

OPRF MARINT Monthly Report

March 2012



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Somali Piracy's Impact on the Global Economy — Various Cost Estimates of Anti-piracy Efforts from U.S. Think Tank Report

This monthly report was summarized and produced by OPRF staff writers based on their analyses and assessments of open source information.

Each source of information is described as an internet link in a bracket, which is available as URL online as of the end of March 2012.

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Intelligence Summary in March 2012

Maritime Security: In March, there were two hijacking incidents. On the 4th, Somali pirates hijacked the Panama-flagged chemical tanker MV *Royal Grace* (6,813DWT) owned by a Dubai-based shipping company off the coast of Oman. On the 26th, Somali pirates hijacked the Iranian-owned cargo ship MV *Eglantine* (63,400DWT) off the north-western Hoarafush island of Maldives.

On the 5th, Greece has recalled its warship from the European Union's anti-piracy task force to save money as it struggles to meet fiscal targets. Deploying a frigate in the region costs Greece 2.5 million euros a month. On the other hand, on the 23th, European Union defense ministers agreed to allow military forces to attack Somali pirates' land targets. In addition, they agreed the extension period of Operation Atalanta for two additional years until the end of December 2014. On the 26th, the EU Naval Force Flagship ESPS *Patino* located a Yemeni registered dhow that was suspected of being involved in acts of piracy. On the 27th, the French Navy frigate *Aconit*, belonging to EU Naval Force, detained a group of 10 suspected pirates off the coast of Somalia.

On the 23rd, *Associate Press* reported that private security firms use floating armories and are storing their guns there. A ship that uses a floating armory will pick up weapons from it at the beginning of its travels through dangerous waters, and then drop them off to another floating armory at the end of the dangerous part of the voyage. Storing guns on boats offshore really took off as a business in situations that the sea transportation industry began to hire more private security guards for anti-piracy efforts in Somalia around 2011. There are between 10 and 12 ships operating as floating armories at any one time.

On the 29th, India's Kerala High Court ordered the release of the Italian tanker, MV *Enrica Lexie*. The tanker has remained anchored at a Kochi Port since two Indian fishermen were allegedly shot and killed by Italian marines onboard the vessel on February 15.

Military Developments: On the 2nd, Britain's most advanced warship HMS *Daring* has joined allied navies for her first major operation east of Suez, the U.K.'s Ministry of Defence (MoD) has announced. The destroyer belonging to the multinational naval force, CTF-150, takes part in Operation SCIMITAR ANZAC, scouring the Red Sea, the Gulf of Aden and the coast of Yemen for illegal activity such as piracy, smuggling, and people-trafficking.

According to a published report by an Indian paper dated the 3rd, *Business Standard*, the Indian ministry of defence (MoD) bars domestic private shipyards from the Project 75I to build submarines that runs way behind schedule, as no private sector shipyard in the country has the infrastructure and capability required for building the high-tech conventional submarines that the Indian Navy wants. In the Project 75I, to build six conventional submarines, the first two will be built in a foreign dockyard, and the next four vessels will be built in domestic defense shipyards.

Li Zhaoxing, the spokesman for China's legislature, known as the National People's Congress, revealed in a press conference on 4th that military spending would reach to 670 billion yuan (\$106 billion), up 11.2 percent from the previous year, passing the \$100 billion mark for the first time. The Chinese Communist Party-owned *People's Daily* reported on the 12th that People's Liberation Army (PLA) Navy Deputy Commander Xu Hongmeng had told media that the PLA "has a plan" to make its first aircraft carrier, the former Soviet Union's *Varyag*, enter service in 2012. On 7th, John Chipman, the director general of the International Institute for Strategic Studies (IISS), said "Military spending by Asian countries in 2012, led by China, is rising fast and for the first time is likely this year to outstrip Europe, as a result of rapid economic growth and strategic uncertainty."

The Turkish newspaper *Hurriyet News* dated the 19th reported that a German-Turkish joint bid for building U209 subs for Indonesia may revive, because South Korea's Daewoo Shipbuilding and Marine Engineering (DSME) unilaterally told its Indonesian counterparts that the price was too low, and increased it to \$1.4 billion, even though the company announced on December 22 2011 that it had won an Indonesian deal for \$1.1 billion for three U209 submarines. A high officer of Turkish procurement agency said, "Meanwhile, we gave our best offer to the Indonesians on February 7 2012. Now we are waiting for their decision."

According to the U.S. newspaper *The Washington Post* dated the 27th, the United States and Australia are planning a major expansion of military ties, including building a new base for the high-altitude unmanned surveillance aircraft Global Hawk in the Australian Cocos Islands in the Indian Ocean. The Indonesian government sent a protest note to the United States and Australian governments against the plan of U.S. military to build a military base in Australia's Cocos Island, saying that it would disrupt the country's sovereignty.

South China Sea-related Events: On the 1st, the Vietnamese Navy commissioned three new model patrol ships.

According to a published report by *Xinhua* dated the 5th, Chen Mingyi, a member of the Standing Committee of the Chinese People's Political Consultative Conference National Committee (who is the former Communist Party chief of the coastal province of Fujian), called for the early establishment of a Ministry of Oceans in China to strengthen maritime law enforcement and exploration activities on the high seas. Major General Luo Yuan of the China Military Science Society called for Beijing to enforce its territorial claims in the South China Sea by establishing a national coast guard, stationing troops on more disputed islands, and encouraging its fishermen and oil companies to start commercial operations around them.

Diplomacy and International Relations: An official at the South Korean Ministry of Land, Transport and Maritime Affairs revealed on the 13th that South Korea would build naval bases on Baeknyeong 180 km off the coast of Incheon and Heuksan islands 90 km off Mokpo on the southwestern tip of the Korean Peninsula to respond more quickly to illegal incursions of Chinese fishing fleets. On the other hand, the South Korean Ministry for Food, Agriculture, Forestry and

Fisheries (MIFAFF) held a ceremony on the 7th to launch a high-tech patrol vessel designed to efficiently tackle unauthorized Chinese fishing in Korea's territorial waters and exclusive economic zones (EEZ), in the southeastern port city of Busan. The 1,258-ton patrol boat with cutting-edge technology and a top speed of 17 knots, named *Mugunghwa I*, after the Korean national flower, is equipped with an electric chart display indicator system, autopilot system and night-time cameras, which are not installed in most existing vessels.

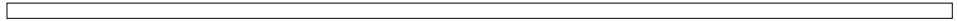
A U.S. newspaper, *The Wall Street Journal* dated the 14th reported a sea boundary dispute between China and the South Korea over a submerged rock in the East China Sea. The spat over what South Korea calls the Ieodo Reef and China refers to as the Suyan Reef. The rock was 4 to 5 meters underwater. China's EEZ overlaps with South Korea's in the ocean between them, with the Ieodo/Suyan Reef falling into the area claimed by both. The two sides have held 16 rounds of negotiations on how to divide the waters, but have failed to reach an agreement.

On the 14th, the International Tribunal for the Law of the Sea (ITLOS) delivered its judgment in the Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal. Sam Bateman, an adviser to the Maritime Security Programme at the S. Rajaratnam School of International Studies (RSIS), a think tank in Singapore, contributed an article on the first ITLOS decision on delimitation of the maritime boundary titled "Solving Maritime Disputes: The Bangladesh-Myanmar Way" to *RSIS Commentaries* dated the 20th, pointing out that the ITLOS judgment does not necessarily provide a precedent for other boundary disputes, despite the peaceful settlement.

Shipping, Shipbuilding and Harbors: On the 9th, Mitsui O.S.K. Lines, Ltd. (MOL) issued a press release, saying the launching of the hybrid car carrier *Emerald Ace* at the Mitsubishi Heavy Industries, Ltd. (MHI), Kobe shipyard. The *Emerald Ace*, designed to generate zero emissions while berthed, was designated as a project to reduce CO2 emissions from ocean-going vessels, and earned MOL a subsidy from Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT) in 2009.

Ocean Resources, Energy, Sea Environment and Others: *Associated Press* dated the 3rd reported on the impact that disposal of overage ships with missiles and bombs had on an environment: (1) the U.S. Navy considered the program called "Sinkex" for sinking exercise as an important national security function, allowing for live-fire exercises and study of "weapons lethality;" (2) on the other hand, the Navy has struggled to balance its military training needs with an environmentally sound way.

Intelligence Assessment: On February 8, the project "Oceans Beyond Piracy" by The One Earth Future Foundation in Colorado, the United States, issued *The Economic Cost of Somali Piracy 2011* (hereinafter the report). According to the report, the sea transportation industry shouldered 80 percent of Somali piracy's impact on the global economy, and the remaining 20 percent was the expense of each country's government for anti-piracy efforts. The report says, the



total cost is estimated to reach \$6.6~6.9 billion (estimated amount of money in US\$ unit). The report takes nine factors in estimating Somali piracy's impact on the global economy by calculating related costs with various information materials together. Analysis of this monthly report will provide a brief introduction to each cost estimate.

1. Information Digest

1.1 Maritime Security

March 4 “Somali pirates hijacks Panama-flagged tanker ” (gCaptain, March 5, 2012)

On the 4th, Somali pirates hijacked the Panama-flagged chemical tanker MV *Royal Grace* (63,400DWT) owned by a Dubai-based shipping company off the coast of Oman.

An outline of the article: On the 4th, Somali pirates hijacked the Panama-flagged chemical tanker MV *Royal Grace* (63,400DWT) owned by a Dubai-based shipping company off the coast of Oman. The M/V *Royal Grace* had a crew of 22 comprised of Indian, Pakistani and Nigerian nationals.

Refer to the article: Pirates Hijack Chemical Tanker off Oman

<http://gcaptain.com/pirates-hijack-chemical-tanker/?41571>

March 5 “Greece pulls out from EU anti-piracy force” (Reuters, March 5, 2012)

On the 5th, Greece has recalled its warship from the European Union’s anti-piracy task force to save money as it struggles to meet fiscal targets. Deploying a frigate in the region costs Greece 2.5 million euros a month.

An outline of the article: On 5th, Greece has recalled its warship from the European Union’s anti-piracy task force to save money as it struggles to meet fiscal target. Greece, struggling with its worst economic crisis since World War Two, is cutting 400 million euros from the defence budget this year. The frigate will return one month earlier than scheduled, on March 8 instead of April 4 and will not take part in the mission during the second half of the year, the Defence Ministry said. Deploying a frigate in the region costs Greece 2.5 million euros a month. Greece was the first country to take command of “Operation Atalanta” the EU launched in 2008, with France, Italy, Germany and Britain among countries taking part.

Refer to the article: Greece pulls out from EU anti-piracy force due to crisis

<http://af.reuters.com/article/somaliaNews/idAFL5E8E59MD20120305>

March 7 “U.S. hands pirate suspects to Seychelles” (Reuters, March 7, 2012)

On 7th, the United States handed over 15 suspected Somali pirates to Seychelles to stand trial. The suspected pirates were detained in January when the U.S. Navy rescued 13 Iranian fishermen abducted in the Arabian Sea and held hostage. In Seychelles, there are 66 convicted pirates in its jails and another 37 suspects in detention.

An outline of the article: On 7th, the United States has handed over 15 suspected Somali pirates to Seychelles to stand trial. Finding a suitable place to try suspected pirates detained has proved difficult on several occasions, and the gunmen are sometimes released. Seychelles changed its laws last year to allow pirates captured anywhere beyond its territorial waters to be prosecuted. According to U.S. State Department, the suspected pirates were detained in January

when the U.S. Navy rescued 13 Iranian fishermen abducted in the Arabian Sea and held hostage (About this incident, refer to 1.1 Maritime Security in the January 2012 issue of OPRF Monthly Report). According to the Seychelles authorities, in the country, there are 66 convicted pirates in its jails and another 37 suspects in detention.

