



Center for Strategic & International Studies  
Washington, DC

Maritime Security in East Asia

The Center for Strategic and International Studies  
American-Pacific Sealanes Security Institute Inc.

With Support From Lockheed Martin Corporation  
Honolulu, HI • January 18-20, 2004

*Agenda*

**Sunday, January 18**

1830-2030 Welcoming Reception and Dinner

**Monday, January 19**

0815 Registration/Breakfast

0845 Introduction

*Kurt Campbell*, Vice President and Director, International Security Program, CSIS  
*William Carpenter*, American-Pacific Sealanes Security Institute, Inc.

0900 Session One: International Maritime Environment

Chair: *Kurt Campbell*, U.S.

- A. Global Maritime Outlook  
Presenter: *RADM Michael McDevitt*, U.S.
- B. Regional Assessment—Northeast Asia  
Presenter: *VADM Hideaki Kaneda*, Japan  
Discussant: *Lee Seo-Hang*, ROK

1015 Break

1030 International Maritime Environment (continued)

Chair: *Alejandro Melchor*, Philippines

- C. Regional Assessment—Southeast Asia  
Presenter: *Hasjim Djalal*, Indonesia  
Discussant: *Rommel Banlaoi*, Philippines
- D. Regional Assessment—South Asia and Indian Ocean  
Presenter: *Probal Ghosh*, India  
Discussant: *Stanley Weeks*, U.S.
- E. Trends in International Shipping, Trade by Sea  
Presenter: *Andrew Forbes*, Australia  
Discussant: *Peter Cozens*, New Zealand

1230 Lunch

Speaker: *Lt Gen Wallace C. Gregson, Jr.*, Commander, U.S. Marine Forces Pacific

- 1400    Session Two: Sea Lanes and Shipping  
Chair: *CDR Russ Baker*, Australia
- A.      Piracy  
Presenter: *Joon Nam Mak*, Malaysia  
Discussant: *Hasjim Djalal*, Indonesia
- B.      Port and Cargo Security  
Presenter: *Matthew Lee*, Singapore  
Discussant: *James Boutilier*, Canada
- C.      Cyber- and other Technological Threats to Shipping  
Presenter: *Abe Lin*, Taiwan  
Discussant: *Jeffrey Chen*, Singapore
- 1530                  Adjourn
- 1830-2030          Cocktails/Buffer dinner

**Tuesday, January 20**

- 0815    Breakfast
- 0845    Session Three: Maritime Interdiction  
Chair: *Derek Mitchell*, U.S.
- A.      Law of the sea/EEZs  
Presenter: *Paik Jin-Hyun*, ROK  
Discussant: *Michael Tsai*, Taiwan
- B.      Regional cooperation against terrorism/proliferation  
Presenter: *Guy Roberts*, U.S.  
Discussants: *Masahiro Akiyama*, Japan, *Rommel Banlaoi*, Philippines
- 1015    Break
- 1030    Session Four: Prospective Maritime Challenges  
Chair: *Tun-Hwa Ko*, Taiwan
- Presentations: *Enders Wimbush*, U.S.; *LTC Joshua Ho*, Singapore  
Discussants: *Kim Dalchoong*, ROK; *RADM Sumihiko Kawamura*, Japan
- 1230    Lunch  
Speaker: *Ralph Cossa*, Pacific Forum CSIS
- 1330    Session Five: Conclusions/Future Cooperation in Maritime Security  
Chair: *Kurt Campbell*, U.S.
- Open Discussion
- 1430    Conference adjourns

# Maritime Security in East Asia

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## *Participants List*

### Australia

**CDRE Russ Baker**

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Director General of Navy Strategic Policy and Futures

**Andrew Forbes**

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**Derek Woolner**

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### Canada

**James Boutilier**

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### India

**CMDR Probal Ghosh**

Research Fellow, Institute for Defense Studies and Analyses  
Communication and Information Technology specialist, Indian Navy

### Indonesia

**Hasjim Djalal**

Special Advisor to the Minister for Maritime Affairs and Fisheries

### Japan

**Masahiro Akiyama**

Chairman of the Ship and Ocean Foundation

**VADM Hideaki Kaneda (ret)**

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**RAMD Sumihiko Kawamura (ret)**

Representative, the Kawamura Institute  
Former Naval Attaché in Washington DC

## Korea

### **Dalchoong Kim**

Director of the Institute of East & West Studies, Yonsei University  
Chairman of the National Committee of the Council for Security Cooperation in Asia-Pacific

### **Seo-Hang Lee**

Professor, Institute of Foreign Affairs and National Security

### **Jin-Hyun Paik**

Professor at the Graduate School of International Studies, Seoul National University

## Malaysia

### **Joon Nam Mak**

Director of Research, Maritime Institute of Malaysia

### **CAPT Mohd Taha Ibrahim** *(invited)*

Royal Malaysian Navy

## New Zealand

### **Peter Cozens**

Fellow, Asia-Pacific Research Institute  
Executive Director of the Center for Strategic Studies, Victoria University of Wellington

## Philippines

### **Rommel Banlaoi**

Professor and Course Director for Political Science, the National Defense College of the Philippines

### **Alejandro Melchor**

Assistant Secretary of National Defense

## Singapore

### **Jeffrey Chen**

Associate Research Fellow, Institute of Defence and Strategic Studies

### **LTC Joshua Ho**

Research Fellow, Institute of Defence and Strategic Studies

### **Matthew Lee**

Assistant Director and Head of the International Department, Maritime and Port Authority of Singapore

## Taiwan

### **Chung Chien**

Professor, National Tsinghua University

### **Michael Kau**

Deputy Foreign Minister, Ministry of Foreign Affairs

### **Henry Ko**

Deputy Secretary General, National Security Council

### **VADM Ko Tun-hwa (ret)**

Vice Chairman of the Society for Strategic Studies

### **Abe C. Lin**

Deputy Chief of General Staff, Ministry of National Defense

### **Michael Tsai**

Deputy Representative, Taipei Economic and Cultural Representative Office

## United States

### **Kurt Campbell**

Senior Vice President and Director, International Security Program, CSIS

Director, Aspen Strategy Group, Aspen Institute

Former Deputy Assistant Secretary of Defense for Asian and Pacific Affairs

### **CAPT William Carpenter (ret)**

Incorporator and Registered Agent, American-Pacific Sealand Security Institute

### **Ralph Cossa**

President of Pacific Forum, CSIS

### **Brad Glosserman**

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### **RADM Michael McDevitt (ret)**

Director, Center for Strategic Studies, Center for Naval Analysis

### **Carola McGiffert**

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Former Special Assistant for China, Office of the U.S. Trade Representative

### **RADM Eric McVadon (ret)**

Director, Asia Pacific Studies, Institute for Foreign Policy Analysis

### **Derek Mitchell**

Senior Fellow, International Security Program, CSIS

Former Special Assistant for Asian and Pacific Affairs, U.S. Department of Defense

Former Senior Country Director for China, Taiwan, and Hong Kong, DOD

**LTC Kevin Richards**

Deputy Division Chief for Southeast Asia, Joint Staff, Pentagon

**Guy Roberts**

Principal Director of Negotiations Policy, Office of the Secretary of Defense

**Stanley Weeks**

Senior Scientist, Science Applications International Corporation

**Enders Wimbush**

Vice President and Manager, Global Strategies Division, Booz Allen Hamilton, Inc.

## **Two Decades Of SLOC Studies**

By: William M. Carpenter

In 1979, four nations held a conference in Taipei, Taiwan on the general subject of East Asian security. One of the papers, presented by Vice Admiral Kenichi Kitamura of Japan, stressed the importance of sealane security, as all of East Asia depends heavily on the sealanes for economic health and national security. This paper inspired Dr. Han Lih-Wu, a senior delegate from Taiwan, to propose a future conference on this subject, security of the sealanes. The other senior delegates: The Hon. Shin Kanemaru of Japan, the Hon. Min Kwan Shik of Korea, and Ambassador U. Alexis Johnson and General Richard G. Stilwell of the United States, enthusiastically agreed.

At the time of that conference the Cold War was very much alive, and national and regional security were of major concern to all nations in East Asia. The participants generally agreed that a regional collective security alliance like NATO was not a prospect, and that regional security relied on bilateral alliances and relations between nations in the region and the United States. Secure sealanes were vital not only to the economic health and security of nations in the region but also to the United States. A U.S. maritime force was likely to remain in the region for as long as the security of the United States and its allies demanded it. Regular conferences on sealane security would promote the exchange of knowledge and encourage cooperative actions, producing tangible security benefits.

Organizational meetings in Washington in 1980 and 1981 led to the first sealane conference in San Francisco in 1982. At the conclusion of that conference, the Japanese delegates agreed to hold the second conference in Tokyo in 1983. The meetings soon came to be known as "SLOC Conferences." In military parlance, a sealane is a sea line of communication, or SLOC. We are now at "SLOC Fourteen."

For the 1983 conference, Japan proposed that participation be expanded from the original four nations to countries of Southeast Asia, including Australia. New Zealand and Canada were also added, and India and the United Kingdom would attend periodically. The People's Republic of China has been invited but has yet to accept an invitation. After Tokyo, conferences were held in Singapore (1985), Taipei (1986), Seoul (1987), Melbourne (1988), Washington (1990), Bali (1993), Kuala Lumpur (1994), Taipei (1996), Tokyo (1997), Seoul (1999) and Canberra (2001).

Over the years, the proceedings of the SLOC conferences have been published and disseminated to those concerned with sealane security. At every conference, local military and government officials attended and participated, thus providing channels for information and recommendations to other officials concerned with sealane security. At this Fourteenth SLOC, the concept has been expanded to include officials in active service from nearly all participating nations.

# **Regional Assessment of Northeast Asia: Pursuing a Maritime Security Coalition in the Asia-Pacific Region**

By: Hideaki Kaneda

## **1. Instability Factors in the Asia-Pacific Region**

At the beginning of the 21st Century, seven specific instability factors affect security in the Asia-Pacific region.

The first factor is the proliferation of weapons of mass destruction and ballistic missiles from Northeast Asia to other regions. The second factor is international terrorism, which has become especially apparent after the 9.11 terrorist attacks. Terrorism is gathering strength through alliances in and out of the Asia-Pacific region, and increasingly targeting countries with weaker governments.

The third factor is the rapid build-up of Chinese military power, mainly naval and air power, which could potentially tip the balance of regional military power. The fourth factor is the military confrontational structure that originated in the cold war and still remains on the Korean Peninsula and in the Taiwan Strait. These bring instability, uncertainty and lack of clarity to the regional situation.

The fifth factor is the historical issue of territorial, religious and ethnic disputes and confrontations. In particular, disputes over the possession of islands are likely to significantly affect the stability of the whole region while obstructing maritime security. The sixth factor is the confrontational structures surrounding oceanic interests, which are closely related to the disputes over island possession. The seventh factor is the increase in internationalized and organized criminal activities such as piracy, drug trafficking and slave trading, and illegal activities such as over-fishing, unsanctioned ocean resource surveying and environmental destruction in Asia-Pacific waters.

## **2. Pursuing a Regional Maritime Security Coalition**

### **(1) Maritime Safety and Security as a Common Key Phrase for Regional Security**

Surveying the above instability factors, “maritime safety and security” stands out as a common key phrase highlighting the vital issues for regional security.

Maritime safety and security can be divided into three categories. The first is emergency maritime security, which indicates purely maritime military issues of war, including the defense of territory and SLOC protection. The second is peacetime maritime safety, which indicates non-military maritime issues such as international terrorism, piracy, drug trafficking, search and rescue, humanitarian and navigational operations. The third is various maritime activities that can include fishing, preserving maritime resources and environmental issues.

In terms of the first factor (WMD proliferation), many proliferation paths of weapons of mass destruction and ballistic missiles heavily rely on SLOC routes, and the threat of ballistic missiles in the Asia-Pacific region is structurally and geographically extended through aerial routes over the oceans. Similarly, the second factor (expanding international terrorist threats) heavily relies on SLOCs for the proliferation of weapons and the transport of terrorists themselves. In addition, terrorist attacks over the oceans have already occurred, significantly affecting maritime safety as in the case of the suicide bomb attack against the USS Cole at Port Aden, against the French tanker Limburg off the coast of Yemen in 2002, and off Basra of Iraq in 2004.

Regarding the third factor (China's military build-up), not only China but also many other regional countries are reorganizing their militaries by building up and modernizing their naval and air capabilities. Therefore, the problem is how such efforts affect regional maritime security along the SLOCs. Similarly, regional geography makes the fourth factor (Korean Peninsula and Taiwan Strait issues) extremely important for securing maritime military dominance in these areas, including maritime security through the SLOCs, maritime blockading or assault-landing if an emergency situation arises.

The fifth factor (territorial disputes over islands), the sixth factor (ocean interests directly related to regional maritime security), and the last factor (criminal or illegal maritime activities) are issues directly concerning the oceans themselves. In other words, it is important to recognize the need for well-governed freedom of navigation and other maritime activities.

## **(2) Creating Regional Frameworks for a Maritime Coalition**

With the exception of the Asian currency crisis of the late 1990s, economic growth in the Asia-Pacific region continues to be strong. Although the effects of the currency crisis still linger in some Southeast Asian countries, even these nations will undoubtedly continue their steady growth in the future. Therefore the issues of this region will be the problems necessarily faced by any country experiencing rapid economic growth.

These issues include: securing energy and resources to maintain economic growth; rapid population increase resulting from economic affluence; and environmental degradation produced by economic development. Even developed countries that have already addressed the issues of maritime pollution, overfishing, habitat destruction or global warming will need to adopt new and effective measures to allow for the participation of additional countries.

Addressing these issues will not be easy politically or technologically. Rather, each country will likely consider and protect its own national interests first. This may lead to the rise of new confrontations between neighboring countries or in the region as a whole, generating an unstable regional security situation. Therefore it is imperative that the countries of the region establish a maritime coalition to oversee safety and security in the SLOCs.

## **(3) A Maritime Coalition as a Suitable Security Framework for the Asia-Pacific Region**

The ASEAN Regional Forum (ARF) is one forum for multilateral dialogue in which members discuss political and security issues of the Asia-Pacific region. However, the principle of non-interference in domestic matters makes ARF members extremely reluctant to get involved in issues of security beyond the framework of voluntary multilateral cooperation.

ARF has grown to include 24 countries and regions, with Ministerial Meetings held every year since 1994. Movements to strengthen ARF in 2003 include an emphasis on preventive diplomacy, and the Chinese proposal to host an ARF Security Policy Meeting. ARF also stated a program on preventative threat cooperation on piracy and maritime security.

Even more, participants at the ninth ASEAN summit meeting in October 2003 adopted the second Bali Statement, promising to form an ASEAN community composed of an ASC (ASEAN Security Community), AEC (ASEAN Economic Community) and ASCC (ASEAN Socio-Cultural Community) by 2020. Nevertheless, the need remains for a new multinational security framework to address issues of the future. Thus far several conferences on maritime security in the Asia-Pacific region have been held, but no multinational security framework exists today.

Northeast Asia in particular has an unstable and uncertain security environment, since the region comprises great powers, has been on the frontline of East-West confrontation during the Cold War, and still holds the potential for conflict on the Korean peninsula and the Taiwan Strait.

Thus far there are two distinct lines of thought on how to proceed with a security framework for the Asia-Pacific region. The first is to further develop ARF into a cooperative multilateral security framework covering Northeast and Southeast Asia, which would coexist with bilateral military alliances centered on the U.S. This framework would have a degree of enforcement authority, but presumably would not have the authority to exercise military power. The second line of thought holds that since the Cold War paradigm has ended, regional countries should de-emphasize bilateral alliances and create a binding security structure with a certain degree of enforcement authority over the region, including the United States.

In reality, the latter is the more ideal security structure but is less feasible. It only indicates a desirable path for the future. The region is likely to pursue the former course, with various approaches possible. The major issue of the future will be how ARF will depart from its current “coordination first” policy and adopt a mandatory enforcement system, and how the roles of bilateral military alliances centered on the United States will be distributed. Therefore the countries of East Asia need to create a multilateral regional organization that provides a framework for regularly discussing maritime safety and security issues and has the authority to impose enforcement measures, if necessary.

