewmembers, on the other hand, generally do not have a high enough position within a corporation to impute privity or knowledge to the vessel owner. However, if the vessel’s master exerts almost exclusive control over the vessel’s business activities, he would be of a sufficient rank in the corporation to impute his knowledge to the corporation."

The El Faro trial is likely to be a battle of expert witnesses, says DeOrchis. With no survivors and limited physical evidence, “the problem for the judge is where do you draw reality from conjecture.”

That is one reason there is so much interest in the voyage data recorder, or "black box" device, on the ship and whether investigators will be able to recover it. In an interview, Brais said the exposure of a company such as TOTE to such a lawsuit is limited to their self retention, and that they will be insured through their membership in a protection and indemnity club, a mutual insurance pool.

The El Faro is covered by the Steamship Mutual Mutual Underwriting Association, which is a member of the International Group of P&I Clubs. Under a complicated pooling and reinsurance agreement, members of Steamship Mutual provide shipowners with an initial layer of protection of $9 million. The pool provides a mechanism for sharing all claims in excess of $9 million up to approximately $7.5 billion.

[American Shipper]

Morocco plans to build five major new ports by 2030

02/11/2015

Morocco is planning to build five major new ports by the 2030 in an attempt to boost infrastructure.

The Oxford Business Group (OBG), a global publishing, research, and consultancy firm, said that Morocco has “the right ingredients for future growth,” pushing ahead with the country’s effort “to dramatically improve and expand its regional port infrastructure.”

In its 2015 report, the Oxford Business Group discussed Morocco’s strategy to build new ports in an attempt to drive regional economic development. In its strategy to spur wider economic
growth and improve trade, Morocco plans to construct five major new ports by the end of 2030.

Under the framework of the “Stratégie Nationale Portuaire 2030,” launched in late 2012, Morocco aims to expand the number and improve the efficacy of its ports, which will enable it to enhance trade with its key trade partners and place itself as an economic gate to the African continent.

The same source said that Morocco is “investing substantially in its port infrastructure,” as “around 98% of Morocco’s external trade currently takes place via ports – equivalent to more than 100m tons per year,” with maritime ties between the country and its economic partners growing significantly.

“The strategy, which includes upgrades of associated logistics and industrial hubs, seeks to build major new port facilities at Nador, Kenitra, and Dakhla, as well as commodity-focused ports in Safi and Jorf Lasfar, in part to help facilitate the development of existing industries and comparative advantages in the surrounding regions,” OBG reported.

The Group said that Morocco’s port strategy will enable the country to develop its industrial sector and make it superior to its neighbors in attracting foreign investment.

[Morocco World News]

**Global track – China sees its railways covering the world**

02/10/2015

*In just eight years, China has built the largest network of high-speed railways on earth. Now it wants to do the same around the world.*

The plan includes a line to link Beijing and Moscow in 33 hours, and routes across South America from the Atlantic to the Pacific and across Africa from the Indian Ocean to the Atlantic – something the European colonial powers never achieved. Never in history has a country proposed such an ambitious program.

If they are all built, they will transform the economies of the countries through which they pass, like the trans-Pacific railway in the United States in the 19th century, which opened up the western states to settlement by farmers and industrial growth.

New lines running across the Eurasian land mass, funded by Chinese money, are an important part of the ‘One Road, One Belt’ initiative launched by President Xi Jinping in 2013.

Premier Li Keqiang said: “China’s manufactured goods have become popular around the world. Now our equipment is going abroad and is earning a good reputation.”
At home, it has built 16,000 km of high-speed railway connecting 160 cities, from Harbin in the north to Nanning in the south and from Qingdao in the east to Urumqi in the west. In 2014, it carried 2.49 million passengers a day, making it the most heavily used network in the world.