Refer to the article: U.S. hands pirate suspects to Seychelles for trial

<http://www.reuters.com/article/2012/03/07/somalia-piracy-seychelles-idUSL5E8E769P20120307>

March 23 “Private security firms use floating armories” (AP, March 23, 2012)

On the 23rd, *Associate Press* reported that private security firms use floating armories and are storing their guns there. A ship that uses a floating armory will pick up weapons from it at the beginning of its travels through dangerous waters, and then drop them off to another floating armory at the end of the dangerous part of the voyage. Storing guns on boats offshore really took off as a business in situations that the sea transportation industry began to hire more private security guards for anti-piracy efforts in Somalia around 2011. There are between 10 and 12 ships operating as floating armories at any one time.

An outline of the article: On the 23rd, *Associate Press* reported that private security firms use floating armories and are storing their guns there. Ships that want armed anti-piracy guards for East Africa’s pirate-infested waters can cut costs and circumvent laws limiting the import and export of weapons, industry officials say. Companies and legal experts say the operation of the armories is a “legal gray area.” Storing guns on boats offshore really took off as a business in situations that the sea transportation industry began to hire more private security guards for anti-piracy efforts in Somalia around 2011. There are between 10 and 12 ships operating as floating armories at any one time. About half a dozen are located in the Red Sea, three off the United Arab Emirates and a couple off the island nation of Madagascar, said a certain private company. A ship that uses a floating armory will pick up weapons from it at the beginning of its travels through dangerous waters, and then drop them off to another floating armory at the end of the dangerous part of the voyage. Several companies said Middle Eastern nations like Saudi Arabia, Egypt and Yemen were particularly sensitive about foreigners bringing in weapons since the start of political uprisings in the Arab Spring. In the island nation of the Seychelles, police come onboard and lock the armory. In Mauritius, weapons must be taken off a ship as soon as it is docked and stored in the police lockup. Many ships fly flags from countries like Liberia or Panama, where regulations can be relatively lax. Even if companies are trying to comply with the law, part of the problem is that legislation has not kept pace with the rapid growth of the maritime private security industry. Since February, all British companies and citizens working in maritime security — or providing services to British ships — have to abide by a new regulation governing firearms. The regulation does not contain any standards for floating armories.

Refer to the article: Piracy fighters use floating armories

<http://www.google.com/hostednews/ap/article/ALeqM5jMdbkordaeVXbTMkeP-74SaX8KrQ?docId=8e04ce8bbc9f4e6cb6bcf21ab91af4f7>

March 23 “EU extends operation to attack Somali pirates’ land targets” (Break Bulk, March 23, 2012)

On the 23th, European Union defense ministers agreed to allow military forces to attack Somali pirates’ land targets. In addition, they agreed the extension period of Operation Atalanta for two additional years until the end of December 2014.

An outline of article: On the 23th, European Union defense ministers agreed to allow military forces to attack Somali pirates’ land targets. In addition, the conference agreed the extension period of Operation Atalanta for two additional years until the end of December 2014. The EU Naval Force would work directly with Somalia’s transitional government and other Somali entities to support their fight against piracy in coastal areas. EU Council said it would provide a 14.9 million euro budget for the prolonged mission.

Refer to the article: EU Extends Somali Counter-piracy Operation

<http://www.breakbulk.com/piracy/eu-extends-somali-counter-piracy-operation>

March 26 “Somali pirates hijack Iranian ship” (BBC News, March 26, 2012)

On the 26th, Somali pirates hijacked the Iranian-owned cargo ship MV *Eglantine* (63,400DWT) off the north-western Hoarafush island of Maldives.

An outline of the article: On the 26th, Somali pirates hijacked the Iranian-owned cargo ship MV *Eglantine* (63,400DWT) off the north-western Hoarafush island of Maldives. 23 crews were on board the vessel. Maldives defence officials said it is the first time Somali pirates have taken a ship in its waters. The Maldives are nearly 3,000 km from the coast of Somalia. It is also co-ordinating with Indian naval officials in an effort to rescue the crew.

Refer to the article: Somali pirates 'seize ship off Maldives'

<http://www.bbc.co.uk/news/world-asia-17518631>



MV *Eglantine*



The Maldives lie some 3,000 km east of Somalia

Source: Minivan News, March 26, 2012

March 26 “EU Naval Forces seize pirates’ mother ship” (EU NAVFOR Public Affairs Office, Press Release, March 28, 2012)

On the 26th, the EU Naval Force Flagship ESPS *Patino* located a Yemeni registered dhow that was suspected of being involved in acts of piracy.

An outline of the article: On the 26th, the EU Naval Force Flagship ESPS *Patino* located a Yemeni registered dhow that was suspected of being involved in acts of piracy. On the previous day (the 25th), there was a report that the dhow had evaded an attack by two skiffs. The dhow with 16 people on board was confirmed as a suspected mother ship. The 14 out of 16 suspected pirates quickly surrendered. 2 dhow crew members were freed. Below is the scene at the time.

Refer to the article: EU Naval Force Ensures Pirate Action Group is Incapable of Further Crime

<http://www.eunavfor.eu/2012/03/eu-naval-force-ensures-pirate-action-group-is-incapable-of-further-crime/>



Helicopter and boarding team closing in to the dhow

Source: EU NAVFOR Public Affairs Office, Press Release, March 28, 2012

March 27 “EU naval forces capture pirate group” (EU NAVFOR Public Affairs Office, Press Release, March 28, 2012)

On the 27th, the French Navy frigate *Aconit*, belonging to EU Naval Force, detained a group of 10 suspected pirates off the coast of Somalia.

An outline of the article: On the 27th, the French Navy frigate *Aconit*, belonging to EU Naval Force, detained a group of 10 suspected pirates off the coast of Somalia. The group of suspected pirates was believed to have tried to attack a Hong-Kong flagged tanker approximately 400 nautical miles off the coast of Somalia on the 26th. *Aconit* was directed onto the fleeing pirates by a Luxembourgish Maritime Patrol and Reconnaissance Aircraft (MPRA). The MPRA quickly located the suspects who were towing a small skiff behind a larger sea going whaler, and alerted it to the vessel. *Aconit*'s helicopter intercepted and stopped the whaler by firing warning shots on the 27th. A team from *Aconit* made an inspection of the whaler, and detained 10 suspected pirates onboard. In order to conceal the evidence of their piracy activities, it is believed that the suspected

pirates had cut loose and sunk the smaller skiff, containing weapons, ladders and a certain amount of fuel. Below is the scene at the time.

Refer to the article: Would Be Pirates Captured By European Naval Forces

<http://www.eunavfor.eu/2012/03/would-be-pirates-captured-by-european-naval-forces/>



Boarding teams and whaler

Source: EU NAVFOR Public Affairs Office, Press Release, March 28, 2012

March 29 “India’s Kerala High Court orders release of Italian ship” (gCaptain, March 29, 2012)

On the 29th, India’s Kerala High Court ordered the release of the Italian tanker, MV *Enrica Lexie*. The tanker has remained anchored at a Kochi Port since two Indian fishermen were allegedly shot and killed by Italian marines onboard the vessel on February 15.

An outline of the article: On the 29th, India’s Kerala High Court ordered the release of the Italian tanker, MV *Enrica Lexie*. The tanker has remained anchored at a Kochi Port since two Indian fishermen were allegedly shot and killed by Italian marines onboard the vessel on February 15. The owners of the *Enrica Lexie*, an Italian shipping company, argued that the marines were not a part of the ship’s crew, but rather appointed by the Italian Navy and should be released. Meanwhile the two Italian marines accused are being held in an Indian prison and face charges of murder (About the incident of February, refer to 1.1 Maritime Security of OPRF MARINT Monthly Report February 2012).

Refer to the article: M/V Enrica Lexie Free to Leave India

<http://gcaptain.com/enrica-lexie-free-leave-india/?43233>

1.2 Military Developments

March 2 “Britain’s most advanced warship takes part in patrol operation in the surrounding sea areas of the Gulf of Aden” (Defence Web, March 2, 2012)

On the 2nd, Britain’s most advanced warship HMS *Daring* has joined allied navies for her first major operation east of Suez, the U.K.’s Ministry of Defence (MoD) has announced. The destroyer belonging to the multinational naval force, CTF-150, takes part in Operation SCIMITAR ANZAC, scouring the Red Sea, the Gulf of Aden and the coast of Yemen for illegal activity such as piracy, smuggling, and people-trafficking.

An outline of the article: On the 2nd, Britain’s most advanced warship HMS *Daring* has joined allied navies for her first major operation east of Suez, the U.K.’s Ministry of Defence (MoD) has announced. The destroyer joins Australian, Pakistani, New Zealand and Yemeni ships and personnel for Operation SCIMITAR ANZAC, scouring the Red Sea, the Gulf of Aden and the coast of Yemen for illegal activity such as piracy, smuggling, and people-trafficking. HMS *Daring* is the first vessel of Type 45 that replaces Type 42, which entered service in the 1970s. Originally a dozen ships were supposed to be bought but the number was halved in 2008, due to financial difficulties. Currently, the construction of three of them has been completed, but the other two have not deployed in action yet. The Type 45s are armed with high-tech Sea Viper anti-air missiles and will be able to carry 60 troops. They also have a large flight deck which can accommodate helicopters the size of a Chinook as well as take on board 700 people in the case of a civilian evacuation. The ships are with a normal displacement of around 8,000 tons, and have a designed top speed of more than 27 knots and a range of more than 7,000 nautical miles.

Refer to the article: HMS *Daring* joins allied navies for her first major operation, hunting for pirates

http://www.defenceweb.co.za/index.php?option=com_content&view=article&id=24053:hms-daring-joins-allied-navies-for-her-first-major-operation-hunting-for-pirates&catid=51:Sea&Itemid=106



HMS *Daring*

Source: Defence Web, March 2, 2012

March 3 “Indian ministry of defence bars domestic private sectors from project to build submarines” (Business Standard, March 3, 2012)

According to a published report by an Indian paper dated the 3rd, *Business Standard*, the Indian ministry of defence (MoD) bars domestic private shipyards from the Project 75I to build submarines that runs way behind schedule, as no private sector shipyard in the country has the infrastructure and capability required for building the high-tech conventional submarines that the Indian Navy wants. In the Project 75I, to build six conventional submarines, the first two will be built in a foreign dockyard, and the next four vessels will be built in domestic defense shipyards.

Refer to the article: According to a published report by an Indian paper dated the 3rd, *Business Standard*, the Indian ministry of defence (MoD) bars domestic private shipyards from the Project 75I to build submarines that runs way behind schedule, as no private sector shipyard in the country has the infrastructure and capability required for building the high-tech conventional submarines that the Indian Navy wants. The Project 75I, to build six conventional submarines, will be built in a foreign dockyard and in domestic defense shipyards. According to the ministry, the first two Project 75I submarines will be built abroad by the foreign vendor. The next four vessels will be built in India, in the two defense shipyards that have the infrastructure for building submarines — Mazagon Dock Limited, Mumbai (MDL), and Hindustan Shipyard Ltd, Visakhapatnam (HSL). This decision was taken by the MoD’s apex Defence Acquisition Council (DAC) in January. In 1999, the Cabinet Committee on Security (CCS) had sanctioned the 30-Year Submarine Construction Plan for constructing 24 conventional submarines entirely in India. The latest MoD decision to build two submarines abroad runs contrary to this. The Indian Navy has argued forcefully for building the first two Project 75I submarines abroad. The navy hopes this would forestall the delays that marred the ongoing Project 75, which involves constructing six Scorpene submarines in MDL, in partnership with Franco-Spanish consortium, Armaris. The first Scorpene, which was to be delivered in 2012, will only be completed in 2015.