#### **(4) A Maritime Coalition for Peacetime Maritime Safety**

Maritime safety and security cannot be achieved by the efforts of a single country, but only through mutual understanding and the cooperation of regional countries. For this, regional countries must come to an agreement on the benefits that maritime safety and security provide to

the region. Undoubtedly this is not an easy task, but if regional countries focus on the future of the region as a whole and of each nation, coming to a consensus will not be impossible.

Because it will be difficult to create a binding framework for the region, it may be necessary for the maritime coalition to begin with those countries willing and able to coordinate their activities. As the coalition develops it can gradually expand to include all countries of the region.

It may also be necessary to take an approach in which the coalition will build consensus on economic and environmental issues, international terrorism and piracy controls at first, while excluding political features as much as possible. The next stage would be to consider which method would enable regional countries to comply with the results of consensus-building efforts. The last stage would be to address measures for imposing certain obligations on regional countries.

Once such a framework becomes reality, common values in the region to secure peacetime maritime safety will give rise to training opportunities and meetings. At this point it will be possible to further the maritime coalition by addressing the issues of emergency maritime security and various maritime activities.

There are two approaches to realizing this framework. The first option is to build a consensus among member parties at the CSCAP (Council for Security Cooperation in the Asia-Pacific) or ARF on the need for maintaining maritime safety and security, and addressing humanitarian measures in the entire Asia-Pacific region. Once such a consensus has been built, the maritime coalition can be realized step by step, and finally expanded to the entire region.

The second approach would involve a process in which willing countries begin implementing concrete measures in advance, as it is relatively easy for these countries to reach consensus. The original participating countries will hold bilateral or multi-lateral meetings and begin implementing concrete measures. These countries will also establish a standing council for the maritime coalition that will undertake actual actions over the open sea.

The coalition will then gradually expand step-to include other countries to address humanitarian issues such as maritime rescue operations, large-scale natural disaster relief, and the evacuation of foreigners. It will also undertake maritime security maintenance, including the suppression of piracy and international terrorism in the Malacca-Singapore Strait.

There are several options for the ultimate form of the coalition. For example, it could be a voluntary multilateral alliance led by the United States and possibly backed-up by the United Nations. It could also develop out of existing regional frameworks such as ARF and CSCAP, or as an expansion of existing military consultation organizations such as WPNS (Western Pacific Naval Symposium). It could also take the form of a joint patrol based on an entirely new voluntary agreement in the region.

## **(5) A Maritime Coalition for Emergency Maritime Security**

A maritime coalition for emergency maritime security will be more difficult to implement than a coalition for peacetime maritime safety. However, a maritime coalition capable of handling emergencies will have a greater impact on security in the region for two reasons.

First, the coalition will aid in crisis prevention and confidence building. Building a framework for emergencies will enable countries to resolve any misunderstandings and clear any doubts that arise between regional actors. Building a consensual maritime coalition for peacetime activities will render each country's intentions transparent, promote trustful relationships, prevent conflicts, and elevate the feasibility of efforts to secure a stable maritime environment.

The second reason is to promote joint responses. If, for example, there is an actual maritime emergency in the region, military and economic SLOCs may be interrupted. This will not only injure the parties directly affected, but would be a serious economic blow to all countries that make use of the Asia-Pacific waters.

Therefore, it is necessary to secure the SLOCs during emergencies. However, if large-scale emergencies occur simultaneously in a number of locations, then even the mighty U.S. Navy deployed in this region may not be able to respond to every emergency. Certainly no other individual country would be able to do so. Therefore it will be necessary for regional countries other than those directly involved in any given emergency to adopt joint response efforts for preserving maritime security. Moreover, such countries may need to maintain maritime transport with one or all parties involved, increasing the need for a joint response approach.

In view of the above, building the framework of a maritime coalition capable of responding to emergency situations is essential for regional maritime security. This could be accomplished by extending and developing a subsidiary organization under ARF, or by elevating navy-to-navy forums such as the West Pacific Naval Symposium (WPNS). When developing the framework, a key point of contention will be the role of the US Navy, which is already committed throughout the region. Achieving consensus on the framework will depend on how regional countries address this issue.

Needless to say, Asia-Pacific SLOCs extend to other regions of the world through neighboring waters. Therefore the maritime coalition may want to consider associating with neighboring maritime regions such as the Indian Ocean and Oceania.

## **(6) A Maritime Coalition for Various Maritime Activities**

As mentioned above, regional counties will continue to rely on the oceans to provide natural resources essential for the future development of each nation. The greater the expectation of each country, the greater the conflicts of interests posed by various maritime activities. Moreover, such conflicts of interests will certainly threaten regional security. This issue has been addressed during bilateral talks in the past, but as regional countries rapidly expand their range of economic activities, such talks may necessitate the involvement of many

other countries. Bilateral talks seem to have hit the ceiling of their effectiveness, and sooner or later may become difficult to hold at all.

Therefore, countries of the region need to arrive at a common understanding on the value of regional waters as a natural resource supply. They must also agree on a way to balance the development needs of each nation with that of the region as a whole. Creating the maritime coalition in the form of a multilateral convention will assist in building a consensus on naval natural resource extraction. This approach can begin by adopting regional responses to multilateral issues the region is likely to face in the future, such as maritime environmental issues (maritime pollution, over-fishing, habitat destruction and global warming), while continuing conventional bilateral talks. In the future this forum can be expanded to include other problems as they arise.

Styling the framework around ARF may bring difficulties, because the issues must be addressed on the basis of the United Nations Convention on the Law of the Sea (UNCLOS). Therefore it may be necessary to establish the convention as a sub-regional or sub-functional organization under the United Nations.

## **Piracy In South East Asia: Indonesian & Regional Responses**

By: Dr. Hasjim Djalal

### **UN Law of the Sea Convention on Piracy**

According to article 100 of the United Nations Convention on the Law of the Sea (UNCLOS) 1982, piracy is an illegal act “on the high seas or in any other place outside the jurisdiction of any state.” An act of “piracy” that takes place in waters under national jurisdiction is, therefore, not an act of piracy, but an act of armed robbery or sea robbery, that should be dealt with exclusively by the affected state, under the principles of coastal state sovereignty and national security.

Looking into this definition, taking into account Article 86 of UNCLOS, and without prejudice to the freedoms of navigation and overflight in Exclusive Economic Zones (EEZs), it would appear that an act of “piracy” within an EEZ would also be understood to be within national jurisdiction, since the notion of “high sea” is generally understood to be an area outside of an EEZ. Yet, since the freedom of navigation is assured in the EEZ in accordance with article 58, paragraph 1 and article 87, paragraph 1a of UNCLOS 1982, it would appear that an act to prevent armed robbery in an EEZ could also be the subject of cooperation between states, since armed robberies interfere with the freedom of navigation.

The meaning of the phrase in “any other place outside the jurisdiction of any state” is unclear, though it might indicate an area of the seabed or continental shelf beyond the 200-mile EEZ. It is difficult, however, to contemplate an act of piracy on the bottom of the ocean, except perhaps an act of depredation against property of another state (see article 101 (a) ii of UNCLOS).

With regard to piracy itself, article 100 of UNCLOS obliges “all states to cooperate to the fullest possible extent in the repression of piracy.” Article 101 defines piracy as:

- Any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed: (1) on the high seas, against another ship or aircraft, or against persons or property on board such ship or aircraft; (2) against a ship, aircraft, persons or property in a place outside the jurisdiction of any state;
- Any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft;
- Any act of inciting or of intentionally facilitating an act described in paragraph (a) or (b).

If the act of piracy is committed by a warship or government ship controlled by a crew that has mutinied, the warship or government ship would be regarded as a private ship that has committed piracy and therefore would be subjected to the rules of piracy (Article 102).

A ship or aircraft would be considered a pirate ship or pirate aircraft if it is dominated by persons who have the intention to use the ship to commit an act of piracy (Article 103). The ship may retain its nationality if it becomes a pirate ship, depending on the law of the state granting nationality. If a pirate ship is on the high seas or in any other place outside the jurisdiction of any state, the pirates, and the property on board may be seized. The state carrying out the seizure would determine the penalties imposed as well as action taken with regard to the seized pirate ship (Article 105).

If it can be proven that the seizure has been effected without adequate grounds, the state making the seizure shall be liable for any loss or damage caused by the seizure (Article 106).

A seizure on account of piracy may be carried out only by warships or military aircraft, or other ships or aircraft clearly marked and identifiable as being in government service and authorized to that effect (Article 107). It appears from this article that warships or military aircraft are allowed to seize pirate ships on the high seas simply based on the fact that they are warships or military aircraft, without needing further authorization, while other ships or aircraft in government service can do so only if they are authorized by the flag state.

The risk of piracy and armed robberies is becoming greater and more dangerous, and are serious crimes in themselves that endanger the safety of human lives. Acts of armed robbery also endanger ships' navigation. If ships are forced to navigate under abnormal conditions, the danger of collision or grounding increases.

Acts of armed robbery or piracy involving large oil tankers also endanger the marine environment. These dangers are multiplied in the area of the Straits of Malacca and Singapore, where more than 600 ships navigate each day, many of them continuing on to or come from the South China Sea.

### **The Indonesian Situation**

Piracy on the high seas or armed robberies in Indonesian waters or in coastal areas is a serious crime under the Indonesian Criminal Law, punishable by up to 15 years imprisonment (Article 438, 439, 440 of the Criminal Law), life imprisonment or even the death penalty, if the crime resulted in death of the person/persons in the pirated ships (Article 444).

Indonesia is a large maritime and archipelagic state in the Asia Pacific region. It controls approximately 3 million square kilometers of archipelagic waters and territorial seas, plus another 3 million square kilometers of EEZs and continental shelf. It also controls several important sealanes for communications between the Pacific and Indian Oceans. While these extensive maritime zones offer enormous economic potential for the development of the country, the tasks of protecting them, maintaining law and order at sea, and preserving Indonesian national unity are enormous.

According to studies, Indonesia requires more than 300 vessels, large and small, to protect its maritime space and resources, as well as port facilities, human resources and technology. Thus far, it has only 115 vessels, and of these, only about 25 are operating at sea at

any given moment. The current political, economic and financial crises in Indonesia have aggravated the problem of law enforcement at sea, as well as the problem of maintaining maritime order to prevent the disintegration of Indonesia as a unitary and archipelagic state. Consequently, law enforcement and security efforts at sea have slackened substantially. This problem is most acute in the EEZs of Indonesia.

Indonesia currently faces five major maritime problems. First, it must prevent conflicts between provinces and between districts. Such conflicts result from the Law No. 22/1999 on Regional Autonomy, which territorialized the jurisdiction of provinces and districts up to 12 and 4 miles from shore, respectively. Secondly, Indonesia must prevent armed robberies at sea and promote cooperation with neighboring countries to combat armed robbery and piracy. Third, Indonesia must prevent illegal fishing by foreign vessels that are depleting the resources of Indonesian seas and depriving the Indonesian government of legitimate income. Fourth, Indonesia must protect and patrol its archipelagic sealanes, particularly after the establishment of three North-South archipelagic sealanes by Government Regulation No. 37/2002. These sealanes are important for regional and global maritime and military strategy, especially in times of regional and global crisis. Fifth, Indonesia must prevent the use of its maritime zones for illegal acts at sea, including illicit traffic in drugs, armed smuggling, maritime terrorism, or illegal human and refugee transit to third countries.

Indonesia requires an enormous amount of resources to protect its maritime zones. Yet, at this moment financial resources are insufficient. Singapore, a country of less than 700 square kilometers, spent 4.2 billion U.S. dollars on its military in 1999, which was roughly 24.9 percent of its total government spending at the time. Indonesia, a country with about 8,000,000 square kilometers of territory and maritime zones, spent only 1.5 billion U.S. dollars in 1999, or roughly 5.9 percent of its total government spending. While Indonesia spends only about 0.8 percent of its GDP on defense purposes, other countries in the region spend much more. For example, Japan spends 1.2 percent of its GDP on defense purposes, Australia 1.8 percent, Germany 1.5 percent, France 2.4 percent, the United Kingdom 2.5 percent, and the United States 3.3 percent (before the Iraq war). Indonesian defense spending is still among the lowest in the region, both in terms of dollar value and in relative to its GDP.

Indonesia is fully aware that piracy and armed robberies have increased significantly between 2000 and 2002. Most of the armed robberies in 2000-2002 in South East Asia occurred in Indonesian waters, particularly in the archipelagic waters between Singapore and the Java Sea, in the Malacca Straits, and in the South China Sea. In the first half of 2003 alone, 64 out of 234 reported incidents worldwide took place in Indonesia, or more than 25 percent. These incidents included 43 boardings, 4 hijackings, and 17 attempted attacks (Jakarta Post, July 24, 2003).

Indonesia has a plan to strengthen law enforcement capabilities in the western waters, particularly the approach to Singapore through the Karimata Straits, by increasing surveillance and monitoring systems as well as response capabilities. A study indicated that an anti-piracy command and control center between the Strait of Singapore and Jakarta would cost about US\$38.5 million. Unfortunately Indonesia does not have the funds for this project, especially as it has accumulated billions of dollars in foreign debt.

Indonesia, Malaysia, and Singapore, with the support of Japan, have been cooperating to promote safety of navigation in the Straits of Malacca for the last 20 years. This cooperation has resulted in improved navigational aids and hydrographic charts as well as other safety measures. The three coastal states, through bilateral mechanisms, have also cooperated and coordinated their patrols to deal with illegal acts at sea, particularly armed robberies. Yet more needs to be done to promote safety of navigation and to protect the marine environment in those waters, including better efforts to prevent armed robberies at sea.

With regard to the South China Sea, Indonesia together with other littoral authorities has taken the initiative to promote cooperation on safety of navigation, shipping and communication as indicated in the activities of the Workshop on Managing Potential Conflicts in the South China Sea (see below).

Article 43 of UNCLOS stipulates, “cooperation between user states and states bordering a strait, (a) in the establishment and maintenance of necessary navigational and safety aids or other improvements in aid of international navigation, (b) for the prevention, reduction and control of pollution from ships.” Thus far, only Japan has cooperated with the three coastal states in installing navigational aids, hydrographic surveys, and other means of promoting navigational safety in the Straits of Malacca and Singapore. Other user states have not offered much assistance in preventing, reducing, or controlling pollution from ships, and have offered practically no help or cooperation in fighting against piracy and armed robberies in the area. In addition, although article 43 deals with the promotion of safety of navigation and control of pollution in ‘straits used for international navigation,’ there is no reason not to apply it to archipelagic sealanes as well if the archipelagic state concerned so requires.

Indonesia needs help to maintain law and order at sea and to protect its maritime resources and national unity. However, Indonesia would not appreciate maritime countries sending navy or coast guard escort vessels through Indonesian waters. Arming commercial or cargo vessels and tankers that navigate Indonesian waters is also unacceptable. Such actions could create problems and complications in the field, rather than solutions. On the other hand Indonesia would welcome initiatives from user states as well as other stakeholders (a) to assist Indonesian law enforcement and security apparatuses at sea in maintaining and strengthening their capabilities through providing aid, equipment and training, (b) to help organize and coordinate cooperative efforts and linkages with other regional or other interested parties, or (c) to intensify training programs for law enforcement and security officers at sea.

There are plenty of agencies in Indonesia involved in enforcement activities at sea. In the last couple of years, such agencies have been coordinated by the *Bakorkamla*, the Coordinating Agency for Security at Sea, led by the Commander of the Armed Forces. Experience indicates that it is not easy to coordinate the activities of the various law enforcement agencies. Lately there have been many discussions reviewing the efficiency and effectiveness of the *Bakorkamla*, particularly since the separation of the police from the armed forces. A number of proposals have been made, such as dividing the function of maintaining “national security” (which should be the responsibility of the Indonesian Armed Forces (TNI)) from “law enforcement” at sea (which should be the responsibility of the Police), and a proposal to delegate that function to the coast guard (so far Indonesia has no coast guard as such). None of these proposals have yet been

approved, and studies and discussions are continuing to seek a proper and effective institutional mechanism to deal with matters of law and order at sea.