According to the official media, China is in talks with 28 countries on high-speed rail projects. They have printed maps showing lines from Harbin to London, via Astana, Moscow, Kiev and Warsaw and from Urumqi to Germany via Kazakhstan, Turkmenistan and Iran. There is even a route from Harbin through Siberia across the Bering Straits to Alaska and Canada.

Given the wars, conflicts and hatreds in many of these regions, it is hard to imagine that all these lines will be built. But the ambition of China is there for all to see.

**New trans-Siberian railway**

Russia is an important piece of the One Road, One Belt initiative. Working with Russian firms, Chinese companies are building a high-speed line that is due to be completed by 2018 from Moscow to Kazan, capital of the Russian republic of Tatarstan, a distance of 770 kilometres. It will cut the travel time from the current 14 hours to three and a half. The investment is 1.06 trillion roubles, of which a portion will come from China. The line is due to be extended from Kazan to Urumqi, capital of the western region of Xinjiang.

Russia’s economy relies heavily on exports of raw materials like oil, gas, timber and minerals, many of them located in the centre and east of the country, while the markets are in China and Europe. It is reliant on railways to transport these materials. Following its annexation of
Crimea and invasion of Ukraine, Russia has faced restrictions on access to western capital markets; so it needs Chinese capital and technical expertise more than ever.

The most dramatic project of the ‘One Road, One Belt’ initiative in Russia is a proposed high-speed line between Beijing and Moscow, running through Kazakhstan; a distance of 7,000 km, it would cut the journey time from the current six days to 30 hours. It would run south of the trans-Siberian railway, via Astana, the capital of Kazakhstan.

In January 2015, the Beijing city government announced that the line would be built at a cost of US$242 billion.

First Vice President of Russian Railways Alexander Misharin said he expected construction would take from 8 to 10 years. He compared the new railway network to the Suez Canal “in terms of scale and significance”.

But, while China can certainly build its share of the line, there is uncertainty on the Russian side. In part because of the western sanctions, Russia is heading toward a recession. Prime Minister Dmitry Medvedev has proposed a postponement of the line until the country has more money to spare.

This Pharaonic project involves construction across some of the world’s most inhospitable terrain, including desert and steppe, with temperatures falling far below zero during winter.

Transforming Africa

More than any other continent, Africa needs railways. China has been very active there, promising to build what none of the European colonial powers – Britain, France, Portugal, Belgium or Germany – were able to do: a railway from the Indian to the Atlantic Ocean.

At the end of the 19th century, British colonialist Cecil John Rhodes announced a plan to build a Cape-Cairo railway, linking the north and south of the continent. By the mid-1930s, a substantial part of this was completed; but it was never finished. Similarly, both France and Portugal announced plans to build a railway linking the two oceans; but neither materialised.

The Chinese plan has a better chance of success. In February this year, a line 1,344-km long opened between the Angolan coastal city of Lobito and Luau on the border with the Democratic Republic of Congo. It is the second longest railway built by a Chinese company in Africa, after the Tanzania-Zambia line, running 1,860 km, which opened in 1976.

The Chinese rebuilt what used to be the Banguela Railway; it was built during the Portuguese colonial period, with construction starting in March 1903. It became the shortest way to transport mineral riches from the Congo to Europe. At its peak in 1973, it carried 3.3 million tonnes of cargo, earned freight revenue of US$30 million and had 14,000 employees.
The civil war that broke out after Angola’s independence devastated the line; by 2001, only 34 km remained in operation. After the end of the war, it was the Chinese who rebuilt the line.

The new Lobito-Luau line has 67 stations and cost US$1.83 billion; it is the longest, fastest and most modern line in Angola. Beijing provided US$500 million in interest-free loans towards construction and technical and equipment support.

This is the first step in a route linking the Atlantic and the Pacific, to be extended through Zambia, Malawi and Mozambique.

In East Africa, China is building a 472-km line between the Kenyan capital of Nairobi and the country’s main port of Mombasa that will cut the journey time from 15 hours to four and a half. Construction began in October 2014 and is due to be completed in 2017, at an estimated cost of US$3.8 billion.