Refer to the article: Doors slammed on pvt firms in submarine project

<http://www.business-standard.com/india/news/doors-slammedpvt-firms-in-submarine-project/466583/>

March 4 “China’s military spending increases 11.2% from last year” (The Washington Post, March 4, 2012)

Li Zhaoxing, the spokesman for China’s legislature, known as the National People’s Congress, revealed in a press conference on 4th that military spending would reach to 670 billion yuan (\$106 billion), up 11.2 percent from the previous year, passing the \$100 billion mark for the first time.

An outline of the article: Li Zhaoxing, the spokesman for China’s legislature, known as the National People’s Congress, revealed in a press conference on 4th China’s military spending in 2012 would increase 11.2 percent from the previous year. Accordingly, the official military budget would reach to 670 billion yuan (\$106 billion), passing the \$100 billion mark for the first time. The defense budget for 2011 was \$91.5 billion, which was a 12.7 percent increase over the 2010

budget. Li said that China's defense spending as a share of its gross domestic product was 1.28 percent in 2011 and that the military budgets of countries such as the United States and Britain exceeded 2 percent of GDP. However, a think tank, the Stockholm International Peace Research Institute, put China's actual military spending as a percentage of GDP at higher than 2 percent. Some analysts have projected that by 2015, China's military spending will surpass that of all 12 of its Asia-Pacific neighbors.

Refer to the article: China military spending to top \$100 billion in 2012, alarming neighbors
http://www.washingtonpost.com/world/china-military-spending-to-top-100-billion-this-year/2012/03/04/gIQAJRnypR_story.html?wpisrc=nl_headlines

【Related article】

“Asia's military spending in 2012 to exceed Europe—IISS” (The Guardian, March 7, 2012)

On the 7th, John Chipman, the director general of the International Institute for Strategic Studies (IISS), said “Military spending by Asian countries in 2012, led by China, is rising fast and for the first time is likely this year to outstrip Europe, as a result of rapid economic growth and strategic uncertainty.”

An outline of the article: On 7th, a British thin tank, the International Institute for Strategic Studies (IISS) released “Military Balance 2012.” John Chipman, the director of the IISS, said in a press conference, “Military spending by Asian countries in 2012, led by China, is rising fast and for the first time is likely this year to outstrip Europe.” “While the west reduces its spending on defence. Asia is becoming increasingly militarised as a result of rapid economic growth and strategic uncertainty,” the director general said. According to an estimate by the IISS, Asian countries increased their defence budget by more than 3% in real terms last year. China increased its share of total military expenditure on weapons in the region to more than 30%. In Asia, Australia, Indonesia, Malaysia, Singapore, Thailand and Vietnam are all investing in improving air and naval capacities. On the other hand, in Europe, defence budgets remain under pressure and cuts to equipment programmes continue. Between 2008 and 2010 there were reductions in defence spending in at least 16 European NATO member states. In a significant proportion of these, cuts in real terms exceeded 10%.

Refer to the article: Asia's military spending likely to overtake Europe this year
<http://www.guardian.co.uk/world/2012/mar/07/asia-military-spending-overtake-europe>

March 8 “Chinese aircraft carrier could launch in 2012—PLA Deputy Commander” (Taipei Times, March 13, 2012)

The Chinese Communist Party-owned *People's Daily* reported on the 12th that People's Liberation Army (PLA) Navy Deputy Commander Xu Hongmeng had told media that the PLA “has a plan” to make its first aircraft carrier, the former Soviet Union's *Varyag*, enter service in 2012.

An outline of the article: The Chinese Communist Party-owned *People's Daily* reported on the

12th that People's Liberation Army (PLA) Navy Deputy Commander Xu Hongmeng had told media that the PLA "has a plan" to make its first aircraft carrier, the former Soviet Union's *Varyag*, enter service in 2012. It was the first time a PLA officer officially mentioned a specific timing for the launch of the refurbished aircraft carrier. Defense analysts believe the carrier could be launched on August 1 to coincide with the anniversary of the establishment of the PLA. The yet-to-be-renamed carrier is expected to carry *Shenyang* J-15 fighter aircraft, as well as Z-8 transport helicopters. It will be based on Hainan Island and cover the East China Sea and South China Sea.

Refer to the article: Aircraft carrier could launch this year: PLA

<http://www.taipeitimes.com/News/taiwan/archives/2012/03/13/2003527671>

March 13 "China provides two frigates to Myanmar" (Maritime Propulsion, March 13, 2012)

The Chinese Navy (PLAN) transferred two of their older Type 053H1 frigates (NATO name *Jianghu-2*) to the Myanmar Navy. The two frigates with the Myanmar Navy are now named UMS *Mahar Bandoola* (F-21) and UMS *Mahar Thiha Thura* (F-23).

An outline of the article: The Chinese Navy (PLAN) transferred two of their older Type 053H1 frigates (NATO name *Jianghu-2*) to the Myanmar Navy. The two frigates of 1,702 tons displacement with the Myanmar Navy are now named UMS *Mahar Bandoola* (F-21) and UMS *Mahar Thiha Thura* (F-23). Two type 053H1 frigates of this class were supplied to the Egyptian Navy in 1984-85 with a further ship sold to Bangladesh in 1989. Four of the later type 053H2 frigates were supplied to the Royal Thailand Navy 1991-92. Four further development of the type 053H3 are being supplied to Pakistan. Three of them were built in China and the last one is under construction in Pakistan.

Refer to the article: Two Chinese Frigates for Myanmar

<http://articles.maritimepropulsion.com/article/Two-Chinese-Frigates-for-Myanmar-2028.aspx>



Type 053H1 frigate with Myanmar Navy hull numbers F21 and F23

Source: Defense Studies, March 10, 2012

March 19 “Turkey may revive again as builder of Indonesian submarine” (Hurriyet News, March 19, 2012)

The Turkish newspaper *Hurriyet News* dated the 19th reported that a German-Turkish joint bid for building U209 subs for Indonesia may revive, because South Korea’s Daewoo Shipbuilding and Marine Engineering (DSME) unilaterally told its Indonesian counterparts that the price was too low, and increased it to \$1.4 billion, even though the company announced on December 22, 2011 that it had won an Indonesian deal for \$1.1 billion for three U209 submarines. A high officer of Turkish procurement agency said, “Meanwhile, we gave our best offer to the Indonesians on February 7, 2012. Now we are waiting for their decision.”

An outline of the article: The Turkish newspaper *Hurriyet News* dated the 19th reported that a German-Turkish joint bid for building U209 subs for Indonesia’s next-generation Submarines may revive after the winner Korean firm’s decision to raise the price by \$300 million unilaterally. Accordingly, South Korea’s Daewoo Shipbuilding and Marine Engineering (DSME) unilaterally told its Indonesian counterparts that the price was too low, and increased it to \$1.4 billion, even though the company announced on December 22, 2011 that it had won an Indonesian deal for \$1.1 billion for three U209 submarines. A high officer of Turkish procurement agency said, “Meanwhile, we gave our best offer to the Indonesians on February 7, 2012. Now we are waiting for their decision.” DSME competed with a German-Turkish joint until the last minute. Still, DSME won the bid. Then came the company’s move to raise its price. Adm. Agus Suhartono, the chief of staff of Indonesian military forces, visited Turkey in February. The Indonesian team told Turkey to forget about the U209s and instead focus on the more developed U214 submarines. For Turkey, a \$2 billion submarine deal with HDW for the joint manufacture of six U214 platforms formally took effect in July 2010. Turkey has a document showing that HDW was given the right to negotiate with third parties to manufacture the U209.

Refer to the article: S Korea’s price hike in sub deal raises Turkish hopes

<http://www.hurriyetdailynews.com/s-koreas-price-hike-in-sub-deal-raises-turkish-hopes.aspx?pageID=238&nID=16265&NewsCatID=344>

March 21~April 1 “Singapore and Indian Navies conduct annual bilateral exercise” (MINDF, Singapore, April 2, 2012)

The Republic of Singapore Navy (RSN) and the Indian Navy (IN) have conducted the annual Singapore-Indian Maritime Bilateral Exercise (SIMBEX), from Mar 21 to April 1, 2012. This year’s exercise is the 19th installment in the series of bilateral exercises held since 1994.

An outline of the article: The Republic of Singapore Navy (RSN) and the Indian Navy (IN) have conducted the annual Singapore-Indian Maritime Bilateral Exercise (SIMBEX), from Mar 21 to April 1, 2012. This year’s exercise is the 19th installment in the series of bilateral exercises held since 1994. The sea phase of this year’s SIMBEX is held at the Andaman Sea and Bay of Bengal. This year’s SIMBEX involved naval and air assets with the RSN deploying a frigate and a missile corvette, and the IN participating with a destroyer, a corvette, a replenishment tanker, two fast attack crafts, a frigate and a submarine. As for air assets, both the RSN and IN deployed

maritime patrol aircraft and naval helicopters.

Refer to the article: Singapore and Indian Navies conduct bilateral maritime exercise

http://www.mindef.gov.sg/imindef/news_and_events/nr/2012/apr/01apr12_nr.html

March 27 “U.S. and Australia consider deploying patrol drone in the Australian islands in the Indian Ocean” (The Washington Post, March 27, 2012)

According to the U.S. newspaper *The Washington Post* dated the 27th, the United States and Australia are planning a major expansion of military ties, including building a new base for the high-altitude unmanned surveillance aircraft *Global Hawk* in the Australian Cocos Islands in the Indian Ocean.

An outline of the article: According to the U.S. newspaper *The Washington Post* dated the 27th, the United States and Australia are planning a major expansion of military ties, including building a new base for the high-altitude unmanned surveillance aircraft *Global Hawk* in the Australian Cocos Islands in the Indian Ocean. The United States operates a key joint naval and air base on the British island territory of Diego Garcia in the Indian Ocean, but operations are crowded, with little room to expand. In addition, the base’s future is uncertain; the United States lease will expire in 2016. Partly as a result, U.S. officials are eyeing the Cocos Islands. U.S. and Australian officials said the atoll could be an ideal site not only for manned U.S. surveillance aircraft but for *Global Hawks*. The U.S. Navy is developing a newer version of the *Global Hawk*, known as the Broad Area Maritime Surveillance drone, or BAMS, that is scheduled to become operational in 2015. Aircraft based in the Cocos would be well-positioned to launch spy flights over the South China Sea.

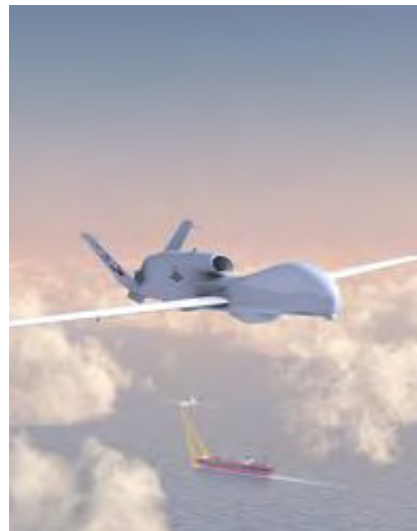
Refer to the article: U.S., Australia to broaden military ties amid Pentagon pivot to SE Asia

http://www.washingtonpost.com/world/national-security/us-to-expand-ties-with-australia-as-it-aims-to-shift-forces-closer-to-se-asia/2012/03/19/gIQAPsXlcS_story_1.html



The Cocos Islands

(Source; <http://www.cocoskeelingislands.com.au/>)



The Broad Area Maritime Surveillance drone

(Source: U.S. Naval Air Systems Command HP)

【Related article】**“Indonesia protest U.S. plan to build surveillance drone base in the Cocos Islands” (Xinhua, March 29, 2012)**

The Indonesian government sent a protest note to the United States and Australian governments against the plan of U.S. military to build a military base in Australia’s Cocos Island, saying that it would disrupt the country’s sovereignty.