## **Regional Approaches**

In Malaysia, there are seven agencies that are authorized to enforce the various maritime legislation, namely the Royal Malaysian Police (Marine), the Fishery Department, the Royal Customs and Excise, the Marine Department, the Royal Malaysian Navy (RMN), the Department of Environment, and the Immigration Department. All of these agencies (except the RMN, which only provides assistance) are principal guardians of specific legislation and conduct their own operation in their own designated area of responsibility. The RMN and the Royal Malaysian Air Force, however, are responsible for the conduct of operations and surveillance over the Malaysian EEZ, while other agencies are responsible for the areas closer to the coastal region within the territorial sea. Since 1985, Malaysia has established a Maritime Enforcement Coordinating Center (MECC) under the National Security Division of the Prime Minister's Department. The MECC monitors all maritime activities and compiles information for distribution to relevant maritime enforcement agencies. It does not, however, exercise any command or control function over any of the agencies.

Thailand: There have been a number of armed robberies in the Gulf of Thailand and in the Andaman Sea, although the incidents are not as widespread as in other areas in Southeast Asia. The Royal Thai Navy, in addition to defending the country, also protects the country's maritime interests and aids other agencies in implementing their respective areas of responsibility. The Royal Thai Navy has established the Coast Guard Command for the purpose of law enforcement and aiding people in its territorial sea and contiguous zone.

While each country in Southeast Asia is strengthening its own respective enforcement agencies, they have also cooperated in implementing the following measures:

The 1992 Indonesia-Singapore Agreement on coordination of patrols and hot pursuit to combat piracy and armed robbery at sea has been very instrumental in reducing armed robbery in the Strait of Singapore, or at least was until the Indonesian economic crisis in 1998. Experience has indicated that intensified police activities on land would make the agreement more effective, as armed robbers and pirates are based on land.

A similar arrangement between Indonesia and Malaysia was established in December 1992 under the auspices of the General Border Committee (GBC). The GBC has also established an operational coordinating border arrangement (the Maritime Operation Planning Team) to discuss and map out strategies to deal with maritime issues arising out of the common border. This has also enhanced bilateral cooperation between the two countries in combating illegal activities. The coordinated maritime patrol operations carried out by Malaysia and Indonesia in the Straits of Malacca have been instrumental in dealing with armed robberies and other illegal acts at sea.

Between Malaysia and the Philippines, the Malaysia-Philippines Border Patrol Coordinating Group (MPBPCG) coordinates the enforcement agencies of Malaysia and the

Philippines that conduct border patrol operations in the maritime areas for the prevention of armed robbery and illegal activities at sea. Under the arrangement, all border patrol operations shall be carried out in accordance with the laws and regulations of the respective countries and in conformity with international law. The combined operations have curbed cross-border illegal activities and armed robberies between the two countries.

The police departments of Malaysia and Singapore share and discuss maritime issues and criminal activities affecting both countries.

The Royal Thai Navy (RTN) has also sought good relations with its neighbors for protecting mutual interests at sea. The RTN and the RMN have conducted joint patrols in the Gulf of Thailand and the Andaman Sea to prevent armed trafficking and other illegal acts at sea. Thailand and Vietnam signed a Maritime Boundary Agreement that helped resolve past problems between the two navies. Thailand has not achieved much progress with Myanmar (Burma) and Cambodia in this regard.

### **ASEAN Efforts**

ASEAN has taken many initiatives to combat piracy and armed robbery in ASEAN seas and waters. The ASEAN work program to implement the ASEAN Plan of Action to Combat Transnational Crimes adopted in Kuala Lumpur on May 17, 2002 included an agreement on sea piracy. This agreement allows ASEAN countries to work together on information exchange, legal matters, law enforcement, training, institutional capacity building and extra-regional cooperation.

Specifically, the agreement includes commitments to:

- Compile national laws and regulations of ASEAN member countries pertaining to piracy and armed robbery at sea, leading toward a regional repository of such national laws and regulations to be made available on the ASEAN Website.
- Exchange information and enhance cooperation with the UN's International Maritime Organization (IMO) as well as with other bodies involved in combating piracy and armed robbery at sea, including the International Maritime Bureau (IMB), Federation of ASEAN Ship-owners Association (FASA) and the ASEAN Chiefs of National Police (ASEANAPOL).
- Compile national studies to determine trends and "modus operandi" of piracy in Southeast Asian waters.
- Consider the feasibility of developing multilateral or bilateral legal arrangements to facilitate apprehension, investigation, hot pursuit, prosecution and extradition, exchange of witnesses, sharing of evidence, inquiry, and seizure and forfeiture of the proceeds of a crime, in order to enhance mutual legal and administrative assistance among ASEAN member countries.

- Enhance programs to coordinate anti-piracy patrols.
- Enhance cooperation and coordination in law enforcement and intelligence-sharing regarding piracy, armed robbery at sea, and other unlawful transnational crimes.
- Promote training programs within ASEAN and ASEAN Dialogue Partners to equip maritime, customs, police, port authority and other officials on the prevention and suppression of sea piracy and other maritime crimes.
- Strengthen and enhance the existing cooperation among national focal points of ASEAN Countries involved in combating and suppressing piracy and armed robbery at sea.
- Seek technical assistance from ASEAN Dialogue Partners, users of the waterways, and other relevant specialized agencies of the United Nations and international organizations, particularly with regard to training and acquisition of effective communication equipment and assets. Such assistance is covered under Article 43 of the UN Convention on the Law of the Sea 1982.
- Seek financial assistance for increased patrolling of particularly vulnerable sea areas and training programs for law enforcement officials and agencies at sea.

#### **Other Initiatives:**

Through the initiative of Japan, 16 countries in the Asia Pacific region have attempted to draft a Regional Cooperation Agreement on Anti-Piracy (ReCAPP). These countries are: Bangladesh, Brunei Darussalam, Cambodia, China, India, Indonesia, Japan, (South) Korea, Laos, Malaysia, Myanmar (Burma), the Philippines, Singapore, Sri Lanka, Thailand, and Vietnam. Some countries in the region, particularly Malaysia, Singapore, South Korea and Indonesia are now competing to host the “Information Sharing Center” (ISC) of the arrangement. Yet after the fourth meeting of the initiative in Seoul in July 2003 many problems still need to be settled and agreed upon before the agreement can be concluded.

Piracy has emerged significantly in ASEAN’s dialogue with the European Union through the EU-ASEAN Experts Group Meeting on Maritime Security. Both sides emphasized the need for cooperation to combat piracy and other trans-national crimes, including transnational/maritime terrorism.

Similarly, the ASEAN Regional Forum (ARF) has begun to take up the issue of piracy in its discussion of transnational crime.

#### **The South China Sea Workshop Process**

The first Workshop on Managing Potential Conflicts in the South China Sea met in Bali in 1990 to promote safety of navigation, shipping and communication in the South China Sea.

Participants in the second workshop in Bandung in July 1991 agreed that the areas of cooperation in the South China Sea “may include cooperation to promote safety of navigation and communication, to coordinate search and rescue, to combat piracy and armed robbery, to promote the national utilization of living resources, to protect and preserve the marine environment, to conduct marine scientific research, and to eliminate illicit traffic in drugs in the South China Sea.”

Participants in the third workshop in Yogyakarta in 1992 decided that problems of navigation safety should be further discussed within a Technical Working Group on Safety of Navigation, Shipping and Communication (TWG-SNSC) to advance the possibilities for cooperation identified during the first and second workshops.

Due to technical difficulties the first TWG-SNSC in Jakarta could not be held until October 1995. Topics discussed in this meeting included:

- Exchange of information and data on safety of navigation, shipping and communications, including improvements to radio beacon system and weather information and networking;
- Education and training programs for mariners;
- Development of contingency plans and search and rescue (SAR) networks;
- Cooperation in hydrographic and oceanographic surveys;
- Cooperation to combat piracy, illicit drug trafficking and problems of refugees at sea.

Subsequent workshops produced agreement on other points:

- Cooperation on the Safety of Navigation, Shipping and Communication (SNSC) is desirable and possible despite unresolved territorial and jurisdictional issues;
- UNCLOS 1982 and IMO Conventions provide a useful framework and basis for efforts to deal with the complex navigational, shipping and communications issues in the South China Sea;
- Governments in the South China Sea region should accede to IMO Conventions and Agreements pertaining to SNSC;
- South China Sea states should adopt the Memorandum of Understanding on Port State Control in the Asia Pacific Region (Tokyo MOU);

- Priorities such as training and improving the competence of seafarers, the corresponding development of ships' regional facilities and implementation of information system require further discussion;
- There is a need to enhance multilateral cooperation and coordination among SAR agencies in the South China Sea;
- To urge relevant authorities to delimit their respective area of SAR responsibilities to enhance the efficacy of a coordinated and well-linked SAR operations in the South China Sea;
- That the authorities in the South China Sea consider the possibility of establishing a regional ship reporting system and transponder system for locating the position of ships in the interest of safety of navigation;
- Enforcement officials of the South China Sea workshop participants should discuss how to deal more effectively with piracy issues and whether and in what way the TWG-SNSC can facilitate such cooperative ventures.

A regular Group of Experts Meeting (GEM) on SAR and Unlawful Acts at Sea was also established in early 1999 as part of this South China Sea Workshop process. However, due to budgetary problems and other constraints, only one such GEM meeting was held.

## **Conclusions**

In my opinion any effort to intensify law enforcement, whether on land or at sea, would have to consider several factors:

The law itself must be clear and should not give rise to conflicting interpretations. Various national legislation maritime issues should not be mutually contradictory. Conflicting regulations are very common in some countries, and law enforcement agencies find them difficult to implement.

Law enforcement agencies and officials must have sufficient and thorough knowledge of the laws and regulations that they are enforcing. All of them must be free of corruption and graft. Law enforcement activities will not work if the law enforcement agencies are corrupt and do not understand the laws.

There must be a clear line of command and responsibility within law enforcement agencies so that a disregard for law enforcement can be attributed to the appropriate level. Under the Indonesian legal system, apparently inherited from the old Dutch legal system, a public prosecutor may 'shelve' ('deponering' in Dutch) a case if he considers the continuation of the case may affect public interest. In some cases this could lead to corruption without clear accountability.

If in certain countries law enforcement activities involve a number of government agencies, the division of authority and the coordination of activities must be clearly outlined and well understood by the respective agency. This way there will not be overlapping jurisdiction in certain cases or denial of jurisdiction in others. This is the problem of the Bakorkamla in Indonesia, particularly as it is a coordinating agency and lacks enforcement capacity. Interagency rivalries are also frequent.

Effective law enforcement activities against piracy at sea and other illegal acts depends to a great extent to the availability of the 5 Ms, namely men, money, materials, methodology, and management. If one of these Ms is missing, law enforcement will be difficult. In fact, the main problem of Indonesia and many developing countries in fighting crimes at sea is lack of these resources.

The support of the people is also essential in implementing laws and regulations. If laws and regulations are contrary to common sense or the people's general sense of justice and propriety, even strong enforcement agencies will find them difficult to implement. Instead the average citizen might regard government and law enforcement agencies as "dictatorial" or "totalitarian".

Laws and regulations should not go against the spirit of good neighborly relations, and should observe the rules of international law, including the law of the sea. Law enforcement agencies should therefore understand and take into account the rules of international law and all applicable regional and international conventions. Otherwise the rules and regulations could be challenged by other states.

The challenges in developing cooperative security and enforcement policy on piracy in our region include:

Promoting and strengthening the ability of national governments to effect a timely and continued response to the perpetrators of piracy and armed robberies at sea. Due to the current economic crisis in Southeast Asia, particularly in Indonesia, the need to support Indonesian law enforcement agencies in strengthening their capabilities is therefore paramount. Technical and financial support could come from the region, the international community, or the countries that have direct and specific interest in the matter. The increasing incidence of maritime crimes and international terrorism in Southeast Asian waters further necessitates such support for coastal countries and regional cooperation.

The promotion of border cooperation between and among neighboring countries is also very important. The efforts to promote solutions and agreement on maritime boundary delimitation between and among Southeast Asian countries should be intensified. This will clarify the activities and the area of operation of the various national law enforcement agencies.

Efforts to promote regional understanding and cooperation should be supported, both formally and informally. Formally, the draft Regional Agreement on Cooperation in Combating Acts of Piracy and Armed Robbery Against Ships, formulated under IMO auspices, should be properly studied and finalized in a way that is acceptable to the countries in Southeast Asia and

the South China Sea. Informally, the initiatives and activities of the South China Sea Workshop process, particularly the activities and works of its Group of Experts on Illegal Acts at Sea should be supported. For 10 years (1990-2000) the South China Sea Workshop process was supported by Canada through the University of British Columbia in Vancouver and the Center for South East Asian Studies in Jakarta. That support has since been terminated. The South China Sea Workshop process is now experiencing difficulties in continuing its work of managing potential conflict in the South China Sea through dialogue, confidence building, and promoting cooperative efforts. Its efforts have been lauded worldwide as a constructive informal mechanism in the area. Perhaps the US CSIS could develop a cooperative relationship with the center for South East Asian Studies in Jakarta to continue its efforts in fighting against piracy and promoting law and order in the Southeast Asian waters.

Finally, in the context of Articles 43 and 100 of UNCLOS 1982 regarding the obligation of all states “to cooperate to the fullest extent in the repression of piracy,” the coastal states of Southeast Asia and the South China Sea should cooperate with user states and relevant regional and international organizations such as the IMO to formulate and initiate anti-piracy policies and activities. Other states, including European states, should extend support.

## **Maritime Security Challenges in South Asia and the Indian Ocean: Response Strategies**

By: Cdr. P K Ghosh

*"Whoever controls the Indian Ocean dominates Asia. This ocean is the key to the seven seas in the twenty-first century, the destiny of the world will be decided in these waters."*

*Alfred Thayer Mahan*

The Indian Ocean region, the birthplace of maritime civilization, was considered a playground of rich industrial European nations during the colonial era. With the commencement of decolonization in 1946, the euphoria of independence was overshadowed by the turbulence of internecine conflicts and inter-state wars that followed. During the Cold War era the two superpowers reinforced their maritime influence directly or indirectly through an impressive array of available port facilities in this region. History was repeating itself in an evolved form.

The post-Cold War era has heralded a socio-politico-strategic shift in thought. Globalization, specifically economics, today dominates strategic considerations. This has led to enhanced maritime security concerns, since most regional trade is sea-borne. Despite "maritime bonding", this region has unfortunately not seen the emergence of a vibrant trans-oceanic community. This may be rooted in regional countries' wide dissimilarities and divergent interests, which have prompted each country to pursue economic linkages with Europe or North America rather than with each other. This has inevitably limited the region's economic growth.

The Indian Ocean is home to many choke points, such as the Straits of Hormuz, Straits of Malacca, Lombok and the Sunda Straits. Any disruption in traffic flow through these points can have disastrous consequences. The disruption of energy flows in particular is a considerable security concern for littoral states, as a majority of their energy lifelines are sea-based. Since energy is critical in influencing the geo-political strategies of a nation, any turbulence in its supply has serious security consequences. Given the spiraling demand for energy from India, China and Japan, it is inevitable that these countries are sensitive to the security of the sea lines of communication (SLOCs) and choke points of the region.

The other challenges in the maritime sphere call for more effective law enforcement and the maintenance of maritime order. The challenges are essentially part constabulary, part economic and part human welfare. Maritime crime has increased, which has opened avenues for maritime security cooperation. Opportunities have yet to be realized; hence the problems continue, as do the challenges in maintaining maritime order.

The main objective of this paper is to highlight maritime security challenges that weigh heavily in the region geographically bounded by the Indian Ocean, and with special reference to

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The views expressed in this paper are those of the author and do not reflect the views of either the IDSA or any other organization.

the South Asian littorals. Viable responses and strategies to address these challenges are also posited for consideration.