The plan is for the line to be part of a new network linking Kenya, Rwanda, South Sudan and Uganda.

In January 2015, Samuel Sitta, Transport Minister of Tanzania, said that his government had awarded contracts worth US$9 billion to Chinese firms. One will be to build a line 2,561 km long to connect the port of Dar es Salaam to land-locked neighbours; another will link coal and iron ore mines to the southern port of Mtwara, close to big offshore natural gas discoveries.
In addition, China has established in Africa a high-speed railway research and development centre, to raise the technical standard of railways there.

**Crossing the Andes**

In May 2015, during a visit to South America, Prime Minister Li Keqiang and Brazilian President Dilma Roussell witnessed the signing of a feasibility study for a 4,400-km railway linking the Atlantic coast of Brazil with the Pacific coast of Peru. It was signed by the two countries and China.

At present, countries in the region mainly rely on the Panama Canal to ship goods. “Latin America has vast land area but lacks enough railways,” said Chen Fengying, a researcher at the China Institute of Contemporary International Relations. “It is difficult to raise enough money for such an expensive project from international institutions. China’s involvement is critical. Its costs are much lower than that of Japan and European countries.”
Spain and Portugal, the two powers that colonised South America, never considered such a railway across the continent.

Studies by the Brazilian government show the line would start at Port de Acu in Rio de Janeiro and go through the agricultural heartland of Mato Grosso and reach Porto Velho; then it would enter Peru, cross the Andes and terminate at a major port like Callao, Mollendo or Llo Arica.

China is the number one trading partner of Brazil and Peru. It is a huge importer of Brazilian grains and oilseeds; these materials would be able to travel on the line, shorten the journey time and cut costs en route to China.

But, like the route to Moscow, this line poses the most difficult engineering and technical challenges, especially going through the Andes mountains between Brazil and Peru. Would the economic benefits justify the enormous cost?

Renato Pavan, an expert on transport integration in Rio de Janeiro, said that the project would cost about US$13 billion and would be unviable. “About 35 very long tunnels would need to be built, which demands mainly technology. Labour represents only one per cent of the total
budget.” Cheap and efficient Chinese labour would be invaluable but not sufficient to overcome all the other challenges.

**Entering the European market**

For the first time, China has started to build railways in Europe, the place which invented the technology 200 years ago. This has the richest historical significance, a sign of how the centre of the global economy is shifting from west to east.

In December 2014, the Serbian government announced an agreement with China and Hungary to build a 370-km high-speed line between Belgrade and Budapest, due for completion by June 2017; it will cut the journey time from eight to two hours. During a visit to Belgrade when the announcement was made, Premier Li Keqiang said that China would set up a US$3 billion investment fund for Central and Eastern Europe.

China is also bidding to build Britain’s HS2, a high-speed train that will link the central city of Birmingham with Leeds and Manchester in the north. This bid is full of symbolism – the world’s newest railway power selling its technology and expertise to the oldest.

It was in September 1825 that the world’s first locomotive-hauled railway opened, over 40 km in the northeast of England. It was a British firm that built the first commercial railway in China, from Zhabei to Baoshan in Shanghai, in July 1876. The Qing government considered it dangerous and disruptive to the spirits that lived underground; it ordered the line dismantled and shipped to Taiwan.

As part of its preparation for the bid for HS2, CSR (China Southern Railway) Corp, China’s largest maker of rolling stock, in May announced a joint research and development centre with three British universities – Imperial College, Southampton and Birmingham. It will be based in Birmingham.

The UK government plans to build HS1, from London to Birmingham, from 2017, to be followed by HS2.

“Western companies like Siemens AG and Alstom of France entered the high-speed rail sector earlier,” said Yu Weiping, vice-president of CNR Corp (China Northern Railway). “But no country in the world has a high-speed network as extensive as China’s.