An outline of the article: Coordinating Minister for Political, Legal and Security affairs Djoko Suyanto revealed in a press conference on the 29th that government sent a protest note to the United States and Australian governments against the plan of U.S. military to build a military base in Australia’s Cocos Island located 3,000 kilometers south of its territory, saying that it would disrupt the country's sovereignty.

Refer to the article: Indonesia sends protest note on US plan to build military surveillance base near territory

http://news.xinhuanet.com/english/world/2012-03/29/c_131496686.htm

1.3 South China Sea-related Events

March 1 “Vietnamese Navy commissions three new model patrol ships” (Vietnam Net, March 2, 2012)

On the 1st, the Vietnamese Navy commissioned three new model patrol ships.

An outline of the article: On the 1st, the Vietnamese Navy commissioned three new model patrol ships. The High Command of Naval Region 5 (manages south coast in the Gulf of Thailand) received two ships, HQ-264 and HQ-265. These are gun boats version of Russian-built *Svetlyak* class, which are designed to carry out a variety of missions, from patrol missions to prevent violations of maritime state border, to protect friendly vessels and facilities from enemy surface and air attacks. The same day, the High Command of Naval Region 2 (manages the southern coast, the southern continental shelf), received another gun boat, HQ-272, the most modern patrol ship manufactured by Vietnam.

Refer to the article: Vietnamese navy receives three modern ships

<http://english.vietnamnet.vn/en/politics/19472/vietnamese-navy-receives-three-modern-ships.html>



HQ-272

Source: Vietnam Net, March 2, 2012

March 5 “Political advisor calls for early establishment of Chinese Ministry of Oceans” (Xinhua, March 5, 2012)

According to a published report by *Xinhua* dated the 5th, Chen Mingyi, a member of the Standing Committee of the Chinese People’s Political Consultative Conference National Committee (who is the former Communist Party chief of the coastal province of Fujian), called for the early establishment of a Ministry of Oceans in China to strengthen maritime law enforcement and exploration activities on the high seas.

An outline of the article: According to a published report by *Xinhua* dated the 5th, Chen Mingyi, a member of the Standing Committee of the Chinese People’s Political Consultative Conference National Committee (who is the former Communist Party chief of the coastal province of Fujian), called for the early establishment of a Ministry of Oceans in China to strengthen maritime law enforcement and exploration activities on the high seas. According to him, as all great countries in modern history are also powers on the oceans, China needs to build itself into a strong maritime state to safeguard its interests in and accelerate development of a maritime territory as large as 3 million square km. In addition, the political advisor suggested central authorities establish a state oceanic commission involving representatives from departments of the economy, military, diplomacy, science and technology, and law enforcement.

Refer to the article: Call for establishment of Ministry of Oceans

http://news.xinhuanet.com/english/china/2012-03/05/c_131447829.htm

【Related article】

“China must establish national coast guard —Gen. Luo” (The Wall Street Journal, March 7, 2012)

Major General Luo Yuan of the China Military Science Society called for Beijing to enforce its territorial claims in the South China Sea by establishing a national coast guard, stationing troops on more disputed islands, and encouraging its fishermen and oil companies to start commercial operations around them.

An outline of the article: Major General Luo Yuan of the China Military Science Society called

for Beijing to enforce its territorial claims in the South China Sea by establishing a national coast guard, stationing troops on more disputed islands, and encouraging its fishermen and oil companies to start commercial operations around them. He also said China should establish a new administrative zone encompassing much of the South China Sea. Gen. Luo is not an official spokesman for the military, and has a long history of using the media to express more extreme positions than the government's. He was speaking during the ongoing meeting of the Chinese People's Political Consultative Conference. Nonetheless, his hawkish views are thought to have support among some other generals, as well as more nationalistic members of the public, and were given prominence on the website of *The People's Liberation Army Daily* dated 7th. Analysts say that resistance from the military and the public — especially online — makes it harder for the Chinese government to compromise on the territorial dispute. China does not have a coast guard at present, with maritime issues falling under the purview of at least six ministries, according to state media. It has, however, been rapidly expanding its Maritime Surveillance force, under the State Oceanic Administration or SOA, over the last two years.

Refer to the article: General Calls for New Coast Guard to Patrol South China Sea

<http://blogs.wsj.com/chinarealtime/2012/03/07/general-calls-for-new-coast-guard-to-patrol-south-china-sea/>

1.4 Diplomacy and International Relations

March 13 “South Korea to build facilities in islands of the Yellow Sea to respond to illegal incursions of Chinese fishing fleets” (The Chosun Ilbo, March 14, 2012)

An official at the South Korean Ministry of Land, Transport and Maritime Affairs revealed on the 13th that South Korea would build naval bases on Baeknyeong 180 km off the coast of Incheon and Heuksan islands 90 km off Mokpo on the southwestern tip of the Korean Peninsula to respond more quickly to illegal incursions of Chinese fishing fleets.

An outline of the article: An official at the South Korean Ministry of Land, Transport and Maritime Affairs said on the 13th, “We decided to build the forward bases so that our maritime police can respond faster to illegal fishing by Chinese fishermen.” He said, “Korea has decided build naval bases to respond more quickly to illegal incursions of Chinese fishing fleets.” Accordingly, South Korea would build the naval bases on Baeknyeong 180 km off the coast of Incheon and Heuksan islands 90 km off Mokpo on the southwestern tip of the Korean Peninsula in the West Sea (the Yellow Sea). The two port cities have harbor facilities for maritime police, which would man there around the clock. “At present it takes as much as eight hours for maritime police to get from the mainland to areas in the West Sea where there are reports of illegal Chinese fishing, and we end up missing a lot of them. Forward bases on those two islands would shorten the response time by half,” the ministry official said. The bases would house fueling depots for ships but also maritime research equipment and accommodate marine scientists. A ship operated

by the Ministry for Food, Agriculture, Forestry and Fisheries would be based there. It plans to pick the exact locations this year and begin construction in 2014. Completion is expected around 2018.

Refer to the article: New Island Bases to Help Fight Against Illegal Chinese Fishing

http://english.chosun.com/site/data/html_dir/2012/03/14/2012031400913.html

【Related article】

“South Korea deploys high-tech patrol ship to counter illegal Chinese fishing” (The Korea Herald, March 7, 2012)

The South Korean Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF) held a ceremony on the 7th to launch a high-tech patrol vessel designed to efficiently tackle unauthorized Chinese fishing in Korea’s territorial waters and exclusive economic zones (EEZ), in the southeastern port city of Busan. The 1,258-ton patrol boat with cutting-edge technology and a top speed of 17 knots, named *Mugunghwa I*, after the Korean national flower, is equipped with an electric chart display indicator system, autopilot system and night-time cameras, which are not installed in most existing vessels.

An outline of the article: The South Korean Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF) held a ceremony on the 7th to launch a high-tech patrol vessel designed to efficiently tackle unauthorized Chinese fishing in Korea’s territorial waters and exclusive economic zones (EEZ), in the southeastern port city of Busan. The 1,258-ton patrol boat with cutting-edge technology, named *Mugunghwa I*, after the Korean national flower, has been built at a cost of 15 billion won since August 2010. The new patrol ship can reach a top speed of 17 knots, and its onboard rescue dingy can travel at a maximum speed of 30 knots. MIFAFF plans to launch four more next-generation patrol ships by 2015. South Korea currently runs a total of 34 patrol ships to safeguard its EEZs against fishermen from other nations, mostly from China and Japan.

Refer to the article: High-tech patrol vessel deployed to counter illegal Chinese fishing

http://www.koreatimes.co.kr/www/news/biz/2012/03/%20%20123_106417.html



Korea’s latest Coast Guard patrol ship, *Mugunghwa I*

March 14 “Sea boundary dispute between China and South Korea over reef in the East China Sea” (The Wall Street Journal, March 14, 2012)

A U.S. newspaper, *The Wall Street Journal* dated the 14th reported a sea boundary dispute between China and the South Korea over a submerged rock in the East China Sea. The spat over what South Korea calls the Ieodo Reef and China refers to as the Suyan Reef. The rock was 4 to 5 meters underwater. China’s EEZ overlaps with South Korea’s in the ocean between them, with the Ieodo/Suyan Reef falling into the area claimed by both. The two sides have held 16 rounds of negotiations on how to divide the waters, but have failed to reach an agreement.

An outline of the article: A U.S. newspaper, *The Wall Street Journal* dated the 14th reported a sea boundary dispute China and the South Korea over a submerged rock in the East China Sea. The spat over what South Korea calls the Ieodo Reef and China refers to as the Suyan Reef, and the rock was 4 to 5 meters underwater. According to the newspaper, it was triggered by the remarks of Liu Cigui (the head of the State Oceanic Administration) in the interview with *Xinhua* in early March, saying that patrols by Chinese maritime surveillance ships and aircraft now covered “all China’s jurisdictional waters.” He defined that as an area stretching from the mouth of the Yalu River in the north to the Okinawa Trough in the east and the James Shoal (the southernmost land feature claimed by China in the South China Sea. It is also claimed by Taiwan and Malaysia) in the south. On the other hand, South Korea’s President, Lee Myung-bak, said on 12th that the reef “will fall naturally into Korean-controlled areas.” Mr. Lee declared that the issue was not technically a territorial dispute as the rock was 4 to 5 meters underwater, but South Korea did consider it part of the country’s “exclusive economic zone,” or EEZ. The same day, South Korea’s Foreign Ministry questioned China’s ambassador in Seoul over the issue. Under the U.N. Convention on the Law of the Sea, the countries involved are supposed to decide between each other where to draw the boundary line. China’s EEZ overlaps with South Korea’s in the ocean between them, the Ieodo/Suyan Reef falling into the area claimed by both. The reef is just over 90 miles from the nearest bit of actual South Korean territory, and about 155 miles from the nearest Chinese territory. South Korea has built an ocean research station on the reef. The two sides have held 16 rounds of negotiations on how to divide the waters, but have failed to reach an agreement. On 12th, China’s Foreign Ministry spokesman agreed that the rock was not technically the object of a territorial dispute, but said jurisdiction over it had to be decided through negotiation between Seoul and Beijing. “Before that, neither side should undertake any unilateral activity in the area,” he said.

Refer to the article: China, South Korea in Row Over Submerged Rock

<http://blogs.wsj.com/korearealtime/2012/03/14/china-south-korea-in-row-over-submerged-rock/>



The ocean research station on the leodo Reef build by South Korea

Source: http://blogimg.goo.ne.jp/user_image/7d/53/b6418364a50fc138dd292dce1e2961c4.jpg

March 14 “ITLOS delivers judgment in Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar” (RSIS Commentaries, No. 048, March 20, 2012)

On the 14th, the International Tribunal for the Law of the Sea (ITLOS) delivered its judgment in the Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal. Sam Bateman, an adviser to the Maritime Security Programme at the S. Rajaratnam School of International Studies (RSIS), a think tank in Singapore, contributed an article on the first ITLOS decision on delimitation of the maritime boundary titled “Solving Maritime Disputes: The Bangladesh-Myanmar Way” to *RSIS Commentaries* dated the 20th, pointing out that the ITLOS judgment does not necessarily provide a precedent for other boundary disputes, despite the peaceful settlement.