### **Disunity in Diversity**

Although a maritime oceanic thread binds the littorals together, maritime cooperation and maritime issues have not attained the importance they deserve in this region. To begin with, there is considerable debate on the extent of the Indian Ocean rim itself. Differing definitions have been applied to the region, and the number of states included ranges from 29 to 35.<sup>1</sup> However the dissimilarities in state capabilities (both economic and military) are also considerable. India, Australia and South Africa each have a blue water naval capability and a booming economy,<sup>2</sup> while the smaller island nations can hardly compare. Hence convergence of interests on security issues has not been readily forthcoming.

The Indian Ocean Rim Association for Regional Cooperation (IOR-ARC) was not formed until March 5, 1997, in Mauritius. The mandate of this international body of littoral states was to boost economic cooperation amongst its member states. While IOR accounts for just eight percent of world GDP and 12 percent of world trade, there is room for considerable improvement. Meanwhile, Australia's efforts to introduce a security agenda have not been successful; indeed, the organization has ignored issues of maritime cooperation. The charter of the association does not even mention the issue, and only one of the projects of the works program examines the subject of development, upgrading and management of ports.

Consequently, maritime issues get ignored in the Indian Ocean Rim Business Forum (IORBF) and the Indian Ocean Rim Academic Group (IORAG).<sup>3</sup> However, it is essential that the existing cold war military mindset of 'preparing for war in order to ensure peace' be revised to 'if you want peace prepare to cooperate' as a guideline for both military and non-military maritime interaction. It is only through cooperation that the challenges to the existing maritime order can be addressed.

An economic community comprising Bangladesh, India, Myanmar (Burma), Sri Lanka, and Thailand (BIMST-EC) was launched in June 1997. Accounting for less than 3% of global trade, it has been overshadowed by a vigorous effort to vitalize the South Asian Association for Regional Cooperation (SAARC), and is also ill-equipped to handle maritime challenges.

### **SLOC Protection**

The economic development of a state is closely linked to its trade and energy supply. Since most of the trade of the Indian Ocean littorals and the South Asian states is seaborne, SLOCs form the lifeline of these countries. According to World Bank estimates, in 1999 the world seaborne trade was pegged at 21,480 billion ton-miles; it is expected to reach 35,000 billion ton-miles in 2010, and 41,800 billion ton-miles in 2014. The United Nations Conference on Trade and Development (UNCTAD) Report, "Review of Maritime Transport 2000", notes that world sea-based trade recorded its fourteenth consecutive annual increase, and Asia's share of imports and exports was 26.1% and 18.8 % respectively. Thus the prospects for seaborne trade are set to rise dramatically. Unfortunately, along with this rise in traffic, the variety and

intensity of threats, including piracy, maritime terrorism, drug trafficking, gun-running, human smuggling, pollution, accidents and inter-state conflicts, are also expected to show a proportional rise.

While the best approach to SLOC security obviously lies in extensive cooperation, the fact is that SLOCs arouse different response strategies amongst different people. To a military analyst, the SLOCs are related to the maritime instruments of power, and maritime geography becomes the pivot on which forces must be deployed. To a politician, on the other hand, SLOCs signify the state of relations with countries located along the sea route traversed, while for an economist it is just the shortest and most economical travel distance between two destinations. Similarly, for some nations multilateral cooperation on SLOC security may mean a perceived intrusion into aspects of sovereignty. Thus the security of sea lanes requires comprehensive strategies encompassing differing perceptions and national interests of concerned states.

The Indian Ocean is home to important SLOCs and maritime choke points. A large volume of international long haul maritime cargo from the Persian Gulf, Africa and Europe transits through this ocean. Some of the primary items transported are energy products - mainly oil and gas. Disruption in energy lifelines can also arise from patterns of trade flows. Imports to South Asia from West Asia utilize the Strait of Hormuz. According to EIA estimates, the Strait recorded a transit volume of 15.4 million barrels of oil per day in 1998. Closure of the Strait of Hormuz practically cuts off Gulf supplies to the East altogether and also affects the West considerably.

Similarly, the closure of the Straits of Malacca, through which nearly 9.4 million barrels of oil per day flow (according to the EIA), can seriously threaten the economies of Southeast Asia and the energy intensive economies of China and Japan. This area has recently witnessed a rise in the levels of piracy (see below). Such piracy could lead to some future traffic being routed through the Sunda and the Lombok Straits within the geographical ambit of Indonesia. However, political uncertainty and instability in Indonesia may dampen this trend. Due to the geostrategic importance of Malacca Straits to almost all the South and Southeast Asian countries, any maritime contingency in this traffic congested region would have profound security ramifications.

The importance of energy to the "demand heartland" (India, China and Japan) is extensive. These countries view SLOCs as their very lifelines. At current levels of consumption, the oil import dependence of India is expected to reach 82.2 percent by 2010 and 91.6 percent by 2020. In the case of China it will be 61 percent and 76.9 percent, while for rest of South Asia it will be 95.1 percent and 96.1 percent respectively.<sup>4</sup> For India, with nearly 89 percent of its oil imports arriving by sea, it is imperative that the SLOCs be secure. This security angle is enhanced many fold, since most of the oil originates in West Asia, and the SLOCs pass through areas under the influence of India's adversary, Pakistan. Added to this is the political turbulence of areas in West Asia that often holds hostage the supply of oil from the region. In the past, supplies from this region have been disrupted on at least seven different occasions, all of which were due to political causes and were not market driven.

Having established the importance of SLOCs, this paper will now focus on the suggested methodology of ensuring their protection through mutual cooperation.

## **Piracy**

Piracy has become the bane of the modern seafarer. The numerous cases of reported and unreported piracy have led to considerable concern and multinational efforts to control this violent menace. According to the International Maritime Organization Annual Report 2002,<sup>5</sup> the Malacca Straits, South China Sea and Indian Ocean are the areas that have been most affected by piracy.

This heavy infestation of piracy has a lot to do with the geography of the area, but economic conditions and the mindset of the coastal people in the hundreds of minor islands that lace the Malacca Straits and South China Sea are also a significant factor. Recently, piracy-related incidents seem to have spilled over from these two areas into the Bay of Bengal and the Arabian Sea. Indeed, the center of gravity of piracy may shift to the waters around India.

There also seems to be a distinct change in the type of piracy that is occurring. Earlier acts were of the type termed 'Asian Piracy' that often involved mere stealing of valuables from ships with a negligible amount of associated violence. However, recent cases in the region have displayed a dramatic increase in brazen violence, and the methodology has made them akin to the South American or West African type of piracy.

In addition, the involvement of organised crime in hijacking ships was evident from the 1999 *MV Alonda Rainbow* case. This case is also a modern example of various enforcement agencies acting together to fight piracy.<sup>6</sup> Unless law enforcement agencies of various states cooperate to bring piracy under control, this phenomenon will not only increase dramatically but may spin out of control. The portents of this problem lie in the fact that Asian operatives have become exceptionally well organized, with entrenched gangs and, at times, under state sponsorship. Their links with other forms of "maritime disorder and terrorism," such as narco-terrorism and human smuggling, are well-established and organic extensions of one another.

## **Maritime Terrorism**

Maritime security has assumed a new dimension in the post 9-11 era. The fight against this old and persistent issue has received a boost with the backing of the international community, particularly the United States. While the search for terrorists and their personification in Al Qaeda continues on land, at sea the international community is hunting for Bin Laden's terror ships, termed the "phantom fleet." The main idea is to prevent Osama Bin Laden and Al Qaeda operatives from escaping via the sea or terrorizing the maritime arena.<sup>7</sup>

The importance of container security to maritime terrorism is only now being realized after a U.S. Navy search of a freighter in January 2002 led to the discovery of a group of Al Qaeda terrorists hiding inside a well equipped shipping container. The group escaped from the container shortly before the search commenced. This discovery prompted an increase in surveillance of ships as well as trucks carrying shipping containers leaving Afghanistan for

Pakistani ports.<sup>8</sup> In another case, a suspected Al Qaeda terrorist smuggled himself halfway around the world inside a shipping container that was equipped with a bed and toilet. He was carrying computers, cameras, mobile phones, airport maps, and airport security passes for Canada, Thailand and Egypt.

With a dramatic increase in large and small container transport by sea,<sup>9</sup> the problem has grown, as these sealed containers often pass through ports without undergoing thorough checking<sup>10</sup> and are capable of containing anything from human terrorist cargo to arms and ammunition. It has been reported that one of Bin Laden's cargo freighters unloaded supplies in Kenya for the suicide cadres who subsequently bombed the US embassies in Kenya and Tanzania<sup>11</sup>

In this context the new CSI (Container Security Initiative) is a step toward overcoming this challenge. However the CSI does not cover any port in the Indian Ocean at present (Durban, South Africa, and Colombo, Sri Lanka, are expected to join soon, along with Kelang, Malaysia, and Tanjung Priok, Indonesia).<sup>12</sup> In addition, many smaller host nations regard the initiative as an impediment to normal trade and a method of re-enforcing trade barriers.

Several terrorist organizations in and around the Indian Ocean are known to possess merchant fleets of various types. The Liberation Tigers of Tamil Eelam (LTTE), for example, have an entire flotilla engaged in dubious maritime trade. Most of these are registered under flag of convenience (FOC) countries known as "pan-ho-lib," i.e. Panama, Honduras and Liberia,<sup>13</sup> and are difficult to track as they routinely change names and registry. Lloyds of London lists 11 merchant ships belonging to Asian front companies that are in reality managed by Kumaran Pathmanathan of the LTTE.<sup>14</sup>

Thus FOCs pose another major challenge to maritime security. Flying the flag of a state other than the country of ownership enables the owners to avoid high registration fees and taxes, and to employ cheap labor operating under sub-standard conditions. It is estimated that there are about 30 such registries (some in private hands operating on behalf of states) mainly run by small island or impoverished nations.<sup>15</sup> Since the checks and balances introduced by these registries are undeniably lax, there is no guarantee as to the type of crew or the type of cargo that these ships carry. Such ships are considered the safest bet for carrying out terrorist-related activities.

### **The Rise of Narco-Terrorism and a Terror-Crime Nexus**

An important adjunct to maritime terrorism is drug trafficking. The nexus of these two phenomena is admittedly so deep that they are often analyzed under the same parameters. With profit margins running into hundreds of percent, drug trafficking is by far the most lucrative means of generating funds to fuel ever-growing terrorist activities and insurgencies around the region.

Additionally, terrorist groups often work hand-in-hand with drug cartels. While this symbiotic relationship provides established routes for drug and arms smuggling, it also provides terrorists with the logistical infrastructure to move people, arms and material according to their desires.<sup>16</sup> This relationship has other benefits, giving powerful syndicates access to politicians,

with the aim of weakening or influencing rather than destroying them. Terrorist groups may thus coerce a "weak government" to look the other way while crime syndicates conduct their affairs.

Considering the geo-political setup of the Indian Ocean region, Iran and Pakistan form a major portion of the drug-infested "Golden Crescent," while Myanmar (Burma) and Thailand constitute the majority of the "Golden Triangle," notorious for its illegal drug production.<sup>17</sup> As all these states are in the IOR, it is natural that narco-terrorism is a major security concern for littoral states like India, which has seen its own emergence as a transit point for a majority of the drugs that emanate from these two areas.

The well-organized LTTE is deeply involved in drug trafficking through their "phantom fleet". Besides transporting timber, sugar and other commercial items, these ships also transport drugs from Myanmar (Burma) to Turkey. They also provide protection and courier services to the sea-borne drug shipments from Myanmar (Burma) to various countries around the world, mainly Europe and the U.S. The drug money is then channeled into arms purchases for continuing the Sri Lankan insurgency.

### **Gunrunning**

The symbiotic relationship between gunrunning and drug trafficking is well known. It is extremely difficult to control one without controlling the other. Gunrunning by sea is by far the safest means for transferring arms and ammunition around the world, while drug trafficking is most lucrative. Insurgent movements around the world, like the United Wa State Army (UWSA) - a splintered faction of the Burmese Communist Party- operating from the northern Shan state in Myanmar - depend extensively on drug money to fuel their movement and equip their forces.

The LTTE has a vast and well-established network for gunrunning, with its reach extending as far as Japan. Their arms mostly originate in Cambodia, and are later loaded into small fishing trawlers from the port of Ranong in southern Thailand. This arms cargo is then transferred to bigger ships (often in mid-ocean), which transport the consignment to Sri Lanka. The seizure in a boat yard in Singapore of an incomplete submersible bound for the LTTE displays the extent of arms that are being transported illegally.

Bangladesh's capture of several small fishing craft laden with arms during the last few years has led to the conclusion that a lot of these arms also make their way from Thailand to the Cox Bazaar in Bangladesh. Similarly, the Royal Thai Navy's seizure of arms meant for the People's Liberation Army (Manipur) off the port of Ranong in 1997 clearly demonstrates the close nexus between arms trafficking and insurgent groups. The other major pipeline for Cambodian weapons is through Southern Thailand, and from there across the Malacca Straits to Aceh.<sup>18</sup>

There are clear links between the narcotics and illegal light weapons trade that include shared supply and transit routes, the use of weapons for protection amongst drug traffickers themselves, and funding of gunrunning through drug trade and vice versa.<sup>19</sup>

## **Maritime Pollution and Oil-related Environmental Disasters**

Oil-related disasters at sea are the bane of not only environmentalists but mariners and security specialists as well. They create havoc with the ecology in the maritime environment and have the potential to affect maritime security. The environmental effects are of long-term or short-term duration, but their consequential effects in related maritime spheres can continue over a longer period. Indeed, many effects of disasters involved LPG tankers have yet to be understood.<sup>20</sup>

Regional governments are deeply concerned with major oil spills or wrecks of oil tankers at narrow approaches to harbours and choke points, since such spills can seriously affect the flow of merchant shipping traffic. Theoretically the traffic can be directed to other similar ports or routes, but practical difficulties of jetties, storage capacity, and longer routing leads to compounding of economic losses.

## **Security Against Mining**

Mining of waters is one of the cheapest ways to conduct maritime warfare. Mines may be laid by seaborne or airborne vessels. Civilian aircraft or vessels may carry out mining operations, which can even be perpetrated by non-state actors to a limited extent. It is not even necessary to carry out actual mining operations. The mere threat or a well-calculated disinformation campaign about the laying of a minefield can deter any merchant ship from entering an “affected” channel or strait.

For many years after World War II, sea mines were not considered a serious threat to naval operations. However, Iran’s extensive laying of mines during its war with Iraq in the 1980’s brought a new awareness of the danger. On April 14, 1988, the USS *Samuel B. Roberts* (FFG-58) hit a mine in the Persian Gulf and suffered extensive damage.

Mines laid in the Persian Gulf in 1987 and the Red Sea in 1984 clearly demonstrated their destructive power by leaving a trail of damaged ships. A concentrated international effort was required to undertake minesweeping operations to clean up the area. Hence mining in a constricted area like the Malacca Straits has the potential to create havoc on international merchant shipping. The consequences are further aggravated because the 960-km strait provides access to important ports like Kelang, Penang, Lumut, and Singapore, and in addition has vital naval bases of different states along both its shores. Thus, closure of this vital area would directly affect the operational deployment pattern of navies along the straits. Most of the regional navies have poor minesweeping abilities and are incapable of undertaking large or even medium-sized minesweeping efforts.

## **Indian Perspective**

Geography places India astride commercial routes and energy lifelines passing from the Indian Ocean to Southeast Asia. In military terms, the Indian Navy (IN) is one of the largest maritime forces in the region. India has played a crucial role in increasing maritime bonding by initiating numerous confidence building measures (CBMs). It conducts regular naval exercises

with IOR and Southeast Asian navies, and in 2004 held its second joint exercise with the Chinese People's Liberation Army Navy (PLAN).<sup>21</sup> The exercise provided an opportunity for the two Asian giants not only to assess one another, but also to extend a hand of rapprochement in the face of existing circumstances that cause the Chinese to feel encircled by the United States. It also enabled the Chinese to become more appreciative of Indian sensitivities regarding Chinese attempts to gain a foothold in the Indian Ocean, a move that had made many of the littorals wary and apprehensive.