“I am confident about our technologies and products. In a couple of years, we will have gained more experience in high-speed trains, which means more chances for us to win the project in the UK,” he said. No mandarin in the Qing government could have imagined such an outcome.

[Macauhub]
A tale of two northern European cities: Meeting the challenges of sea level rise

02/11/2015

- Author: Daniel Grossman
- Photos: Alex Maclean

For centuries, Rotterdam and Hamburg have had to contend with the threat of storm surges and floods. Now, as sea levels rise, planners are looking at innovative ways to make these cities more resilient, with new approaches that could hold lessons for vulnerable urban areas around the world.

Water rings Rotterdam, the Netherlands’ second-largest largest city, at the confluence of the Rhine, Meuse, and Scheldt rivers, about 19 miles from the North Sea. Merchants founded the city, now Europe’s largest port. But the water that has long favored Rotterdam also threatens it. Ninety percent of the city sits below sea level. A band of dikes snakes along the city’s shoreline, a reminder of storm surges that could flood Rotterdam at any time.

Hamburg, Europe’s second-largest port, sits in an inland delta of the Elbe River. Cargo ships stacked high with red, orange, and blue containers glide up the Elbe, close by downtown. Settlers and conquerors built Hamburg on low bluffs above the north bank. It’s largely free of flood danger. But neighborhoods at the base of the plateau and on a few islands are at or below sea level.
Residents of these two great port cities have battled water for centuries. Floods have devastated property and, at times, drowned people by the hundreds. Out of their ruins, the vulnerable cities have learned how to cope with the ever-present risk of flooding. But, according to Henk Ovink, Special Envoy for International Water Affairs for the Netherlands, “fighting water is a war you never win,” and that is especially true today considering that global sea levels are projected to rise at least three feet this century.

“Societies all over,” says Ovink, “have to rethink.”

Germany and the Netherlands are leaders in flood control strategies and expertise, but other nations looking to them for help will find no easy solutions. These two countries are beefing up time-tested flood barriers such as dikes and sluice gates, as shown in these striking aerial photographs by Alex MacLean. But these upgrades can be enormously expensive and take a high environmental toll on shoreline ecosystems.

Today, German and Dutch coastal planners and engineers are trying out new ideas that can fortify coastlines at lower financial and environmental cost. They’re experimenting with the science of “building with nature,” the practice of domesticating natural forces like wind and water, as well as using natural material such as sand and vegetation, to hold back the sea. But these approaches, too, are costly and could exact their own environmental toll.

Many coastal protection officials around the world have been soliciting advice and expertise from experts in the Netherlands. After Superstorm Sandy devastated the coastline of New
York and New Jersey in 2012, for example, U.S. officials hired Ovink to help plan future flood control measures.

Experts note that while the Netherlands, Germany, the United States, and other industrialized nations have the means to confront, if not overcome, rising sea levels and higher storm surges, countries in the developing world — from Cairo to Bangladesh — generally do not. And one of the most important discussions taking place at United Nations climate talks in Paris next month will be exactly how much aid industrialized nations will provide poorer countries in their battle to hold back the sea.

**Hamburg: New flood-protection innovations**

On November 9, 2007, a North Sea gale pitched a tide almost 18 feet above normal on the German coast, sending a surge of water that rushed all the way to Hamburg, 56 miles inland. The port closed and a torrent washed through low-lying quarters. But one neighborhood under construction on two river islands, HafenCity, stayed dry thanks to an innovative flood protection program.

Thorsten Gödtel, an urban planner, watched as the waters rose in HafenCity. Sitting in a café, Gödtel felt as safe as if he were peering into an aquarium, even though silty water swirled halfway up the restaurant’s extra-thick windows, inches from his aquiline nose. He left the restaurant on an elevated roadway, keeping his feet dry.