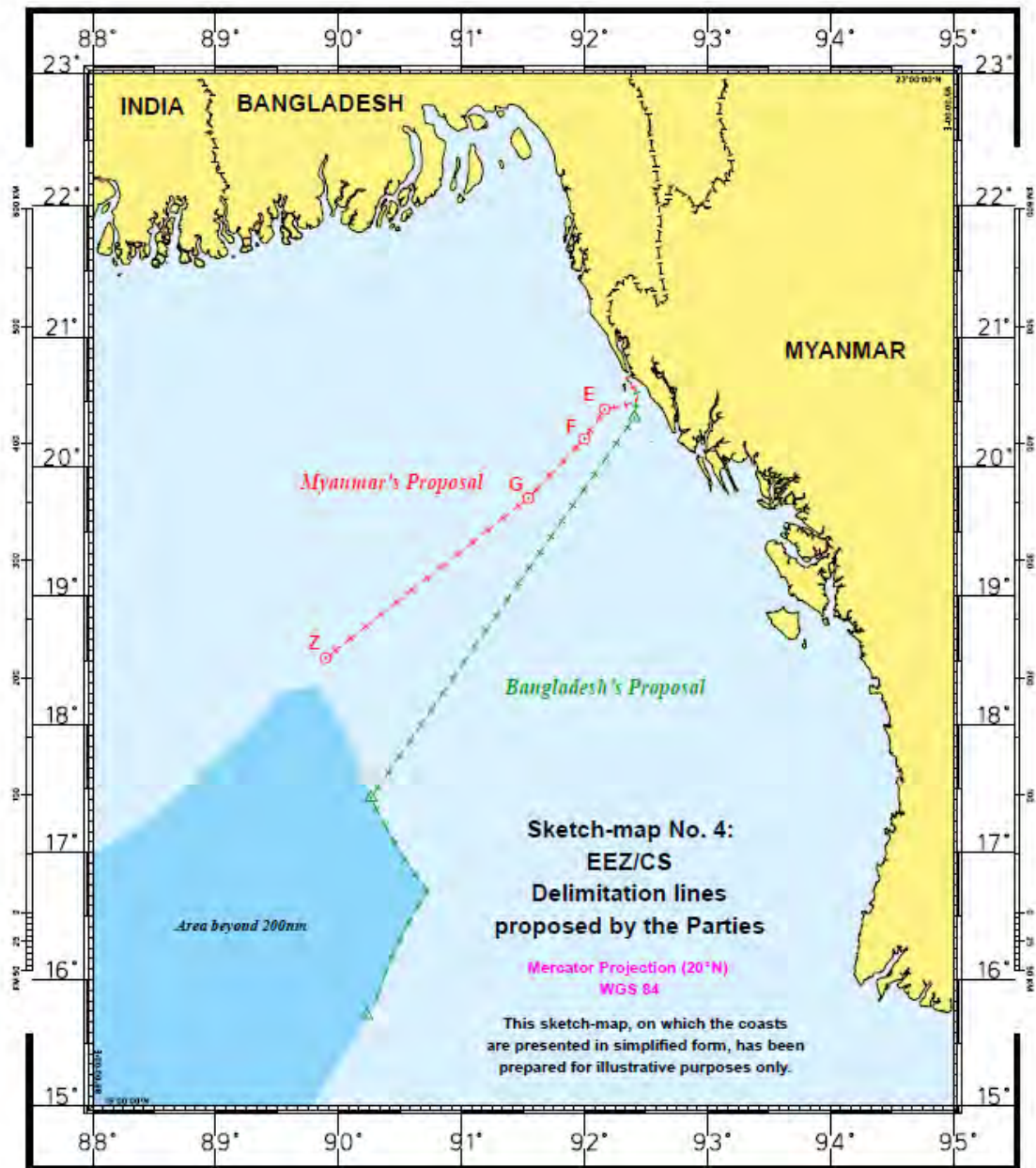
An outline of the article: Sam Bateman, an adviser to the Maritime Security Programme at the S. Rajaratnam School of International Studies (RSIS), a think tank in Singapore, contributed an article titled “Solving Maritime Disputes: The Bangladesh-Myanmar Way” to *RSIS Commentaries* dated the 20th. On the 14th, The International Tribunal for the Law of the Sea (ITLOS) delivered its judgment in the Dispute Concerning Delimitation of the Maritime Boundary between Bangladesh and Myanmar in the Bay of Bengal. He points out on the first ITLOS decision on delimitation of the maritime boundary that the ITLOS judgment does not necessarily provide a precedent for other boundary disputes, despite the peaceful settlement. Bateman summarizes the main points of the matter as follows:

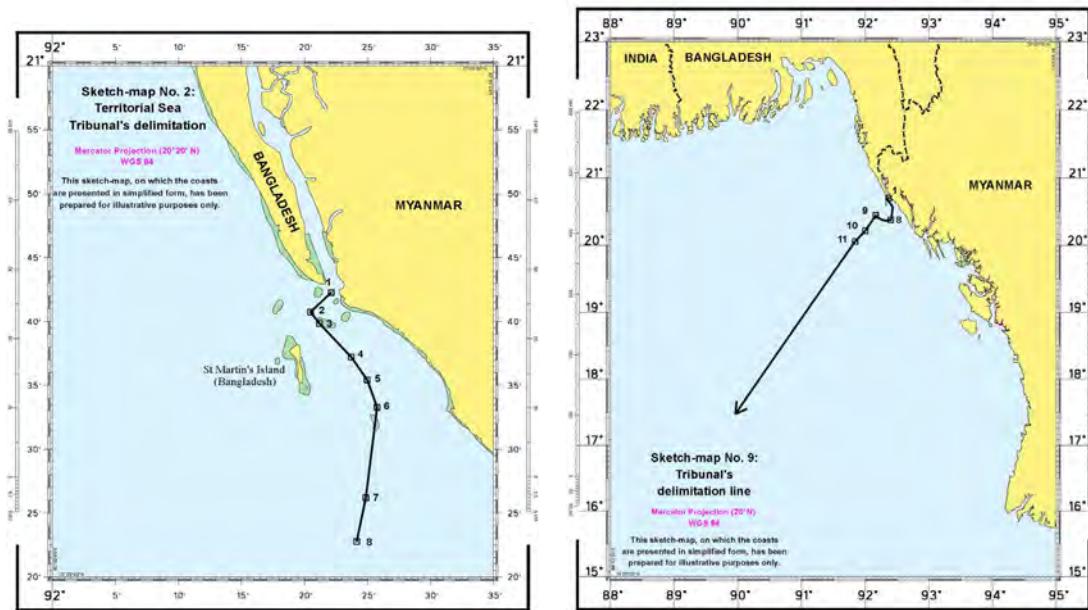
- (1) The Tribunal decided on an adjusted equidistant line as the boundary between the two countries. This was rather more in favour of Bangladesh than a median or equidistant line between the boundaries proposed by each of the two countries would have been. Nevertheless, it still gave over half as much more of the “relevant area” to Myanmar than to Bangladesh. As is often the case with international settlement of maritime boundary

- disputes, there was no outright “winner” or “loser” with the ITLOS judgment. The Foreign Minister of Bangladesh, Dr. Dipu Moni, claimed it as a victory for her country; but conversely, Myanmar might also claim a “win” as it received a much larger share of the relevant area while St. Martin’s island was not given full weight in the delimitation,
- (2) The Bangladesh-Myanmar case was the first maritime boundary dispute to go before ITLOS. There are many technical arguments why the Tribunal reached its decision. The principles of maritime boundary making have also become more complex. As well as geographical issues and concepts of equidistance, attention is given to so-called “equitable principles,” which can be economic, physical or social. However, there is no accepted definition of just what is an “equitable principle.”
- (3) The separate opinion of Judge Zhiguo Gao from China is an interesting aspect of the ITLOS judgment. While the judge did not vote against the judgment, his separate opinion shows views that are more or less in line with China’s position on its disputes in the East and South China seas. Firstly, Judge Gao opined that the equidistance/relevant circumstances method was not appropriate for determining the boundary because it failed to take into account the concave nature of the Bay of Bengal and produced some inequity in the outcome. This view is relevant to the differences between China and Japan in settling their boundary dispute in the East China Sea. Secondly, he thought that the treatment of St. Martin’s island at the junction of the landward end of the boundary between the two countries was flawed. He argued that the island more than justified it being treated as an island under the UNCLOS regime of islands entitled to a full suite of maritime zones. Thus Judge Gao seems to be protecting China’s position in the South China Sea where China claims some islands are full “islands” under UNCLOS, but other countries do not share that view. Thirdly, Judge Gao questioned the rest of the Tribunal’s views of the effect to be given natural prolongation of the land mass of a coastal State in determining the limits of its continental shelf and its maritime boundaries. Again, his views reflect those of China in its boundary dispute with Japan in the East China Sea.
- (4) The ITLOS judgment resolves a major source of tension in the Bay of Bengal, and shows that with political will, maritime disputes can be settled peacefully. However, this does not mean that there will be a rush of maritime disputes from the region going to ITLOS. The disputes in other regional seas, particularly those in the South China Sea, are complex with intractable aspects that militate against them being taken to international arbitration in the foreseeable future. The disputants will remain reluctant to do so for the simple reason that the outcome may go against them. The recent ITLOS judgment does not necessarily provide a precedent for other boundary disputes. In the final analysis, the settlement of boundary disputes is inherently political in nature and two countries can agree whatever boundary they want in the absence of any impact on a third party.

Refer to the article: Solving Maritime Disputes: The Bangladesh-Myanmar Way
<http://www.rsis.edu.sg/publications/Perspective/RSIS0482012.pdf>

Note: The followings are part of a map in the judgment paper.





The Maritime Time Boundary between Bangladesh and Myanmar

The Judgment Paper

[http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_16/1-C16 Judgment 14 02 2012.pdf](http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_16/1-C16_Judgment_14_02_2012.pdf)

The separate opinion of Judge Zhiguo Gao from China

http://www.itlos.org/fileadmin/itlos/documents/cases/case_no_16/9-C16.sep_op.Gao.withmaps.orig.E.pdf

1.5 Shipping, Shipbuilding and Harbors

March 9 “MOL launches hybrid car carrier” (MOL Press Release, March 12, 2012)

On the 9th, Mitsui O.S.K. Lines, Ltd. (MOL) issued a press release, saying the launching of the hybrid car carrier *Emerald Ace* at the Mitsubishi Heavy Industries, Ltd. (MHI), Kobe shipyard. *The Emerald Ace*, designed to generate zero emissions while berthed, was designated as a project to reduce CO2 emissions from ocean-going vessels, and earned MOL a subsidy from Japan’s Ministry of Land, Infrastructure, Transport and Tourism (MLIT) in 2009.

An outline of the article: On the 9th, Mitsui O.S.K. Lines, Ltd. (MOL) issued a press release, saying the launching of the hybrid car carrier *Emerald Ace* at the Mitsubishi Heavy Industries, Ltd. (MHI), Kobe shipyard. *The Emerald Ace*, designed to generate zero emissions while berthed, was designated as a project to reduce CO2 emissions from ocean-going vessels, and earned MOL a subsidy from Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT) in 2009. *The Emerald Ace*, slated for delivery in June 2012, will be the world’s first newly delivered hybrid car carrier and begin test operations of its hybrid power system. The vessel’s hybrid system represents

a significant step forward in realizing ISHIN-I, the concept for the next-generation car carrier that MOL announced in September 2009. *The Emerald Ace* will be equipped with a hybrid electric power supply system that combines a 160kW solar generation system jointly developed by MHI, Energy Company of Panasonic Group, and MOL with lithium-ion batteries that can store some 2.2MWh of electricity. Conventional power generation systems use diesel-powered generators to supply electricity on board while berthed. However, on *the Emerald Ace*, electricity will be generated by the solar power generation system while the vessel is under way and stored in the lithium-ion batteries. The diesel-powered generator will be completely shut down when the ship is in berth, and the batteries will provide all the electricity it needs, resulting in zero emissions at the pier. The cargo capacity of the car carrier is 6,400 vehicles (standard passenger cars).