In addition, the IN has made flag-showing visits to important ports in the IOR an annual feature. Naval training establishments in India under the Southern Naval Command at Kochi regularly accept naval personnel from Southeast Asian and IOR countries for training, a feature that must continue if Indians are to build stronger and more influential relationships with friendly navies around the region.

In addition to the surveillance of its vast maritime zones, the Indian Navy, in association with its Coast Guard, is specifically involved in surveillance of the Palk Straits, the Gulf of Mannar, the coasts of Maharashtra and Gujarat, and other island territories. Its goal is to curb the influx of refugees and Tamil terrorists, and to prevent poaching, gun running, etc.

India has been spearheading a multilateral naval exercise, designated MILAN, since the mid 1990s. MILAN involves a series of exercises, includes participation from the Bay of Bengal rim states, and is conducted every year off the Andaman and Nicobar Islands. The MILAN series was institutionalized with the objective of achieving interoperability with ASEAN navies, allaying fears about the Indian Navy's growing influence in the Andaman Sea, and promoting goodwill between India and ASEAN countries. MILAN 2003, held in February, further highlighted India's commitment to this end. The exercise now includes navies from Myanmar (Burma), Singapore, Indonesia, Vietnam, Thailand, Malaysia and Australia.<sup>22</sup>

In addition, bilateral and multilateral exercises involving search-and-rescue drills, exchanges of information, anti-submarine warfare, advanced mine countermeasures and anti-terror tactics have been held between regional navies from time to time. Bilateral goodwill visits with ASEAN countries, China, Japan and the United States are a regular feature and include extensive cooperation on the training of personnel, hydrography, etc. Singapore is prepared to share intelligence with India as part of a comprehensive anti-terrorism agreement.<sup>23</sup> Unfortunately no such institutionalized set-up exists for the IOR navies, although there is extensive sharing of operational expertise and intelligence regarding transnational crime (except piracy, which is covered by the pirate reporting centres).

The silver lining to the above has been in the MALBAR series of exercises that the U.S. Navy and the IN have revived. The exercise, held in December 2002, involved ships from Sri Lanka, the Maldives and Mauritius as well. The latest and sixth exercise in the series was held in 2003.<sup>24</sup>

It is obvious from the above that smaller regional navies have a lot to gain from interaction with the Indian Navy, based on its experience in dealing with transnational crime and terrorism. In fact, joint efforts by the Indian Navy, and other capable IOR and Southeast Asian

navies, could lead to SLOC patrols to help ensure the free flow of traffic through SLOCs and choke points. Malaysia and Indonesia, however, vehemently opposed recent Indian offers to provide SLOC protection in the Malacca region in partnership with the U.S. Navy - regarding the entire prospect as an affront to their sovereignty. Other smaller nations also viewed the issue with milder apprehension. This episode has revealed an important lesson for participant states: while the success of any transnational security enforcement agency will require multilateral cooperation, working out the modalities of such cooperation may prove difficult due to acute national sensitivities toward the preservation of state sovereignty.

The United States maintains a considerable and continuous naval presence in the politically volatile Gulf region, mainly for its strategic interest in seeing that energy lifelines are not unduly threatened. It may be prudent to include the powerful U.S. Navy in any arrangement that seeks to ensure maritime order in the region. This would not only lower the vulnerability threshold of the SLOCs and the choke points, but also ensure that they remain stable and free from threat of closure.

### **What Can Be Done – The Multi-Layered Approach**

From an Indian perspective it is obvious that the various maritime challenges must be addressed on a multi-layered basis. Some challenges that are predominantly located around the Indian coast require a unilateral approach. These deal with policing and constabulary functions. Other challenges require a bilateral approach, such as military exercises involving US Navy and other navies. The most desirable format is the multilateral approach toward solving transnational crime and maintaining maritime order.

While regional cooperation between navies and coast guards must take center stage in the emerging order, non-military maritime cooperation is equally important. Navies must reorient themselves from the existing mindset of 'preparing for war in order to ensure peace' to that of 'if you want peace and stability prepare to cooperate.'

Any multinational agency designed to deal with the aforementioned maritime challenges will need to set priorities multinational security organization will have to adapt to different capabilities and perspectives on the pace of operations and the degree of force to be applied to a particular challenge. Money laundering would probably not elicit a military response by most states, whereas biological terrorism would necessitate assistance from naval forces, as may disaster relief, drought assistance etc. Tracking of smugglers and gunrunners would lead to greater military involvement and possibly interdiction and arrest as well. Of the various transnational security threats, maritime piracy and terrorism would most directly and extensively involve nations' naval forces.<sup>25</sup>

Unfortunately, the problem plaguing the Indian Ocean and the Southern Asian region is the lack of "channelized" efforts towards addressing maritime challenges. Previous efforts to combat these problems have been mostly bilateral and, at best, trilateral arrangements. There is a near total absence of a multilateral approach to combat maritime disorder. Track II arrangements like the Council for Security Cooperation in the Asia-Pacific (CSCAP) and the Western Pacific Naval Symposium (WPNS) have been active in hosting seminars and discussions, but most states

have yet to incorporate their suggestions in their national policies. This calls for an accentuated belief in and greater importance attached to Track II recommendations on this issue that has sadly been lacking.

In view of the above, I recommend the following measure: the establishment of *Joint Maritime Centers (JMCs) and “Oil Spill Response Centers.”*<sup>26</sup> Interlinked joint maritime centers comprising regional navies and coast guards should be formed at important ports near strategic choke points to enable rapid and coordinated responses to smuggling, piracy, humanitarian disasters, illegal migration, environmental incidents, and search-and-rescue operations, since these are crucial areas that require cooperation. The centers may also provide a venue for intelligence sharing. These centers can join with “oil spill response centers” to combat the hazards of oil spills. Oil spills are an ever-increasing problem with serious consequences for marine ecological systems. For example, in the Malacca Straits alone there were five oil spills totaling 3.5 million tons of oil in 1994. Hence, regional navies and coast guards need to structure “spill response centers” with mandatory power to inspect oil tankers, as Turkey, Italy, and France implemented in some of their ports. These response centers could be amalgamated with the JMCs for better coordination and management.

Regional states should also develop marine technology and a joint strategy to ensure the safety of ports and harbors. They should also pursue coordinated efforts on utilization and management of marine resources, both animal and mineral, in their respective Exclusive Economic Zones, or EEZs.

## **Conclusion**

Transnational threats, including narco-terrorism, gun running, sea piracy, immigration control and assistance during natural disasters, have spawned a multitude of additional “out of area” operational roles for regional navies, and have dramatically increased the maritime security challenges of the South Asian region. Countering these threats and challenges requires consistent cooperation between the states affected and the associated maritime agencies.

Admittedly, the above-cited areas of potential cooperation seems like a wish list that sidesteps practical limitations imposed by the realities of divergent national perspectives on issues of sovereignty, etc. However, a fatalistic assessment of the situation is neither practical nor necessarily pragmatic given the stakes of maritime security. To begin with, littoral states in the region should look toward regional power centers for assistance in maintaining maritime order and coping with natural disasters. Countries with enhanced maritime capabilities like the United States, India, South Africa, and Australia can help by not only cooperating amongst themselves, but also by taking other littoral states on board as part of multilateral efforts towards maintenance of maritime order.

The agreement reached between the Malaysian, Indonesian and Singaporean navies on the conduct of joint anti-piracy patrols in the Malacca Straits is an example of progress in increasing maritime cooperation. India has also been asked to help in this task.<sup>27</sup> The establishment of joint maritime centers (JMCs) at important ports and near ocean choke points

would prove to be a milestone towards this type of maritime cooperation. The sea may bring together like-minded countries that in turn may influence the region's strategic perceptions. Indeed, to quote the old saying: "*the sea unites while the land divides.*"

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## Endnotes

- <sup>1</sup> Rahul Roy Chowdhury, "India's Maritime Security" (Knowledge World, New Delhi, June 2000) p.30.
- <sup>2</sup> India's economy grew by 8.4% in the second quarter of 2003-04 and a phenomenal 10.4% in its third quarter. It has a FE reserve of about US\$119 billion (as of Jul 3, 2004) in comparison to US\$1billion in 1991. Its stock sensex crossed an all time high of 6000 pts in early 2004, showing tremendous investor confidence. In the first quarter of 2004 the Indian economy grew by about 8.2%. However, some estimates for 2004 predict a steady growth of + 7%.
- <sup>3</sup> P. K. Ghosh, "Let Indian Ocean Unite the Rim", *The Financial Express*, December 12, 2000. Also see ibid pp 33-35.
- <sup>4</sup> P. K. Ghosh, "The Maritime Dimension", in "Oil and Gas in India's Security" Ed Jasjit Singh (Knowledge World New Delhi July 2001).
- <sup>5</sup> International Maritime Organisation, "Reports on Acts of Piracy and Armed Robbery against Ships- Annual Report 2002," dated 17 April 2003, available in pdf at <http://www.imi.org>.
- <sup>6</sup> MV *Alondra Rainbow*, a 7,000-ton Panama-registered vessel belonging to Japanese owners was hijacked. The vessel was en route from Kuala Tanjung, Indonesia to Milke in Japan. The Piracy Reporting Center of the International Maritime Bureau had announced through a worldwide broadcast that pirates had captured the vessel. After a high-speed chase and drama it was finally captured by Indian Naval ship INS *Praha.r*
- <sup>7</sup> See "Hunt for 20 terror ships", *The Observer International*, London, December 23, 2001.
- <sup>8</sup> See "Inside the Ring", <http://www.gertzfile.com/ring010402.html>.
- <sup>9</sup> See 'Containerisation', [www.choicegroup.co.in/html/cntrization.htm](http://www.choicegroup.co.in/html/cntrization.htm). From vessels that used to carry 226 TEU's (Twenty-Foot Equivalent Units) in 1957, there are today vessels that can carry 6,600 TEUs. Maersk Sealand alone has approximately 21 vessels that can carry over 6,000 TEUs. Their "S"-Class Post Panamax vessels can carry 6,600 TEU's. Other lines having over 6,000 TEU vessels in their fleet are MSC, P&ONL Hanjin, Hyundai Merchant Marine, and CMA-CGM. The world fleet at present consists of 32 vessels of 6,000 TEUs and above, with another 40 in the order books and many more to follow.
- <sup>10</sup> According to United States custom authorities, only 2 per cent of the cargo containers that enter seaports each day are inspected as cited in "Port of Entry Now Means Point of Anxiety," *The New York Times*, December 23, 2001.
- <sup>11</sup> "U.S. Ports Represent Weakness in Nation's Defenses, Analyses Shows," [http://www.military.com/Content/MoreContent/1,12044,FL\\_ports\\_103001,00.html](http://www.military.com/Content/MoreContent/1,12044,FL_ports_103001,00.html)
- <sup>12</sup> For details see "Container Security Initiative" at United States Customs and Border Protection website: [http://www.cbp.gov/xp/cgov/enforcement/international\\_activities/csi/](http://www.cbp.gov/xp/cgov/enforcement/international_activities/csi/).
- <sup>13</sup> "Killing Of Sea Bird Not A Big Blow to LTTE Shipping Operations", *The Sunday Times*, February 1996.
- <sup>14</sup> Ibid.
- <sup>15</sup> "What are FOCs: A brief guide to flags of convenience", [www.itf.org.uk/seafarers/foc/Body\\_foc.html](http://www.itf.org.uk/seafarers/foc/Body_foc.html).
- <sup>16</sup> For a detailed treatment see B. Raman, "Control of Transnational Crime and war against Terrorism" *Indian Defence Review*, Apr- Jun 2002, Vol 17(2).
- <sup>17</sup> P. K. Ghosh n.3. Also see UN Report on "Trafficking scene in South and South West Asia", Chapter 4 available at <<http://www.unodc.org/pdf/india/ccch4.pdf>> and Dr. Nihar Ranjan Das "Narco-Politics and Islamic Society: A Case Study of Pakistan" Jan 08 2004, available at <http://www.defenceindia.com/defenceind/research.html>.
- <sup>18</sup> David Capie "Small Arms Production Transfers in South East Asia," *Canberra Papers on Strategy and Defence* No.146, 2002, p.20.
- <sup>19</sup> Research Report on "Combating Illicit Light Weapons Trafficking: Developments and Opportunities," British American Security Information Council, London January 1998.
- <sup>20</sup> The effect of an LPG tanker blast is yet to be fully understood and is still under study. See Jerry Havens "Ready to Blow" *Bulletin of Atomic Scientists*, July/August 2003, pp. 16-18.
- <sup>21</sup> For a more detailed perspective on the strategic and other implications of Sino Indian naval exercises see P. K. Ghosh, "Indo China Exercises: Unlikely Mates" at Asia Times Online, Nov 19, 2003, available at <<http://www.atimes.com>>.
- <sup>22</sup> See Vijay Sakhuja, "Naval Diplomacy: Indian Initiatives" *BHARAT RAKSHAK MONITOR* Volume 6(1) Jul-Aug 2003.
- <sup>23</sup> Intelligence Pointers, Janes' Intelligence Digest, April 12, 2002.
- <sup>24</sup> R.K. Radhakrishnan, "Indo-U.S. joint naval exercises conclude," *The Hindu*, Saturday Jul 12, 2003.
- <sup>25</sup> Paul J Smith and Don Berlin, "Transnational Security Threats in Asia," Conference Report, Asia Pacific Centre.

<sup>26</sup> See P. K. Ghosh n.3

<sup>27</sup> Earlier a joint anti-piracy, anti narco-terrorism patrol of the Indian Ocean had been agreed to in principle between Singapore, Australia, Thailand and the Philippines, to which India was also “invited”. (See Shisir Gupta, “Delhi gets Indian Ocean coalition to guard the seas,” *Indian Express* Mar 16, 2004). However, later reports suggest that Malaysia, Indonesia, and Singapore have signed an accord to implement anti-piracy patrols in the Malacca Straits (see “South East Asian Navies to Patrol Malacca Straits” *The Strait Times*, June 29, 2004). India was again invited to join this group at the ARF meeting held in July 2004.

## **International Shipping: Trends and Vulnerabilities**

By: Andrew Forbes

I have been asked to talk about the trends in Asia-Pacific international shipping and the threats facing this shipping.

At the outset I should say that my information comes from open sources and is therefore at least 12 months behind current events. Furthermore, the information available is variable and differs from source to source. I have chosen to use data from the United Nations Conference on Trade and Development (UNCTAD), not because it is necessarily correct, but to provide a common starting point for both economic and shipping data.