About two decades ago, city officials realized that the islands, then a warehouse and industrial district near the city center, could be better used. But, says Gödtel — who leads tours of the project — storm tides flooded the islands. Ringing their six miles of shoreline with dikes would have been prohibitively expensive and would have ruined the view.

Instead, planners created a special development zone, razed the old buildings and specified flood-related rules for new ones. The city built the roads and open public spaces on terraces of sand more than 25 feet above normal high tide. HafenCity’s shoreline was left at its original elevation, just above high tide. Developers were permitted to build at this level, but were required to waterproof the structures all the way up to, and have entrances at, the higher street level.

Now about 30 percent complete, HafenCity is home to about 2,000 residents and has 10,000 people working in the neighborhood. A flood barreling up the Elbe “feels more like an event,” than a disaster, says Gödtel. He acknowledges that other cities would find it hard to elevate land to avoid flooding, and says its expensive design was made possible by its prime location near downtown.

The city’s Wilhelmsburg section — an almond-shaped island of about 55,000 inhabitants south of HafenCity — doesn’t have the luxury of raising roads and flood-proofing buildings. Some of Wilhelmsburg sits 22 feet below sea level, and the neighborhood relies on earthen dikes for
protection. “Without dikes,” says Henning Cordes — a “Dike Lord,” or elected official, who monitors flood protection — “Wilhelmsburg would be under water twice a day.”

Wilhelmsburg’s existing dikes were raised by nearly five feet in the 1960s following a disastrous 1962 storm that breached the dikes and killed 300 people. The city is currently building up dikes an additional 2.6 feet, a costly renovation that should keep Wilhelmsburg safe till mid-century. City officials haven’t decided what they’ll do next. Earthen dikes need several feet of additional width for every foot of added height, requiring more land than Wilhelmsburg can spare. “We have to look for other solutions,” says Cordes.

This embayment near the Wilhemsberg section of Hamburg was created to allow in river water and slightly relieve flooding.

One option is to rely more heavily on so-called “building with nature” techniques, which seek to enhance natural buffers — such as dunes and floodplains — to turn back rising waters. In 2012, for example, backhoes broke through a bank separating the Elbe from a crescent-shaped marsh on Wilhelmsburg. River water gushed through the channel, creating a cove and adding 75 acres to the floodplain. The experimental basin slightly lowers the peak height of a storm surge.

Antje Stokman, director of the Institute of Landscape Planning and Ecology at Stuttgart University, advocates river widening on a much larger scale, using low-lying valleys that run parallel to the river downstream from Hamburg as flood relief valves. “We have to think of ways to create more flood plains — more space for the river — not just raise the dikes,” says Stokman.
Hans Von Storch, director emeritus of the Institute for Coastal Research in Geesthacht, Germany, has examined alternatives to higher dikes, including flood-plain augmentation. He says that such solutions would entail daunting economic and political obstacles. “People would revolt,” he said, if Hamburg tried to fortify itself by converting low-lying agricultural land into retention basins.

**Rotterdam: Beyond dikes and barriers**

As with Hamburg, a catastrophic flood haunts and reshaped Rotterdam. On January 31st, 1953 a powerful storm struck the Netherlands. Scores of dikes breached, swamping nearly 340,000 acres and killing 1,800 people.

After the disaster, the Dutch government designed the Delta Works, a far-reaching construction program to prevent a repeat. Instead of reinforcing thousands of miles of dikes lining flood-prone rivers and tributaries, the plan called for building robust dike-rings around large swaths of territory and the damming of bays with huge flood gates. The largest, most densely populated zone, Dike Ring South Holland, or Dike Ring 14, would encircle Rotterdam, Amsterdam, and other urban areas.

The massive gates of the Maeslant Barrier can be closed to protect Rotterdam and other areas from storm surges.

The Delta Plan’s capstone, the Maeslant Barrier, is a movable storm gate at the mouth of the Rhine. When a storm surge reaches 9.8 feet above normal sea level, the structure’s two massive doors swing on pivots from opposite shores, meeting mid-stream like hands clasping. They’re among the largest moving objects on Earth, each 787 feet long and weighing 15
million pounds. Following Superstorm Sandy, some engineers proposed building similar gates across the Verrazano Narrows to protect New York City.