Refer to the article: MOL Celebrates Launching of Hybrid Car Carrier *Emerald Ace*-Aiming at Zero Emissions While Berthed-

http://www.mol.co.jp/pr-e/2012/e-pr_1217.html



Launching ceremony for the hybrid car carrier *Emerald Ace*

Source: MOL Press Release, March 12, 2012

1.6 Ocean Resources, Energy, Marine Environment and Others

March 3 “Issue of disposal of overage warships with missile and bomb—U.S. Navy” (AP, March 3, 2012)

Associated Press dated the 3rd reported on the impact that disposal of overage ships with missiles and bombs had on an environment: (1) the U.S. Navy considered the program called “Sinkex” for sinking exercise as an important national security function, allowing for live-fire exercises and study of “weapons lethality;” (2) on the other hand, the Navy has struggled to balance its military training needs with an environmentally sound way.

An outline of the article: Associated Press dated the 3rd showed the main points of the impact that disposal of overage ships with missiles and bombs had on an environment as follows:

- (1) In 2005, the USS *America* aircraft carrier was blasted with missiles and bombs until it sank in the briny depths about 300 nautical miles southeast of Norfolk, Va. Navy documents state that among the toxic substances left onboard the *America* were more than 500 pounds of PCBs or polychlorinated biphenyls, a chemical banned by the U.S. in 1979. In the past 12 years, records show the Navy has used missiles, torpedoes and large guns to sink 109 old, peeling and rusty U.S. warships off the coasts of California, Hawaii, Florida and other states. During the same period, 64 ships were recycled at one of six approved domestic ship-breaking facilities. The U.S. Navy considered the program called “Sinkex” for sinking exercise as an important national security function, allowing for live-fire exercises and study of “weapons lethality.”
- (2) On the other hand, the Navy has struggled to balance its military training needs with an environmentally sound way. Under its agreement with the EPA (Environmental Protection Agency), the Navy must document how much toxic material is removed and how much is sent into the sea. But the AP review of the Navy’s year-end reports since 2000 found incomplete and inconsistent estimates of PCBs and other toxics. For example, in 2008, the Navy estimated that no PCBs remained on the nearly 7,000-ton USS *David R. Ray*, a destroyer that once operated in the Persian Gulf. But the previous year, a similar-sized vessel, the guided missile cruiser USS *Jouett*, was reported to contain more than 100-pounds of materials containing PCBs.
- (3) The Navy says it costs \$500,000 to \$600,000 to remove toxics from ships before the target practice, although the total cost of the disposal exercises is much higher. Ship breaking companies say their price for recycling a large Navy vessel is typically tens of millions of dollars. The Navy defended its cleaning and inventory process, saying it removes all liquid PCBs, thousands of gallons of fuel, mercury from instruments and other pollutants.
- (4) In the 1990s, the Navy was forced to stop Sinkex for two years because of concern that the program ran afoul of the federal Toxic Substances Control Act’s prohibition of PCB releases. At the time, many old Navy vessels were sent to ship-breaking facilities in Bangladesh and southeast Asia, where they were scrapped at a much cheaper price than U.S. yards. The U.S. government in 1998 banned overseas recycling. In 1999, the EPA exempted Sinkex from federal toxic pollution laws, and the Navy resumed sinking old ships — at least 50 nautical miles from shore and at least 6,000 feet deep.
- (5) The project “Sinkex” creates concerns about marine pollution. PCB’s found in fish near an aircraft carrier, the USS *Oriskany*, sunk in 2006 as an artificial reef near Pensacola, Florida have raised concerns about the impacts. Annual monitoring by the Florida Fish and Wildlife Conservation Commission of waters around the aircraft carrier concluded that fish around the carrier exceeded state PCB standards (50 ppb), and the EPA standards (20 ppb), in the first two years. Fish later collected saw a drop in those levels overall, but some still exceeded the EPA and Florida standards. A domestic ship breaking company observes more Sinkex vessels should be sent for recycling, considering the facts that the project “Sinkex” would add jobs and is bad for the environment.

Refer to the article: AP ENTERPRISE: Navy 'Sinkex' raises pollution fear

<http://www.google.com/hostednews/ap/article/ALeqM5jLRt6VbnIP2dkWF77g2PVvxske2w?docId=22325cbde666483e8c2a48cecdac3817>

March 8 “U.S. Navy runs successful tests to sail operational fleet ship with algae-based fuel” (The Naval Sea Systems Command, U.S. Navy, March 8, and UPI, March 14, 2012)

On the 2nd, the U.S. Navy conducted the first test with an operational Fleet ship: the guided-missile frigate USS *Ford* (FFG 54) from the ship's homeport in Everett, Wash., to San Diego, using the new shipboard fuel of a 50/50 algae-derived, hydro-processed algal oil and petroleum F-76 blend in the ship.

An outline of the article: The Naval Sea System Command of the U.S. Navy revealed on the 8th, the guided missile frigate USS *Ford* (FFG 54) conducted a test to sail from its homeport in Everett, Wash., to San Diego, using 25,000 gallons of a 50/50 algae-derived, hydro-processed algal oil and petroleum F-76 blend in the ships LM 2500 gas turbines. The *Ford's* (standard displacement: 4,100 tons) transit on the algal blend marks the first demonstration of the alternative fuel blend in an operational Fleet ship. Use of the 50-50 blend required no changes to the frigate's infrastructure or the drop-in fueling pier used for the test. The operational performance of the fuel system and gas turbine engines on the 50-50 blend has been comparable to operations on traditional petroleum F-76. The algae-based fuel has raised hopes that more attention can be focused on producing renewable energy from abundant marine resources and wean investors from biofuels that in recent years have claimed land cultivated for food.

Refer to the article: USS *Ford* (FFG 54) Conducts Operational Transit on Alternative Fuel Blend

<http://www.navsea.navy.mil/Lists/NewsWires/DispForm.aspx?ID=21>

U.S. Navy OKs test with algal fuel blend

http://www.upi.com/Business_News/Security-Industry/2012/03/14/US-Navy-OKs-test-with-algal-fuel-blend/UPI-75901331724326/



USS *Ford* (FFG 54)

Source: U.S. Navy USS *Ford* Official HP

2. Intelligence Assessment

Somali Piracy's Impact on the Global Economy — Various Cost Estimates of Anti-piracy Efforts from U.S. Think Tank Report

On February 8, the project “Oceans Beyond Piracy” by The One Earth Future Foundation in Colorado, the United States, issued *The Economic Cost of Somali Piracy 2011*¹ (hereinafter the report). According to their study, the sea transportation industry shouldered 80 percent of Somali piracy's impact on the global economy, and the remaining 20 percent was the expense of each country's government for anti-piracy efforts. The report says, the total cost is estimated to reach \$6.6~6.9 billion (estimated amount of money in US\$ unit; the same shall apply hereinafter). The report takes nine factors in estimating Somali piracy's impact on the global economy by calculating related costs with various information materials together. Analysis of this monthly report will provide a brief introduction to each cost estimate below. Related tables will appear at the end for the convenience of the description.

1. Ransoms: \$159.62 million

According to available data, 31 ransoms were paid in 2011, amounting to a total of \$159.62 million, with the average ransom being \$4.97 million, which increased from about \$4 million of 2010 (see Table 1).

The success rate of pirate attacks in 2011 has declined from 27% in 2010, to 13% in 2011, but pirates has been securing equal or greater value for less hijacked vessels. The highest ransom paid on record in 2011 was \$13.5 million to release the Greek flagged Very Large Crude Carrier (VLCC) *Irene SL* (released on April 7). The former highest ransom on record had been paid to release the Marshall flagged oil tanker *Samho Dream* (hijacked on April 4 2010 and released on November 6 2010) operated by a South Korean shipping company for \$9.5 million. The two VLCCs were laden with crude oil. On average it took 178 days, or around six months for a ransom to be negotiated, and a ship released.

2. Piracy Insurance: \$635 million

- (1) According to the report, War Risk and Kidnap and Ransom (K&R) are the two primary forms of piracy-related insurance. Vessels transiting through ‘war risk areas’ are required to pay war risk premiums. War risk areas are identified by the Lloyds Market Association (LMA) Joint War Committee, in London. The report says, as of January 2011, the War Risk zone covers a very large portion of the Indian Ocean, the Gulf of Aden, the Red Sea and the

¹ The Economic Cost of Somali Piracy 2011

[http://oceansbeyondpiracy.org/sites/default/files/economic cost of piracy 2011.pdf](http://oceansbeyondpiracy.org/sites/default/files/economic%20cost%20of%20piracy%202011.pdf)

See also, The Economic Cost of Somali Piracy 2010

[http://oceansbeyondpiracy.org/sites/default/files/documents old/The Economic Cost of Piracy Full Report.pdf](http://oceansbeyondpiracy.org/sites/default/files/documents%20old/The%20Economic%20Cost%20of%20Piracy%20Full%20Report.pdf)

Gulf of Oman. War risk premiums may be reduced if ships have armed security guards, or other security equipment such as citadels, razor wire, or sonic deterrent equipment.

- (2) K&R insurance typically protects the crew. The report says that K&R can add a useful additional layer of insurance protection to war risk insurance, and is often used to cover fees for public relations, negotiators, medical and psychological treatment, ransom delivery costs, and travel costs for hostages' families.
- (3) The report says, although it is difficult to quote insurance, the number of ships transiting the war risk area was used as the basis of the estimation. Best Management Practices Version Four (BMP4)² requires tall ships transiting the High Risk Area (HRA) to register with EUNAVFOR's Maritime Security Center Horn of Africa (MSC HOA). According to the report, the number of the transiting ships was figured out as below. Based on the number of vessels registering with MSC HOA between January and August 2011, the average number of vessels transiting each month is around 2,830. As a result, the number of vessels transiting in 2011 was estimated at around 33,960 vessels. Beside this, given that the number of vessels adherence to BMP4 and the registration of vessels to MSHOA is estimated to be around 80% compliant, the total number of vessels transiting is likely to be around 42,450 per year.
- (4) The report made an estimate of \$420,287,250 for war risk and \$214,620,000 for K&R insurance, taking various factors into consideration based on 42,450 vessels as an estimation standard. Thereby, the report estimates piracy-related insurance premiums at around \$635 million.

3. The Cost of Security Equipment and Guards: \$1.064~1.16 billion

- (1) BMP4 requires vessels transiting the HRA to take a number of security measures to prevent and defend against a pirate attack. For example, (a) watch keeping and enhanced vigilance, (b) enhanced Bridge Protection and control of access to bridge, (c) razor wire, (d) water spray and foam monitors, (e) maneuvering practice, (f) Closed Circuit Television (CCTV), (g) Upper Deck lighting, (h) alarms, (i) Citadels.