### **Trends in International Shipping**

I do not profess any expertise in international shipping, so the information that follows is essentially verbatim from relevant UNCTAD Reports:

#### **Merchandise Trade**

Table 1: Export and import volumes, by region and economic grouping 2000-2002  
(percentage change over previous year)

| <b>Region/Country</b>          | <b>Export Volume</b> |             |             | <b>Import Volume</b> |             |             |
|--------------------------------|----------------------|-------------|-------------|----------------------|-------------|-------------|
|                                | <b>2000</b>          | <b>2001</b> | <b>2002</b> | <b>2000</b>          | <b>2001</b> | <b>2002</b> |
| World                          | 10.8                 | -0.9        | 2.0         | 10.2                 | -1.0        | 1.6         |
| Developed economies of which:  | 9.2                  | -1.2        | 0.1         | 6.4                  | -1.6        | 0.0         |
| Japan                          | 9.0                  | -10.9       | 9.6         | 11.1                 | -1.9        | 1.6         |
| USA                            | 11.3                 | -5.9        | -3.6        | 13.5                 | -3.3        | 3.9         |
| Western Europe                 | 10.0                 | 2.1         | 0.0         | 2.4                  | 0.0         | 0.0         |
| Developing countries of which: | 13.9                 | -1.5        | 5.8         | 19.6                 | -1.1        | 4.4         |
| China                          | 25.8                 | 7.6         | 23.6        | 52.6                 | 12.3        | 20.1        |
| East & South Asia              | 15.4                 | -5.4        | 4.8         | 19.4                 | -7.4        | 4.0         |
| West Asia                      | 9.7                  | 3.2         | -1.9        | 14.4                 | 4.6         | 4.8         |
| Africa                         | 2.6                  | 2.3         | 2.6         | 18.2                 | -2.2        | 2.6         |
| Latin America                  | 9.7                  | -0.1        | 0.7         | 4.1                  | 2.7         | -8.3        |
| Transition Economies           | 13.0                 | 8.7         | 7.8         | 15.0                 | 12.7        | 9.3         |

**Source:** UNCTAD, *Trade and Development Report 2003*, Table 3.1, p 42.

World trade expanded steadily throughout the 1990s at a rate of more than 6 percent per annum, and exceeded the growth in world output by a wide margin. World trade growth reached double digits in 2000, mainly due to the trade in manufactures (predominantly information technology). The subsequent bursting of the IT bubble and the slow down in world output in 2001, however, caused a greater deceleration in world trade in 2001. The events of Sept 11 and

the subsequent fight against terrorism compounded this deceleration. 2002 saw a modest recovery, with trade again exceeding world output, but the margin was smaller than in recent years. Growth in 2003 was predicated on an economic recovery in Japan and Europe as well as on increased North American imports. The International Monetary Fund (IMF) predicts growth in world trade of over 4 percent in 2003 and at 6 percent in 2004.<sup>1</sup>

### Seaborne Exports

This then leads us to the volume of world seaborne exports, which increased slightly in 2002, reaching 5.88 billion tons of loaded goods; with a growth rate of 0.8 percent for that year.

Table 2: Development of international seaborne trade, selected years (goods loaded)

| Year     | Tanker Cargo |          | Dry Cargo    |          |                                    |          | Total (all goods) |          |
|----------|--------------|----------|--------------|----------|------------------------------------|----------|-------------------|----------|
|          |              |          | Total        |          | Of which main bulk commodities (a) |          |                   |          |
|          | million tons | % change | million tons | % change | million tons                       | % change | million tons      | % change |
| 1970     | 1442         |          | 1124         |          | 448                                |          | 2566              |          |
| 1980     | 1871         |          | 1833         |          | 796                                |          | 3704              |          |
| 1990     | 1755         |          | 2253         |          | 968                                |          | 4008              |          |
| 1998     | 2084         |          | 3532         |          | 1170                               |          | 5616              |          |
| 1999     | 2073         | -0.5     | 3593         | 1.7      | 1196                               | 2.2      | 5666              | 0.9      |
| 2000     | 2167         | 4.6      | 3703         | 3.1      | 1288                               | 7.7      | 5871              | 3.6      |
| 2001     | 2170         | 0.1      | 3670         | -0.9     | 1331                               | 3.3      | 5840              | -0.5     |
| 2002 (b) | 2140         | -1.4     | 3748         | 2.1      | 1352                               | 1.6      | 5888              | 0.8      |

**Source:** UNCTAD, *Review of Maritime Transport 2003*, Table 3, p. 5.

**Notes:** a) iron ore, grain, coal, bauxite/alumina, and phosphate; b) estimate

The breakdown of world seaborne loaded goods by continent was as follows: Africa's share of world exports was 8.8 percent, while America's reached 21.2 percent. Asia had by far the largest share of the world tonnage of seaborne loaded goods at 37 percent. Europe's share was the second largest, at 25.4 percent, while Oceania's was the smallest, representing only 7.6 percent of the total. The breakdown for selected trading blocks was: European Union (EU) - 17.8 percent; Gulf Cooperation Council (GCC) - 12.5 percent; North America Free Trade Association (NAFTA) - 10.2 percent; Association of South East Asian Nations (ASEAN) - 7 percent; South Common Market (MERCOSUR) - 5.2 percent; and Common Market of Eastern and Southern Africa (COMESA) - 1.6 percent.<sup>2</sup>

### Seaborne Trade in Tankers

World shipment of tanker cargoes in 2002 amounted to 2.14 billion tons, a contraction of 1.4 percent from the previous year. About 76.8 percent of this tanker trade was in crude oil, with the remainder as petroleum products. The share of tanker shipments in overall world seaborne trade remained unchanged at 36.1 percent.

- Crude oil seaborne shipments decreased by 1.7 percent to 1.64 billion tons in 2002.
- (Liquefied natural gas) LNG shipments increased by 4.4 percent during 2001 to reach

143 bcm of natural gas, representing about 5.8 percent of world production.

- Global trade in petroleum products was steady in 2002 at 496.8 million tons.<sup>3</sup>

### **Dry Cargo Shipments**

In 2002, overall dry cargo shipments increased by 2.1 percent, reaching 3.75 billion tons. The five dry-bulk trades, namely iron ore, coal, grains, bauxite/alumina and rock phosphate, recorded 1.6 percent growth to reach 1.35 billion tons. The remaining dry cargo trades, minor bulks and liner cargoes, increased by 2.4 percent to 2.40 billion tons. The share of dry cargo shipments in world seaborne trade was 63.6 percent of total goods loaded during the year.

- *Iron ore shipments.* The booming production of steel was reflected in the 5.1 percent increase in iron ore shipments during 2002, for a total of 475 million tons.
- *Coal shipments.* Coal shipments increased by 1.8 percent in 2002 and reached an all-time record of 575 million tons. As in previous years, thermal coal made up 70 percent of world coal trade, and in 2002 shipments grew at a rate of 3.7 percent to reach 403 million tons.
- *Grain shipments.* World grain shipments reached 220 million tons in 2002, a decrease of 6 percent from the previous year's 234 million tons, almost equally split between wheat and coarse grains, such as maize, barley, soybeans, sorghum, oats and rye.
- *Other bulk shipments.* During 2002, shipments of bauxite and alumina, the primary inputs for the aluminium industry, are estimated to have increased by 3.9 percent to reach 53 million tons. Shipments of rock phosphate stood at 29 million tons, almost the same level as the previous year.<sup>4</sup>

### **Containerised Cargoes**

The balance of 1.6 billion tons of dry cargoes is increasingly being carried in containers along liner trade routes. In some regions, specialized unitised services, such as Ro-Ro, reefer and cars, coexist with traditional general cargo services, with some of the latter serving to back up the main container trades. However, container traffic continues to increase its market share. In 2001, 60 percent of the 61.9 million tons of reefer trade moved in special containers.<sup>5</sup>

The world fleet of fully cellular container ships continued to expand substantially in 2002 in terms of both number of ships and their TEU (Twenty-Foot Equivalent Units (inter-modal shipping container) capacity. Ship sizes also continued to increase in 2003, reflecting the building of larger vessels to achieve economies of scale. As of the end of 2002, the well-defined trend towards large container vessels was continuing unabated.

### **Structure of the World Fleet**

The world merchant fleet stood at 844.2 million deadweight tons (dwt) on January 1, 2003. This is a 2.3 percent increase over 2002, at which time the world fleet had already expanded at a rate of 2.1 percent over the tonnage in 2001. New building deliveries represented

49.0 million dwt, while 30.5 million dwt were broken up and lost. The result was a net gain of 18.5 million dwt in 2002.<sup>6</sup>

Table 3: World fleet size by principal type of vessel, 2001-2003  
(beginning-of-year figures, in thousands of dwt)

| Principal Types             | 2001             | 2002             | 2003             | % change<br>2002/2003 |
|-----------------------------|------------------|------------------|------------------|-----------------------|
| <b>Oil tankers</b>          | 285,441<br>35.3% | 285,519<br>34.6% | 304,396<br>36.1% | 6.6                   |
| <b>Bulk carriers</b>        | 281,654<br>34.8% | 294,588<br>35.7% | 300,131<br>35.5% | 1.9                   |
| Ore/bulk/oil                | 11,391<br>1.4%   | 14,456<br>1.8%   | 12,612<br>1.5%   | -12.8                 |
| Ore/bulk                    | 270,263<br>33.4% | 280,132<br>33.9% | 287,519<br>34.1% | 2.6                   |
| <b>General cargo ships</b>  | 102,653<br>12.7% | 99,872<br>12.1   | 97,185<br>11.5%  | -2.7                  |
| <b>Containerships</b>       | 69,216<br>8.6%   | 77,095<br>9.3%   | 82,793<br>9.8%   | 7.4                   |
| <b>Other types of ships</b> | 69,412<br>8.6%   | 68,578<br>8.3%   | 59,730<br>7.1%   | -12.9%                |
| Liquefied gas carriers      | 18,525<br>2.3%   | 19,074<br>2.3%   | 19,469<br>2.3%   | 2.1                   |
| Chemical tankers            | 8,044<br>1.0%    | 7,974<br>1.0%    | 8,027<br>0.9%    | 0.7                   |
| Miscellaneous tankers       | 768<br>0.1%      | 785<br>0.1%      | 906<br>0.1%      | 15.4                  |
| Ferries and passenger ships | 5,038<br>0.6%    | 5,319<br>0.6%    | 5,495<br>0.6%    | 3.3                   |
| <b>Other</b>                | 37,037<br>4.6%   | 35,426<br>4.3%   | 25,833<br>3.1%   | -27.1                 |
| <b>World Total</b>          | 808,376<br>100%  | 825,652<br>100%  | 844,235<br>100%  | 2.25                  |

Source: UNCTAD, *Review of Maritime Transport 2003*, Table 6, p. 21.

The tonnage of oil tankers in 2002 increased by 6.6 percent and that of bulk carriers by 1.9 percent. These two types of ships represented 71.6 percent of total tonnage, a slight increase from 70.3 percent in 2001. The fleet of general cargo ships decreased again in 2002 and at the same rate as that of the previous year, that is, by 2.7 percent; this category now represents 11.5 percent of the total world fleet. In terms of deadweight tonnage, the fleet of container ships increased by 5.7 million dwt or 7.4 percent, and now represents 9.8 percent of the total world fleet. This relatively high rate of increase reflects the growing portion of manufactured goods being traded, generally in containers.<sup>7</sup>

### Age Distribution of the World Merchant Fleet

Table 4: Age distribution of the world fleet, by types of vessel, as at 1 January 2003  
(percentage of total dwt)

| Types of vessel       | 0-4<br>years | 5-9<br>years | 10-14<br>years | 15-19<br>years | 20<br>years<br>and<br>over | Average<br>age<br>(years)<br>2001 | Average<br>age<br>(years)<br>2002 |
|-----------------------|--------------|--------------|----------------|----------------|----------------------------|-----------------------------------|-----------------------------------|
| <b>All ships</b>      | 22.0         | 20.9         | 15.56          | 13.2           | 28.1                       | 13.9                              | 12.6                              |
| <b>Tankers</b>        | 26.9         | 18.5         | 21.11          | 9.5            | 24.0                       | 13.2                              | 11.6                              |
| <b>Bulk carriers</b>  | 19.7         | 23.9         | 12.81          | 17.8           | 25.8                       | 13.7                              | 12.7                              |
| <b>General cargo</b>  | 9.4          | 13.6         | 9.80           | 16.7           | 50.6                       | 16.2                              | 17.0                              |
| <b>Containerships</b> | 31.1         | 33.9         | 13.14          | 10.0           | 11.9                       | 11.0                              | 9.1                               |
| <b>All others</b>     | 14.9         | 13.1         | 13.43          | 9.4            | 49.2                       | 14.9                              | 16.0                              |

**Source:** UNCTAD, *Review of Maritime Transport 2003*, Table 8, p. 23.

The average age of the total world fleet in 2002 dropped by more than a year to 12.6 years, reflecting increased scrapping of old tonnage and deliveries of new buildings. By type of vessel, the average age of tankers decreased by almost two years to 11.6 years in 2002.

## **Vulnerabilities**

What has become increasingly clear since the events of Sept 11 is that the entire supply chain relating to international seaborne trade is now more vulnerable. A trading system based on lowering economic costs to its users and shortening of delivering schedules is not necessarily conducive to stronger security measures.

In its early days, the International SLOC (Sea Lines of Communication) Conference examined SLOC protection in its traditional setting, but today has become more holistic in its consideration of the relevant factors. This can only continue to evolve in the future, where issues ashore will also be relevant. For example, Australia has had a long-term concern for the protection of oil and gas infrastructure. In a traditional SLOC protection scenario, LNG carriers would also be considered particularly vulnerable. However, on January 1, 2004, an explosion at the Santos gas processing plant in Moomba, South Australia, reduced the gas supply to New South Wales and South Australia by 70 percent (the usual gas supply at that time of year was 350-400 terajoules a day, and was reduced to 120 terajoules a day). Both state governments instructed some of their largest industrial customers to reduce their gas consumption, leading to a shut down or curtailed production in the period immediately after the explosion. While alternative sources were found to meet the shortfall in gas supply, it is estimated that New South Wales will face a shortfall of up to 60 terajoules a day until the Moomba plant returns to full operations.<sup>8</sup> This begs the question of whether in the future shipping and shore infrastructure might be attacked, or whether a more significant economic impact might be achieved with attacks on critical land infrastructure.

Shipping is vulnerable to attack or disruption by a variety of groups with differing motives: locally-operating and state-supported pirates/criminal gangs, terrorist groups, and although less likely at the moment, nation states. Indeed, at the moment, the threat of state on state attacks on shipping appears to be low to non-existent, shipping remains vulnerable to such an attack. If such attacks were to occur, navies would know how to react, although, it is not clear who should actually be authorized to respond to such attacks.

Piracy remains a major concern but some methodological confusion is becoming evident in reports of attacks. Should an attack be reported as piracy or maritime terrorism? It may seem semantic, but marine insurers may refuse to pay out after an attack.

While the threat of maritime terrorism is a growing concern, reports suggesting it as a high-risk possibility are, in my opinion, somewhat flawed. When I studied international relations 20 years ago, I was interested in counterinsurgency operations. A well-known statement then was that one man's insurgent was another's freedom fighter. Interestingly today, regional groups that used to be called insurgents are now dubbed terrorists.

### **Vulnerability of Shipping**

Vulnerabilities facing international shipping include:

- *Physical attacks on ships.* Historically, this has been a state-on-state activity, although it is an option open to terrorists as a political act.
- *Hijacking of cargoes, crews, and the ship itself (for ransom).* This can be done by pirates, criminal groups, or terrorists (either as a political act or to generate funds).
- *Sinking ships, either to block narrow passages, port entrances or focal points, or to create an environmental catastrophe.* This could be considered a state-on-state activity or an option for terrorists.
- *Turning the ship into a weapon, either to attack land infrastructure through collision or explosion, or to incapacitate the crew.* The ship may continue along a busy strait, risking collision with other ships. Such acts could be undertaken by terrorists. While pirates have in the past incapacitated crews, it is not clear whether they also intended to harm nearby shipping.
- *Container security.* Containers have long been a concern as a vehicle for trans-national crime: the importation of drugs, weapons, people etc. The potential of using containers to import weapons of mass destruction has long been recognised, and with terrorist groups targeting the United States, this has now become a priority for international security cooperation, particularly through the Container Security Initiative. The International Ship & Port Safety (ISPS) Code, pushed through the International Maritime Organization by the United States, is its attempt to manage the importation of goods and the safety of shipping visiting U.S. ports.
- *Cyber threats.* Cyber attacks are a more feasible and low cost option for a state-organized or terrorist action. While initial consideration of cyber-attack has been directed at port infrastructure, there have been reports of merchant ships having incorrect (and unexpected) GPS readings.<sup>9</sup> The implications of this for navigation are obvious.

## **Vulnerability of Ship Types<sup>10</sup>**

After looking at the types of attacks that might occur, how are specific ship types affected?

- Oil tankers have high economic value and could be hijacked for the cargo, or turned into an explosive weapon. The move to double hulls may have a positive impact here.
- Gas tankers also have a high economic value, but are actually hard to set on fire, and are more at risk when they are loading or unloading in port.
- Bulk carriers have a lower economic value but given the size of the larger ships, can be used as weapons to crash into other ships or infrastructure, or could be sunk to block access to ports. However, if the ship is carrying fertiliser, it can also easily become a weapon.
- General cargo ships can inadvertently become weapons if hazardous chemicals are incorrectly recorded and stored in close proximity.
- Container ships can have a high economic value, but their greatest threat is what may be carried in a container.