Jan Mulder, a coastal engineer for the big Dutch water consulting firm Deltares says dikes have become pervasive visual barriers, a problem worsening every time they’re raised. He said that the Delta Works also caused serious ecological damage to the coast. It completely cut off three branches of a large estuary from the sea with impermeable floodgates, transforming them into artificial freshwater lakes. The fish, shellfish, and marsh grass that lived there have disappeared. Algal blooms have plagued the water bodies. Even the Easterscheldt Barrier, which allows some tidal flow, has seriously degraded the wetlands behind it.

“The technological approach has not brought us a sustainable solution,” says Mulder.

To keep Rotterdam and other nearby land safe in the face of sea level rise, engineers will need to beef up the seacoast, where a nearly continuous strip of sand dunes holds the sea back, says Mindert de Vries, another Deltares engineer. Like Mulder, De Vries proselytizes for “building with nature.” Instead of steel, concrete, and packed clay, he’d like to see more sand and marsh grass used to protect coastlines. He’d also like to use natural forces, such as wind and currents, rather than heavy earthmoving equipment, to move protection into place. The most important example today is called the Sand Engine, which involves dumping dredged sand offshore of the coastal dune fields, stabilizing the coast by preventing waves from eroding the shore.

Beach stabilization projects and a dike behind the sand protect a town in the northern Netherlands.
Crews started holding the coastline in place with sediment dredged from the North Sea in the 1990s. Initially they dumped about 200 million cubic feet of sand a year — more than two times the volume of the Giant Pyramid of Giza. In 2008 the government’s flood protection advisory body concluded that to keep up with sea level rise through 2050, the country must distribute 3 billion cubic feet of sand a year along 200 miles of coastline. Researchers are still trying to figure out how to economically move this vast volume of material.

Arriving in his car at Ter Heijde, a resort town on the coast, Mulder gestures to a curved peninsula of light brown sand stretching into the sea like a bent arm flexing a muscle — the Sand Engine. In 2011 researchers deposited 750 million cubic feet of sand here in a half-mile swath. They project that the powerful winds and racing currents around Ter Heijde will spread the material out along six miles of shoreline over 20 years. Some scientists worry that such massive movement of sediment could harm coastal wildlife, but Mulder says the experiment includes careful ecological monitoring for problems. Mulder says that the mass has already spread more than two miles since the experiment began. “The redistribution process,” he says, “is going very well.”

Is coastal retreat inevitable?

In the coming years, many more cities will take up the struggle that has preoccupied Hamburg and Rotterdam for more than 1,000 years. Last year, the U.S. Department of Housing and Urban Development announced seven plans for protecting the New Jersey and New York shores from storms like Sandy, and allocated almost $1 billion in initial funding. Five of the funded projects — which included the use of dikes, rejuvenated marshes to slow storm surges, and natural basins for temporary storage of storm waters — were submitted by groups that included Dutch engineering and design firms.

And what of cities and nations lacking the financial resources of Hamburg, Rotterdam, or New York? Experts say they will either have to receive massive financial assistance from the developed world, or retreat from the coasts. Jan Mulder says that, up to a point, “building with nature” techniques could be an effective and economical way for developing countries to protect their coastlines. For instance, restored mangrove forests on the coast of India and Bangladesh could slow destructive wave action and trap sediment, helping to elevate the shoreline as the sea rises.

But Klaus Jacob, a research scientist at Columbia University’s Lamont-Doherty Earth Observatory, says that society is still woefully unprepared for sea level increases later this century that will spare neither industrialized nor developing nations. “We are still in denial that we can engineer ourselves out of this,” says Jacob. “The only truly reliable solution is retreating from low-lying areas.”

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