² Refer to BMP4 on the Web site:

http://www.cusnc.navy.mil/marlo/Guidance/BMP4_web.pdf

Security Measures: Physical Barriers

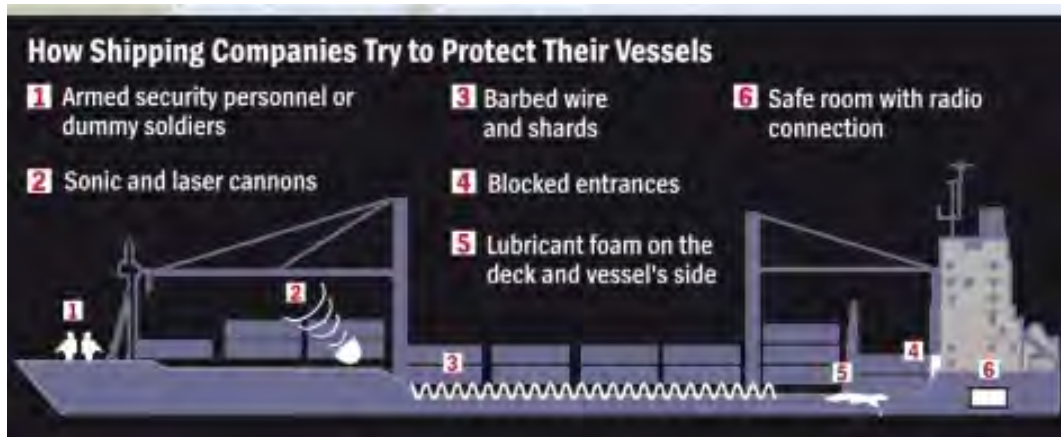


Razor Wire



Enhanced Bridge Protection

Source: BMP4, p.30 (left), p.28 (right)



Source: Spiegel Online, November 23, 2010

As mentioned earlier, BMP4 compliance rates are estimated to be at 80%, and the number of vessels transiting is estimated to be 33,960 vessels. Based on this, the total cost of security measures is estimated at \$533,609,653~\$629,248,653.

(2) In 2011, as a deterrent mechanism against pirate attacks, the number of cases that ship owners deployed private armed security on commercial vessels transiting the HRA rapidly increased. A number of flag states permitted the use of armed security onboard ships (such as Cyprus, Denmark, Finland, Germany, Greece, Hong Kong, India, Italy, the Netherlands, Norway, Spain, the United Kingdom and the United States). The use of armed guards was also endorsed by the International Maritime Organization (IMO), the International Transport Workers' Federation (ITF), and some insurance companies.

According to British security guard private company, the employment of private armed guards acted as a deterrent. Managing Director of British Protection Vessels International Ltd. (PVI) on October 18, 2011 revealed that the armed guards were composed of only former Royal Marines. He also said, PVI charged a flat daily rate and the average cost was \$50,000 a voyage. The average journey lasted eight days. PVI's guards had come under attack 30 times in 3 1/2 years, but

warning shots were enough to repel all the assaults without incurring any deaths or injuries, he said. (Bloomberg.com, October18, 2011)

In addition to the employment of private security guards, some countries take their military personnel on their own flag ships. For example, Thailand put four members of its armed guard units aboard each Thai merchant vessel to provide protection until it traveled out of the piracy-prone sea lanes in the Gulf of Aden from July to the end of November, 2011. Italy changed its laws in August 2011 to allow groups of six Italian Navy marines to travel on commercial ships. There are currently 60 marines seconded on this kind of duty. On the night of February 15, 2012, the security personnel of the Italian flagged tanker MT *Enrica Lexie* (104,769DWT) operated by an Italian shipping company fired and killed two Indian fishermen by accident off the coast of Kerala, South India, mistaking an Indian fishing ship for a pirate ship.

The report estimates that approximately 25% of vessels transiting the HRA employed armed guards in 2011. This figure of 25% is an estimation of the entire year of 2011. The report considers that by the end of the year this figure was closer to 50% of vessels. Moreover, if there are approximately 42,450 transits through the HRA each year, then around 10,612 transits employ armed security. At an average cost of \$50,000 per transit, the total costs of private armed security are estimated to be in the region of \$530.6 million per year.

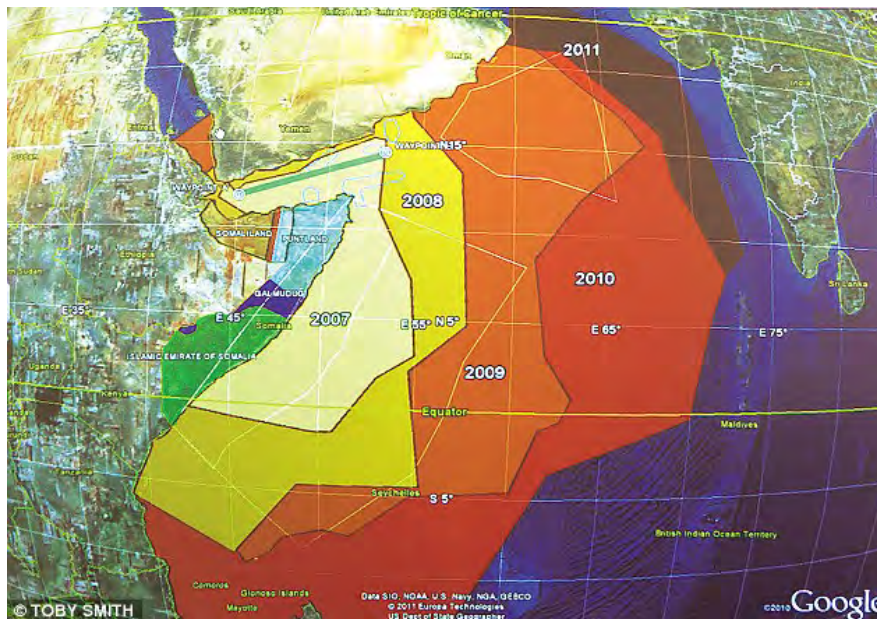
In addition to the costs of security equipment and guards to the shipping industry, the report also estimates a cost to pay an accreditation body to authorize private security companies. According to the results, the Security Association for the Maritime Industry (SAMI) is the main such accreditation body, and on average members pay \$3,824 per year. Since the organization has approximately 76 members, the total costs of licensing accreditation is around \$290,624 per year.

(3) As explained above, the report estimates the cost of this field at \$1.064~1.16 billion.

4. Re-routing: \$486~680 million

(1) According to the report, owing to some factors, the number of ships opting to re-route around the Cape of Good Hope to avoid attacks by pirates decreased significantly in 2011. Firstly, shipping companies have increasingly placed private armed security on their ships. Until now, no ship with armed guards is believed to have been successfully hijacked. Therefore, many ship owners appear to find paying for armed security and transiting directly through high-risk zones to be more cost effective than re-routing around the Cape of Good Hope. Secondly, as pirates expanded their area of operation, the war risk zone has been extended into the larger Indian Ocean. Below is how the pirates' area of operations has expanded over the past few years.

How the pirates' area of operations has expanded over the past few years



Source: Daily Mail, December 11, 2011

Thirdly, Suez Canal revenues reached record levels in 2011, which suggests that there was not a substantial re-direction of shipping traffic away from the Suez. In August 2011, Egypt's Suez Canal Authority announced that despite political turmoil in Egypt and surrounding countries, the waterway had collected a record \$5.05 billion in the 2010/11 fiscal year, with revenues collected by the Authority increasing by 12.7% on the same period in 2010.

According to the report, the feature of the re-routing in 2011 was that of ships hugging the Western Coastline of India, in an attempt to transit around the east side of the piracy risk zone. This more moderate model of re-routing adds approximately one excess day to an average transit between Singapore and Oman.

- (2) Since it was difficult to determine how many ships opted to re-route when the cost of re-routing was estimated, the report opted to conservatively focus on two vessel types - tankers and bulk carriers - given their slower speed and lower bridge, which places them at greater risk of hijack by pirates. In addition, some tankers were reluctant to have armed guards on board (due to the possibility of live weapons igniting fuel transported by tankers), and were therefore more susceptible to attack. To begin with, the report estimates that 8,375 tankers and 6,626 bulk carriers out of 42,450 ships transited the HRA in 2011.
- (3) Since the report was not able to access data on the precise number of each vessel type opting to re-route away, it therefore estimates the cost of re-routing to tankers and bulk carriers when 50% of vessels re-route, and when 70% of vessels re-route. Under these specific scenarios, the cost of re-routing in 2011 was between \$486 million and \$680 million.

5. The Cost of Increased Speeds: \$2.7 billion

- (1) According to the report, there was no successful pirate attack on a vessel travelling at 18

knots or faster. BMP4 therefore recommends that vessels transit at least 18 knots, throughout their transit of the HRA. As a matter of course, this increased speed is an added cost to vessels given that they are transiting at higher speeds than their most 'economically optimum' speed.

- (2) The report picked container ships up for their cost calculation of the increased speeds. Container ships over the past couple of years were traveling substantially slower than their full-speed capacity to decrease fuel consumption and costs, although capable of higher speeds than any other class of ship. For example, according to AP Moller-Maersk, the world's largest container ship company, in 2010, AP Moller-Maersk mandated its ships to sail at 12 knots, also known as 'super slow steaming.' A report in 2010 also found the average speed of container ships to be 11.4 knots. The report estimates that the average speed of container ships 'in the absence of piracy' is 12 knots. In addition, the report calculates the cost of the increased speeds with assumptions below:
 - (a) When vessels are transiting South/North through the Indian Ocean, they are traveling at an increased speed of 13 knots (up from their 'economically optimum' speed of 12 knots).
 - (b) When vessels transit towards the Northeast of Somalia and through the Gulf of Aden, they are traveling at speeds between 18 and 20 knots. The report assumes two typical voyages to be from Oman to Yemen and from Pakistan to Yemen.
 - (c) 20% of container ships in the HRA do not transit the Indian Ocean at all (they are transiting East/West between the Gulf/Europe through the Gulf of Aden). Approximately 16,165 container ships transited the HRA in 2011, 20% of container ships is 3,233 vessels.
 - (d) The transits of the remaining 80% (12,932 vessels) is calculated such that for approximately 50% of their voyage (i.e. 1,613nm from Sri Lanka to Pakistan) they travel at around 13 knots; and for the remaining 50% of the voyage (i.e. 1,601nm from Pakistan to Yemen), at 18 knots:
- (3) Under the specific scenarios and assumptions discussed above, the report calculates that the excess cost of container ships transiting at increased speeds through the HRA was approximately \$2.7 billion in 2011.

6. The Cost of Labor: \$195.06 million

- (1) In 2011, 1,118 seafarers were held hostage by Somali pirates, and 24 killed, the report says. According to an agreement worked out between the ITF, ship owners and companies, during the period of transit of the HRA, seafarers shall be entitled to compensation amounting to 100% of the basic wage and a doubled compensation payable in case of death and disability. In addition, the Philippine Government requires that all contracts with Filipino seafarers include a provision for hazard pay in the form of 200% of wages when transiting the HRA. Filipino seafarers account for around 25% of all seafarers.
- (2) The report assumes, as it takes approximately seven days to transit the area and hazard pay is equal to wages of approximately \$2,100 per vessel per day, the cost per vessel is approximately \$14,700. In addition, if all crews aboard the 42,450 vessels that transit the

HRA each year received hazard pay, the cumulative cost would be around \$624 million. However, not all ship owners have signed the agreement. The report therefore assumes that crews on 30% of vessels received hazard pay, amounting to around \$187.2 million.

- (3) The ITF agreement also provides for 200% compensation for seafarers held hostage in the region. According to the report, there were 28 vessels hijacked in 2010 that remained in Somali pirate control in all or part of 2011, and 25 more captured in 2011, for a total of 53 vessels carrying 1,118 seafarers. If the report uses an average of 20 seafarers per vessel (derived from the average for all ships held captive in 2011) and the estimate of total wages on the average ship to be \$2,100, \$39.1 million would have been distributed to seafarer-hostages and their families. However, if the report calculates seafarer-hostage compensation only for all Filipino seafarers and the crews aboard vessels subject to the ITF agreement. In 2010, Filipino seafarers accounted for 20% of all hostages held, while 5 of the 53 hijacked vessels were subject to the ITF agreement. Therefore, labor costs for seafarers in captivity totaled around \$7.87 million in 2011.
- (4) As stated above, the report estimates that the total excess piracy-related labor cost for seafarers in 2011 was approximately \$195 million.