## **Impact of These Scenarios**

While the cost of a ship, its cargo, and the lives of its crew have a nominal value, it is the economic impact of trade disruption to nations that has become increasingly critical. With globalisation increasing these trends, the industries of many countries have moved to a just-in-time production philosophy, relying on goods to be delivered when required. This means that disruptions to deliveries through ship sinkings or the more probable rerouting can have major impacts on a national economy. This is particularly the case if energy shipments are affected.

World trade relies on international shipping, which is vulnerable to disruption and attack. Navies are well equipped to manage state-based attacks on shipping, and regional navies have been extensively involved in anti-piracy patrols. However, it is not clear whether navies are prepared to confront the other threats and vulnerabilities that shipping and port operations face.

What is needed is a more detailed analysis and assessment of the risks to shipping and trade. The risk assessments that I have seen are flawed by not being able to identify the impact of trade disruption or destruction on national economies, which is a critical area for future study. While the likelihood of a maritime attack is relatively likely in this arena, its full implications are difficult to determine if its implications cannot be assessed. Certainly, we in Navy Headquarters are hopeful that we may begin some basic considerations of the implications of trade disruption to the Australian economy in the coming year.

## **Endnotes**

<sup>1</sup> UNCTAD, *Trade and Development Report 2003*, Geneva, 2003, pp. 41,44; *Review of Maritime Transport 2003*, Geneva, 2003, p. 3.

<sup>2</sup> UNCTAD, *Review of Maritime Transport 2003*, Geneva, 2003, p. 4.

<sup>3</sup> *ibid*, pp. 6-7, 11.

<sup>4</sup> *ibid*, pp. 11-13.

<sup>5</sup> *ibid*, p. 14.

<sup>6</sup> *ibid*, p. 19.

<sup>7</sup> *ibid*, p. 19.

<sup>8</sup> Michael Harrison, *Awaiting the Moomba backdraft*, [www.lawyersweekly.com.au/articles/71/0C01CD71.asp](http://www.lawyersweekly.com.au/articles/71/0C01CD71.asp) accessed 17/02/04

<sup>9</sup> This relates to the MV *Jupiter Glory*, which was in the vicinity of RAS Tanura/Juaymah on 5 January 2004 when an error was introduced into her GPS system. It is not clear whether this was due to coalition naval activity in the area, or atmospheric/natural causes. Personal e-mail to author via the Australian NCAGS Organisation.

<sup>10</sup> Philippe Crist, *Security in Maritime Transport: Risk factors and Economic Impact*, Maritime Transport Committee, Organisation for Economic Co-operation and Development, Paris, July 2003 provides a good introduction to these issues. Future Directions International ([www.futuredirections.org.au](http://www.futuredirections.org.au)), a think-tank based in Western Australia have also undertaken work in this area.

## **Luncheon Keynote Remarks**

By: Lt Gen Wallace C. Gregson, Jr.

This is a particularly good time of the year for Monday Morning Quarterbacks. It's still the American professional football season, with the playoffs still in full swing. This being Monday, you can see the expert opinions in today's sports pages. Hindsight, but expert, with the facts and results laid out for all to see.

It's been a good few years for Monday Morning Quarterbacks in the international arena, also. The attacks on the World Trade Center and the Pentagon on 9/11, the current stabilization phase of our operations in Iraq, the state of government in Afghanistan and others are all there for instant analysis.

The dominant hindsight after 9/11 was that it was "an intelligence failure" because our security agencies did not detect the attack in time to prevent it. It was certainly an intelligence failure, but not because we were not warned or aware of the danger. It was an intelligence failure that occurred between our ears, because all the naked events and facts were there in front of us from 1979 to 2003, but we refused to recognize what was going on.

We even had direct indications and warning, but we missed them. On 26 February 1993, a rented Ryder van packed with explosives parked in the underground parking garage of one tower. The plan was that when the van exploded, it would topple one tower into the other, bring both down, and saturate the area with toxic gas. As we know, it did not quite work out as planned, that time. Only six people died. Ramzi Yousef and his 5 cohorts were sentenced to a total of 240 years in prison. At the World Trade Center, we took action! We made sure nobody would be able to do anything like that with a Ryder van again! We know all too well what happened 10 years later.

We saw this 1993 event as a dot, a discreet event; we did not see it for what it was, a part of a line from our embassy in Tehran through Beirut to the Philippines (an attempted simultaneous hijacking of 11 aircraft) to New York to Oklahoma City to East Africa and back to New York and Washington.

Meanwhile, at sea, piracy and armed attacks are on the rise. The data show a continuing pattern of attacks in South East Asia and the Far East, especially in Indonesian and Malaysian ports and adjacent waters; in Brazil and Ecuador in Latin America, in and around the Indian sub-continent, in certain ports in West Africa, notably in Nigeria; and in east and north east Africa, especially in waters off Somalia.

On Sunday, 6 October 2002, the French tanker Limburg was attacked and badly damaged off Yemen by a speedboat packed with explosives. The attack had some similarity to the attack on USS Cole. One crewman was killed, the ship was disabled, and 90,000 barrels of oil were spilled into the Arabian Sea. This attack produced no demand for negotiation, no statement of intent. It was destruction for its own sake. Eight years from that attack, will we look back at this as a feasibility demonstration?

What is going on here? Let me suggest that the same transformation of war that we see on land is also taking place at sea. We're facing a new enemy, employing new tactics, in pursuit of senseless destruction.

It's not so much foresight that's needed, it's forethought. We live in an increasingly decentralized world. Previously insignificant actors play a decisive role. We need new ways of thinking. The old policy and strategy paradigms of the past are gone. Threat Containment, to name just one, will not work in our new, computerized world.

Technology's ever-accelerating advancements produce resentment, not joy, in many parts of the world. In places where liberal government does not rule, where schools do not teach, where services do not exist, where safety and security and employment and health care are dreams, our world is seen as evil, and the cause of misery.

Asian Sea Lanes wind through a lot of these desperate neighborhoods. While living conditions vary widely across our region, approximately two thirds of people who exist on less than \$1/day reside in the South Asia and the Asia Pacific regions. In some areas, 40% of the poorest families have older teenage children with no education while the offspring of the wealthiest 20% have more than 10 years of schooling. Infant mortality rates in South and East Asia are at least 6 times higher than that of developed nations; fifteen percent of people living with HIV or AIDS reside in the same region.

These desperate conditions are fertile soil for transnational issues such as organized crime, insurgent movements, narcotics trading, HIV/AIDS, and human trafficking. Vulnerable and alienated people are exposed daily to extremist information campaigns designed to produce radicalized and dedicated soldiers. Desperate conditions and persuasive messages provide a strong source of new recruits and financial support to organized terrorist movements. If we can't fix these conditions, we won't contain the threat.

"Globalization" of information, and thus commerce and knowledge, was supposed to be a great advance for the world, a new "ordering of the world" that would bring peace and benefit all mankind. Not everybody shares our enthusiasm. The 1999 World Trade Organization talks in Seattle collapsed in clouds of teargas and violence. It was a big surprise to us, as we thought everybody supported this wonderful new phenomenon. Since then, every similar gathering has had security not seen, at least in America, since the Vietnam war protest days of the 60s.

On September 11th, 2001, we realized the dark side of globalization. The phenomena of networked communications and worldwide instant financial transactions empower not only legitimate business, but also small, ideologically driven, sub-national, worldwide terrorist groups. Universal access to worldwide communications gives these disaffected, dedicated terrorist groups an unprecedented ability to attack nations and legitimate governments. This capability allowed a man in a cave to destroy the World Trade Center and damage the Pentagon.

Globalization also assaults the ramparts of nation-state government. Unfettered access to scientific and technical knowledge previously held only by certain governments bypasses international organizations and state power. It gives rogue states and terrorist movements the ability to achieve unprecedented destructive power. Past measures to control access to specialized material and machinery are largely ineffective. The discipline of the various nuclear non-proliferation regimes is rapidly fading. Weapons of mass destruction in the hands of our dedicated, suicidal enemies are the ultimate anti-access strategy. They are also the ultimate extortion strategy. New operational strategies and capabilities are needed to cope with their potential use in this theater.

Today's terrorism threat is profoundly different from the past. We are accustomed to practical terrorism - violent action designed to change political circumstances. In the recent past, airplane hijackers were to be appeased, not resisted, because the airplane was assumed to be a bargaining chip. Apocalyptic terrorism seeks destruction as its own end. No negotiation is possible. No amount of destruction short of total is enough. Apocalyptic terrorism, rogue states, and weapons of mass destruction in combination are a survival-level interest to the United States and our friends.

Our enemies have "transformed," or "revolutionized," their capability for conflict. Small organizations and individuals are now the staple of questions directed at high public officials - Osama, Ramsi, Hekmatyar, others. Like rock stars, they are known by their first names. Just as Information technology has broken new ground for friends of peace, it has broken the distance and power barriers for our enemies.

World and Asian sea lane security is as much a part of the War on terrorism as is air travel security or building security. Any solutions require that we adopt new ways of thinking. We need a full understanding of the threat, the conditions that produce the threat, and the actions we must take.

This war on terrorism includes all of the pillars of national and international power: political, cultural, military, economic, law enforcement, cooperative interdiction, information and others. It will require nations to share data and information on citizens, financial transactions and movement of people and controlled material, regardless of past sovereign considerations. We need to apply new rules and new technologies. We need an international, seaborne equivalent of the North American Air Defense Command. The challenge is for all of us to now manage the waterways and seaborne security with the same vigor that we apply to manage aircraft in a crowded and confusing airspace, before we have a maritime 9/11. I suspect the work of your conference is very important in moving us toward this goal.

Thank you for your interest and your courtesy.

# **Piracy in Southeast Asia: Priorities, Perspectives and the Hierarchy of Interests**

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**Presentation for the**  
**Conference on Maritime Security in East Asia**  
**Organized by the**  
**Center for Strategic & International Studies (CSIS)**  
**American-Pacific Sealanes Security Institute, Inc.**  
**Honolulu**  
**Jan. 19-20, 2004**

## **Introduction**

This paper begins by presenting aggregated statistics on piracy for the Southeast Asian region, sourced from the International Maritime Bureau's Piracy Reporting Centre. The PRC's statistics showed that in the eight years from 1995 to 2002, a total of 905 piracy "incidents" took place in Malaysian waters, Indonesia, the Malacca Straits, the Singapore Strait and the South China Sea. These incidents ranged from attempted boardings, petty thefts to outright hijacking of ships.

How serious is the piracy situation therefore in Southeast Asia? I make two main points. The first is that whether piracy is regarded as a serious security problem or not depends on an actor's priorities and hierarchy of interests. This is because of the range of security problems that exist in the region. As such, piracy must be located within the context of a state's security priorities, and especially the domestic pressures that it is facing. A good example is Indonesia, which is beset with socio-economic problems, as well as having to cope with separatist movements in various parts of the country, in addition to religious strife.

State capacity, too, determines the resources allocated to fighting piracy. The two archipelagic states – the Philippines and Indonesia – have not merely very limited resources in policing their coastlines, but the maritime area and length of coastlines they have to keep under surveillance is extremely large. This is in contrast to Singapore and Brunei, both miniscule states with very limited maritime area, but with enough economic resources to tightly police their short coastlines.

The reactions of both state and non-state actors (such as the International Maritime Bureau) therefore depend on their capacities and hierarchy of interests. Thus, in Southeast Asia, only a few actors have attempted to securitise piracy, i.e. move piracy to the top of an actor's security agenda by portraying it as a threat to a state's existence.

The chief proponent of the securitisation concept is the Copenhagen School (Barry Buzan, Ole Weaver et al). In securitisation theory:

1. Security is equated with survival.
2. An issue is argued to pose an “existential threat” to a referent object (state, group), and
3. Security threats justify use of extraordinary measures outside the normal political process.

Singapore, Japan and the IMB have all attempted to securitise piracy for reasons of their own. However, other regional states have not responded in the same way because of other more perceived security concerns. This paper examines very briefly the different attitudes of four major actors towards piracy. It attempts to provide an explanation for these differing approaches by locating the issue within the hierarchy of interests of the four actors – the IMB, Malaysia, Indonesia and Singapore.

### The Hierarchy of Interests

#### The IMB

1. Safety of international shipping
2. Freedom of navigation
3. Costs

#### Singapore

1. Safety (port, navigation, other key facilities)
2. Freedom of navigation (unimpeded access)
3. Access to maritime resources

#### Malaysia

1. Outdo Singapore Malaysia in everything (especially ports and shipping)
2. Management of ocean space (especially protection against unauthorised intrusions)
3. Stop outflow of foreign exchange to shipping services and foreign transshipments

#### Indonesia

1. Maintain Indonesian territorial integrity (archipelagic concept or Wawasan Nusantara)
2. Protection/management of ocean space against foreign intrusions, especially by elements out to subvert unitary Indonesia and foment domestic dissension.
3. Exploit ocean resources to benefit economy.
4. Control of foreign shipping in archipelagic sealanes.

Thus we can see that securing national ocean space against pirates is not a priority for all the ASEAN members.

## Pirates = Terrorists?

The second major issue that the paper addresses is whether a condominium has been established between pirates and terrorists. The verdict is still out. However, so far as I know, there has been no known tie-up as yet between deeply ideological terrorist groups and pirates.<sup>1</sup> One must bear in mind that pirates, like other gangsters based on land, are economic criminals. They are pirates either out of greed, poverty or both. As such, it is unlikely for pirates to embrace the cause of the religious or political fanatic since it brings no measurable pecuniary benefit to them. More than that, if pirates take on the cause of the terrorist, it will bring the full weight of the global anti-terror campaign against them.

Indeed, Singapore recently argued that all pirates should be regarded as terrorists. Singapore's Home Affairs Minister Wong Kan Seng said on December 21, 2003, that there should be no distinction made between pirates operating for personal gain and terrorists.<sup>2</sup> What are the implications of this attempt to conflate terrorism with piracy? One major problem facing regional enforcement agencies in dealing with piracy is that no regional legislation exists for dealing with piracy. No ASEAN state is a party to the Rome Convention (Suppression of Unlawful Acts at Sea – SUA). Even more problematical, all Southeast Asian states do not have specific anti-piracy legislation, or agreements to cooperate across the board against piracy. If Singapore manages to persuade other regional states to classify piracy as terrorism, then the slew of anti-terror agreements which nearly all states are party to can be invoked. This will then force all states in the region to act against pirates (a.k.a. terrorists). This will impact most on Indonesia, since most pirates are based in Indonesian territory.

So far, however, there is little evidence that pirates are aligning with terrorists. The notorious Abu Sayaf Group (ASG) in the southern Philippines, for example, has been regarded as more of a criminal gang rather than as dedicated separatists, much less ideological terrorists, who resort to kidnap for ransom for funding. Similarly, the Gerakan Aceh Merdeka (GAM), until 2003, apparently assiduously avoided committing any act of terrorism, and especially piracy. This is because GAM has established important support infrastructures in Peninsular Malaysia, especially Kuala Lumpur. As a consequence, GAM leaders realised that if they preyed on ships sailing in Malaysian territorial waters, they would lose not only sympathy for their cause, but would arouse the Malaysian authorities to act against them. GAM therefore feared being caught between the jaws of both the Malaysian and Indonesian maritime enforcement agencies.

## Loss of Governance

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<sup>1</sup> Using the definition preferred by the US State Department, terrorism is: "Premeditated, politically motivated violence perpetrated against noncombatant\* targets by subnational groups or clandestine agents, usually intended to influence an audience." Guardian Unlimited © Guardian Newspapers Limited 2003.

<sup>2</sup> "Piracy equals terrorism on SE Asia's troubled waters: Singapore minister", Agence France Presse, December 21, 2003.

Nevertheless, there are two scenarios whereby pirates could collaborate with terrorists. The first is where national governments lose control over outlying areas and are replaced by al-quada type organizations. In such instances where terrorist organizations provide effective administration, including health care and education, they have the opportunity – as occurred in Afghanistan - to win over hearts and minds and recruit volunteers for martyrdom.