7. The Cost of Prosecutions and Imprisonment: \$16,429,631

- (1) According to the report, over the past few years, approximately 1,089 pirate suspects have been arrested for piracy, and have either been tried or are awaiting trial in 20 countries. Table 2 shows the details of each country. To calculate the average cost of pirate trials and of imprisonment for suspected Somali pirates, the report divides countries into four groups: Africa, Asia, Europe and Japan, and North America, on the basis of the level of economic development and judicial expenses.
- (2) According to the report, 882 suspects are accounted for in the cost of prosecutions and imprisonment, but the cost excludes 207 suspects (143 suspects held in Kenya and 64 suspects held in the Seychelles), which were covered by funding from UNODC Counter Piracy Programme. The report estimates the cost of prosecutions and imprisonment at \$16,429,631 (refer to the following table).

Cost of Piracy Prosecutions

Region	Pirates Imprisoned	Total Imprisonment Cost per Year	Pirates Trial	Total Trial Cost	Total Regional Cost in 2011
Africa	624	455,520	25	5,950	461,470
Asia	158	53,427.70	151	1,173,421	1,226,849
Europe & Japan	72	3,469,464	28	1,873,956	5,343,420
North America	28	791,952	28	8,605,940	9,397,892
Total	882		232		16,429,631

Source: The Economic Cost of Somali Piracy 2011, p.24, Table 5.

8. The Cost of Military Operations: \$1,273,266,011

(1) In 2011, over 30 countries dispatched naval ships, patrol aircraft, and other military personnel, etc. The report estimates the cost of these military operations in two forms, the administrative budgets of the 'big three' missions in the region: the European Union Naval Force (EUNAVFOR) Operation Atalanta, NATO's Operation Ocean Shield, and Combined Task Force (CTF) 151, and the operating costs of each contributing state. Nations contribute to one of the major missions through: Navy vessels (surface combat vessels and auxiliary ships), Maritime patrol/reconnaissance aircraft, Vessel Protection Detachment teams, Military staff assigned to Operational Headquarters or onboard units.

(2) The report estimates the operating cost of three multinational anti-piracy task forces at \$219 million. The detail of the cost is as follows.

(a) EUNAVFOR: \$10.9 million

EUNAVFOR is typically composed of 5-10 frigates or destroyers, one auxiliary, and three maritime patrol or reconnaissance aircrafts. The contributing nations of EUNAVFOR are Belgium, Estonia, France Germany, Greece, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, and the United Kingdom.

According to EUNAVFOR's home page, as of March 2012, EUNAVFOR is composed of a French supply vessel (flag ship), two French frigates, a French aircraft, a German supply vessel, a German aircraft, an Italian frigate, a Luxembourg aircraft, a Dutch frigate, a Portugal frigate, a Spanish Corvette, a Spanish frigate, and a Spanish aircraft.

(b) NATO's Operation Ocean Shield: \$5.5 million

The contributing nations of NATO's Operation Ocean Shield are composed of Denmark, Norway, Turkey, the United States, etc.

(c) CTF-151: \$5.5 million

CTF-151 is a multinational task force for use in in the Gulf of Aden, and off the coast of Somalia. CTF-151 is composed of detached units from Denmark, South Korea, Pakistan, Turkey, the United States, Australia, Bahrain, New Zealand, and Singapore.

(3) The report estimates the operating cost of warships and patrol aircraft form each country, including the fuel and operational costs based on an approximation of the number of

vessels deployed on a daily basis. Using the figures above on the average number of vessels deployed for the three major operations, as well as independent deployers, the report estimates as shown below that on any given day, the vessels deployed might be double the typical composition of the EUNAVFOR forces. Accordingly, the annual operating cost is estimated at \$959,909,773. (See **Table 3**)

- (4) The report also estimated the cost of unmanned aerial vehicles (UAVs) working on counter-piracy efforts in the Indian Ocean. The major suppliers of UAVs for counter-piracy missions are the US, India and Spain. U.S. deploys 4 Reaper, and Spain deploys 4 Scan Eagle. Since India deploys 100 Searcher II and Heron for various national security activities in the region, the report estimated that only a third of those UAVs were used towards counter-piracy activities. According to the report, the operational cost of UAVs in counter-piracy activities is estimated at \$291,456,238.

9. The Cost of Counter-piracy organizations: \$21.3 million

In 2011, over 11 organizations conducted anti-piracy efforts. The major organizations were: Trust Fund to Support Initiatives of States to Counter Piracy off the Coast of Somalia ('Trust Fund'), The United Nations Office of Drugs and Crime (UNODC), The Contact Group on Piracy Off the Coast of Somalia (CGPCS), The Djibouti Code of Conduct, The United Nations Development Program – Somalia, UN Political Office for Somalia (UNPOS), etc. The report estimates the total cost of contributions from each country and operational budgets for these organizations at \$21.3 million.

(By Hideshi Ueno, editorial staff of OPRF MARINT Monthly Report)

Table 1: Ransoms paid in 2011

Ship Name	Date Hijacked	Date Released	Days Held	Ship Type	Ransom Amount (millions)
<i>Motivator</i>	4-Jul-2010	16-Jan-2011	196	Chemical Tanker	\$4.97
<i>Izumi</i>	10-Oct-10	28-Feb-11	141	General Cargo	\$4.50
<i>EMS River</i>	27-Dec-10	1-Mar-11	64	General Cargo	\$3.00
<i>Rak Afrikana</i>	11-Apr-10	9-Mar-11	332	General Cargo	\$1.20
<i>York</i>	23-Oct-10	9-Mar-11	137	LPG Tanker	\$4.50
<i>Hannibal II</i>	11-Nov-10	11-Mar-11	120	Chemical Tanker	\$2.00
<i>Jahan Moni</i>	5-Dec-10	14-Mar-11	99	Bulk Carrier	\$4.00
<i>Irene SL</i>	9-Feb-11	7-Apr-11	57	Oil Tanker	\$13.50
<i>Thor Nexus</i>	25-Dec-10	12-Apr-11	108	General Cargo	\$5.00
<i>Beluga Nomination</i>	22-Jan-11	13-Apr-11	81	General Cargo	\$5.00
<i>Asphalt Venture</i>	28-Sep-10	15-Apr-11	199	Bitumen Tanker	\$3.60
<i>Renuar</i>	11-Dec-10	23-Apr-11	133	Bulk Carrier	\$6.00
<i>Jih Chun Tsai No. 68</i>	30-Mar-10	1-May-11	397	Fishing Vessel	\$8.00
<i>Sinar Kudus</i>	16-Mar-11	1-May-11	46	Bulk Carrier	\$4.50
<i>Yuan Xiang</i>	12-Nov-10	1-May-11	170	General Cargo	\$3.60
<i>Vega 5 (Spanish Crew)</i>	28-Dec-10	11-May-11	134	Fishing Vessel	\$5.00
<i>Khaled Muhieddine K</i>	20-Jan-11	25-May-11	125	Bulk Carrier	\$2.50
<i>Zirku</i>	28-Mar-11	11-Jun-11	75	Oil Tanker	\$12.00
<i>Suez</i>	2-Aug-10	13-Jun-11	315	General Cargo	\$2.10
<i>Susan K</i>	8-Apr-11	16-Jun-11	69	General Cargo	\$5.70
<i>Jubba XX</i>	16-Jul-11	27-Jul-11	11	Product Tanker	\$0.20
<i>Sinin</i>	12-Feb-11	13-Aug-11	182	Bulk Carrier	\$4.00
<i>Eagle</i>	17-Jan-11	19-Aug-11	214	Bulk Carrier	\$4.00
<i>Polar</i>	30-Oct-10	26-Aug-11	300	Product Tanker	\$7.70
<i>Panama</i>	10-Dec-10	6-Sep-11	270	Container Ship	\$7.00
<i>SY ING (Danish hostages)</i>	24-Feb-11	7-Sep-11	195	Yacht	\$3.00
<i>Hoang Son Sun</i>	17-Jan-11	17-Sep-11	243	Bulk Carrier	\$4.50
<i>Dover</i>	28-Feb-11	30-Sep-11	214	Bulk Carrier	\$3.50
<i>Blida</i>	1-Jan-11	3-Nov-11	306	Bulk Carrier	\$3.50
<i>Rosalia D'Amato</i>	21-Apr-11	25-Nov-11	218	Bulk Carrier	\$6.00
<i>Gemini</i>	30-Apr-11	30-Nov-11	214	Chemical Tanker	\$4.05
<i>Savina Caylyn</i>	8-Feb-11	21-Dec-11	316	Oil Tanker	\$11.50
TOTAL RANSOMS PAID IN 2011					\$159.62¹²

Source: The Economic Cost of Somali Piracy 2011, p.12, Table 1.

Table 2: Pirate Suspects & Trials

Country	Total Suspects	Trials in 2011	Region
Belgium	1	Unknown	Europe & Japan
Comoros	6	Unknown	Africa
France	15	6	Europe & Japan
Germany	10	10	Europe & Japan
India	146	146	Asia
Japan	4	Unknown	Europe & Japan
Kenya	143	6	Africa
Korea	5	5	Asia
Madagascar	12	Unknown	Africa
Malaysia	7	Unknown	Asia
Maldives	37	0	Africa
Netherlands	29	10	Europe & Japan
Oman	12	13	Africa
Seychelles	64	20	Africa
Somalia & Puntland	308	Unknown	Africa
Somaliland	100	6	Africa
Spain	13	2	Europe & Japan
Tanzania	19	6	Africa
UAE	10	Unknown	Africa
USA	28	20	Nth America
Yemen	120	Unknown	Africa
TOTAL	1,089	104	

Source: The Economic Cost of Somali Piracy 2011, p.23, Table 4.

Note: On the early morning of March 5 2011, a U.S. Navy's guided missile destroyer, the USS *Bulkeley* (DDG 84) assigned to multinational counter-piracy mission Combined Task Forces (CTF) 151, rescued a Japanese-related oil tanker, MV *Guanabara* (57,000 DWT), from pirate attack, and detained four suspected pirates. Afterwards, they were transferred to Japan. The four suspects in detention pending trial have been charged in court at the moment.

Table 3: Cost of Counter-Piracy Military Vessels

Vessel Type	Average Number Deployed	Average Pre-Tax Fuel Price (per gallon)	Adjusted Daily Fuel Consumption (gallons/day)	Daily Operating Cost	Total Annual Cost
Frigate	5-10 (8)	3.61	18,034	52,147	342,366,159
Destroyer	5-10 (7)	3.61	40,909	56,145	520,775,590
Auxiliary	2	3.61	10,300	21,032	42,498,360
Maritime Patrol / Reconnaissance Aircraft	6	3.61	6,335	1,912	54,269,663
Total	23		75,578	131,236	959,909,773

Source: The Economic Cost of Somali Piracy 2011, p.27, Table 7.

Note: (a) Fuel Cost: \$3.61 per gallon; calculated using the pre-tax average diesel price from January-October 2011 from Belgium, France, Germany, Italy, Netherlands, UK, and USA.

(b) Methodology for adjusted daily fuel consumption:

1. Calculation of daily fuel consumption:

- i. Divide the listed range by the listed fuel capacity (in some cases converted from tons to liters) to calculate the 'gas mileage' for each craft.
- ii. Divide the 'gas mileage' by the listed cruising speed to calculate 'gallons burned per hour'.
- iii. Multiply 'gallons burned per hour' by 24 to get daily fuel consumption.

2. Adjustment: as per discussions with a navy representative, ships are assumed to be operating 25 days per month; and aircraft fly 5 hours per day.

(c) Model ships used for classification: Frigate: Oliver Hazard Perry Class (U.S.); Destroyer: *Arleigh Burke* Class (U.S.); Auxiliary: average of *Quinghaihu* Supply Ship (China), INS *Sukanya* Patrol Ship (India), and *Galicja* Class Amphibious Ship (Spain); Aircraft: P-3C Orion (multiple countries).

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