But analysts such as Dr Peter Chalk have pointed out that attacking maritime targets is unlike setting off a car bomb in a street or blowing yourself up in a crowded pub. Maritime targets – such as ports, ports facilities, ships and offshore structures – are harder to approach and require greater expertise, including more explosives, to damage them. As such, potential attackers must be trained seamen.

Another way of attacking maritime targets would be to assault installations and ships and place explosives to blow them up. Yet all these methods require a navigator's or seaman's knowledge. In this respect, it has been noted that pirates are often expert, trained seamen who obviously have served aboard ships. Thus the danger is that once an al-quada-type "liberated zone" has been set up, it could also provide a training base, run by pirates, for terrorist saboteurs. The MILF training camps in the southern Philippines is a case in point, except that they have not concentrated on training terrorists to attack maritime targets.

The second scenario is even harder to deal with. This, as the OECD has pointed out, would involve a terrorist organization buying over a legitimate shipping company, complete with ships registered with a Flag of Convenience (FOC) registry. Terrorist crews could be slowly trained to run these ships. At an opportune moment, one of these "terrorist ships", packed with explosives, could be set off near a selected (preferably US) target.

### The Need for Intelligence

To my mind, the answer to piracy is not mere policing action. Policing at sea is necessary to manage the problem. But in the long run, the issue of piracy must be recognised as stemming from a combination of factors, including poor socio-economic conditions and equally important, a sense of political deprivation.

Thus, good intelligence is obviously the key to combating piracy and to ensure that no enclaves are established to nurture and train terrorists in maritime attacks. At the same time, intelligence is also the key to ensure that terrorist organisations do not own ships that they can use to attack ports and other targets.

# **Cyber and other Technological Threats to Shipping**

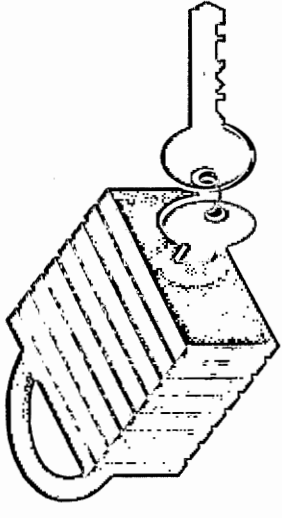
**Abe Chin-Ching Lin**

**Ministry of National Defense, R.O.C**

**18 January 2004**

# **OUTLINE**

- ◆ **Introduction**
- ◆ **Analysis of GPS Threats**
- ◆ **Investigation of communication  
satellite threats**
- ◆ **Taiwan's Capability to Counter the Threats**
- ◆ **Conclusions**



# Introduction

- ◇ Located in the west of the Pacific, Taiwan is an island which was formed about a million years ago due to the impact of the Philippine Sea and Eurasian plates.
- ◇ Thanks to the advancements of telecommunications, neither the ocean nor the time difference can limit business activities and everyday lives on the island anymore.
- ◇ On the contrary, they have facilitated foreign trade and investments and helped the island to make constant progress and innovations in line with the world.

# Introduction

- ◆ ISO has acknowledged the importance of cyber threads, it is thus needed to recognize and analyze these threads before actions can be taken to reduce possible impacts.
- ◆ By identifying these threats through introducing the definitions and classifications of cyber threats in ISO/IEC 13335, this paper intends to investigate the possible threats in the global position system (GPS) and satellite communication that are commonly used in shipping.
- ◆ A set of actions will be proposed as the suggestions and conclusions of the paper.

# Introduction

- ◆ Also in The National Strategy to Secure Cyberspace, three out of the five national-level priorities specified by the US government are attempts to reduce cyber attacks, threats and vulnerability, which suggests that the importance of cyber threat is gaining momentum.
- ◆ ISO/IEC 13335-1 is an introduction and brief description of the concepts and possible impacts of threat.
- ◆ Threat basically refers to “the potent possibility of system or organizational damage that caused by unexpected accidents.”

# Example of threats

| <b>Artificial</b>                                                                                                 |                                                                                                                     | <b>Environment</b>                                                  |
|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| <b>Deliberation</b>                                                                                               | <b>Accident</b>                                                                                                     | <b>Earthquake</b><br><b>Flashing</b><br><b>Flood</b><br><b>Fire</b> |
| <b>Eavesdropping</b><br><b>Data modification</b><br><b>System intrusion</b><br><b>Malicious program marauding</b> | <b>Errors and negligence</b><br><b>File deletion</b><br><b>Incorrect program logic</b><br><b>Physical accidents</b> |                                                                     |

# List of possible threats affecting IT security

|                                                |                                                 |                                                               |
|------------------------------------------------|-------------------------------------------------|---------------------------------------------------------------|
| 1 Earthquakes (E)                              | 17 EMI (D, A, E)                                | 33 Network access of unauthorized users (D)                   |
| 2 Floods (D, A, E)                             | 18 Statics accumulation (E)                     | 34 Unauthorized use of network facilities (D)                 |
| 3 Typhoons (E)                                 | 19 Theft (D)                                    | 35 Network component technical failure (A)                    |
| 4 Flashing (E)                                 | 20 Unauthorized use of storage media (D)        | 36 Transmitting failure (A)                                   |
| 5 Industrial actions (D, A)                    | 21 Deterioration of storage media (E)           | 37 Line damage (D, A)                                         |
| 6 Bomb attacks (D, A)                          | 22 Operator mistakes (D, A)                     | 38 Transmitting flow overload (D, A)                          |
| 7 Use of weapons (D, A)                        | 23 Maintenance errors (D, A)                    | 39 Wiretap (D)                                                |
| 8 Fire (D, A)                                  | 24 Software failure (D, A)                      | 40 Communication invasion (D)                                 |
| 9 Deliberate damage (D)                        | 25 Use of software by unauthorized users (D, A) | 41 Flow analysis (D)                                          |
| 10 Power failures (A)                          | 26 Unauthorized use of software (D, A)          | 42 Message wrong route (A)                                    |
| 11 Water supply failures (A)                   | 27 Disguise as an authorized user (D)           | 43 Message re-routing (D)                                     |
| 12 Air condition failures (D, A)               | 28 Illegal use of software (D, A)               | 44 Deniable (D)                                               |
| 13 Hardware failures (A)                       | 29 Detrimental software (D, A)                  | 45 Communication malfunction (such as: Network service) (D,A) |
| 14 Unstable power supply (A, E)                | 30 Illegal I/O of software (D)                  | 46 Personnel shortage (A)                                     |
| 15 Extreme temperatures and humidity (D, A, E) | 31 Operator mistakes (D, A)                     | 47 User failure (D, A)                                        |
| 16 Dust (E)                                    | 32 Maintenance errors (D, A)                    | 48 Misuse of information (D,A)                                |

# Analysis of GPS Threats



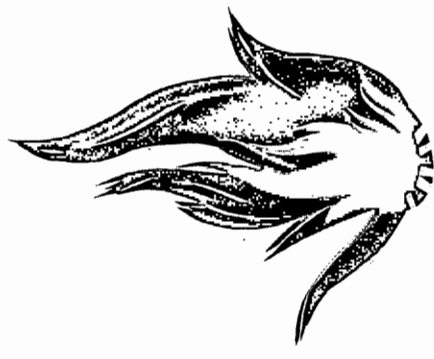
# Analysis of GPS threats



Two possible ways to jam GPS downlink signals for military purposes:

- ◇ Use of unmanned aerial vehicles (UAV) to imitate the GPS signal transmitting equipment
- ◇ Use of air-drop or cast GPS earth scrambles in the enemy's area to jam the signal of GPS equipment in the vicinity

# Counteract the deliberate interferences

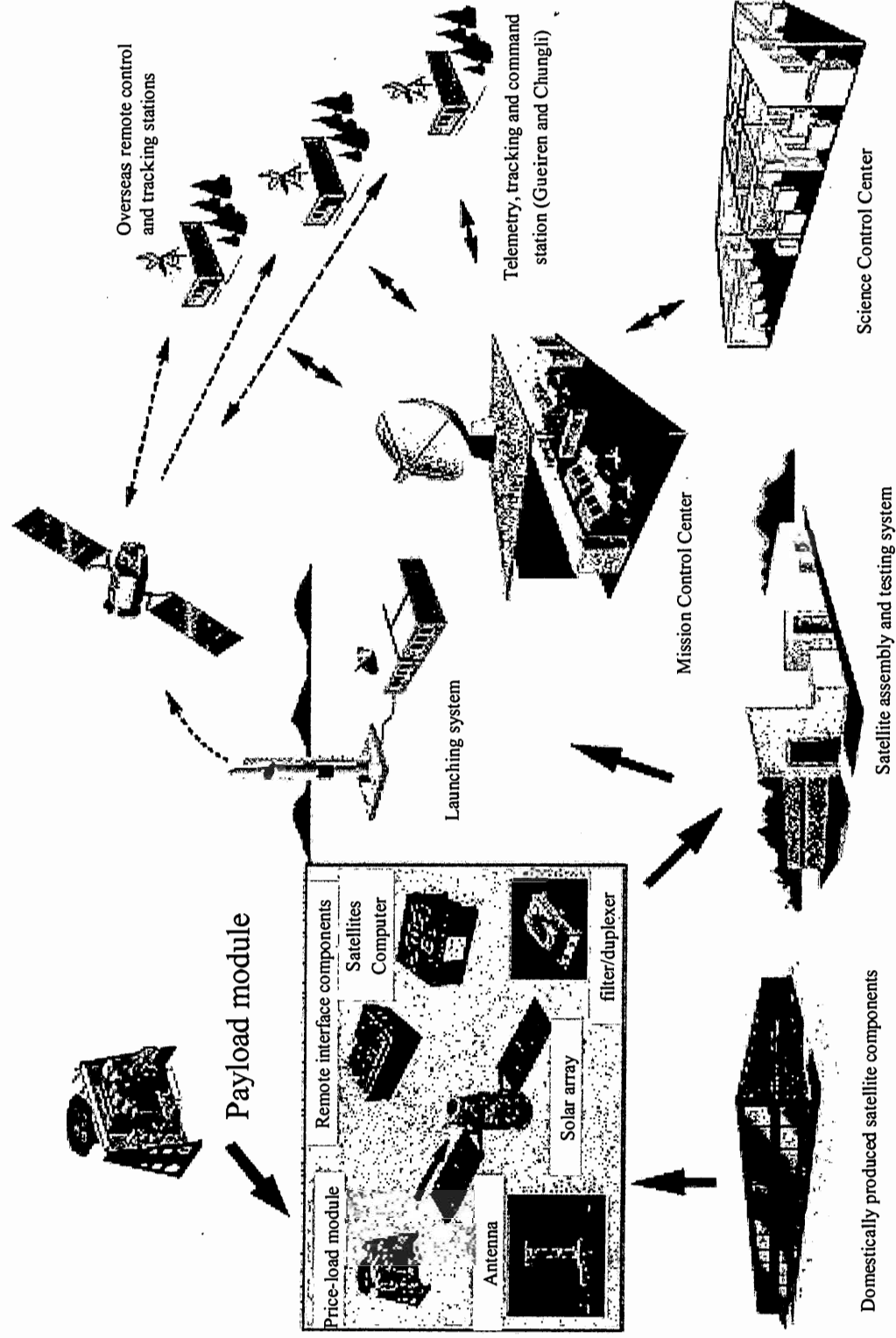


- ◊ Increasing the transmitting power of GPS satellites
- ◊ Anti-spoofing effect (AS)
- ◊ Inertial navigation system (INS) integration

# Investigation of communication satellite threats

# Satellite System Components

Satellite System Components and Operation Relational Chart



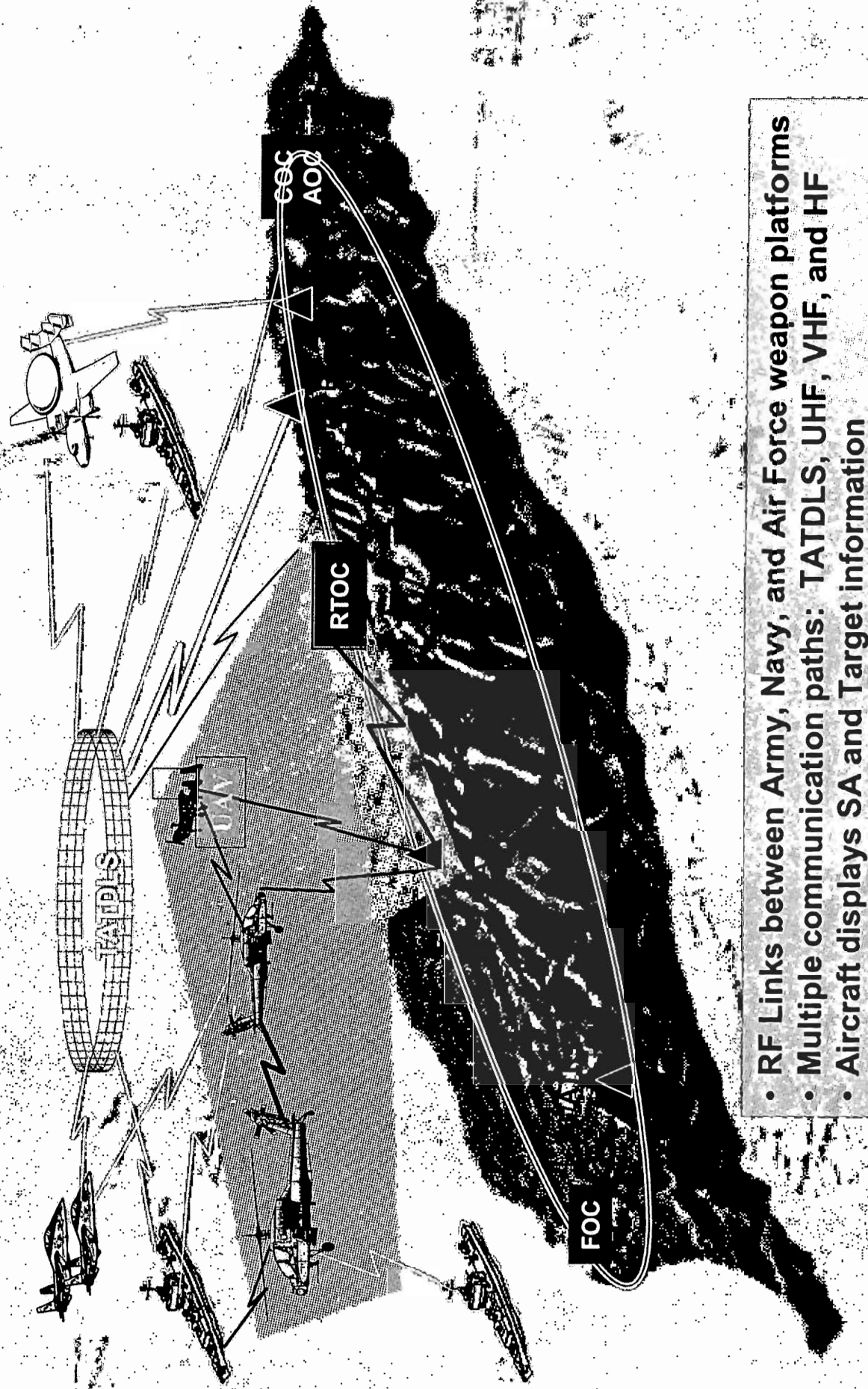
## Investigation of communication satellite threats

- ◇ We can categorize communication satellite threats into deliberate and non-deliberate threats.
- ◇ Non-deliberate threats can be subdivided into fixed frequency and radar full-frequency interferences.
- ◇ Fixed frequency interference: the transmitter can receive non-satellite communication signals at a specific frequency regardless of the direction of antennas.
- ◇ Radar full-frequency interference: the entire band of the satellite is jammed by radar interference. The sources of interference may be airport and military radars.
- ◇ Deliberate communication satellite threats include pulse interference, full-frequency interference and partial band interference.

# Taiwan's Capability to Counter the Threats

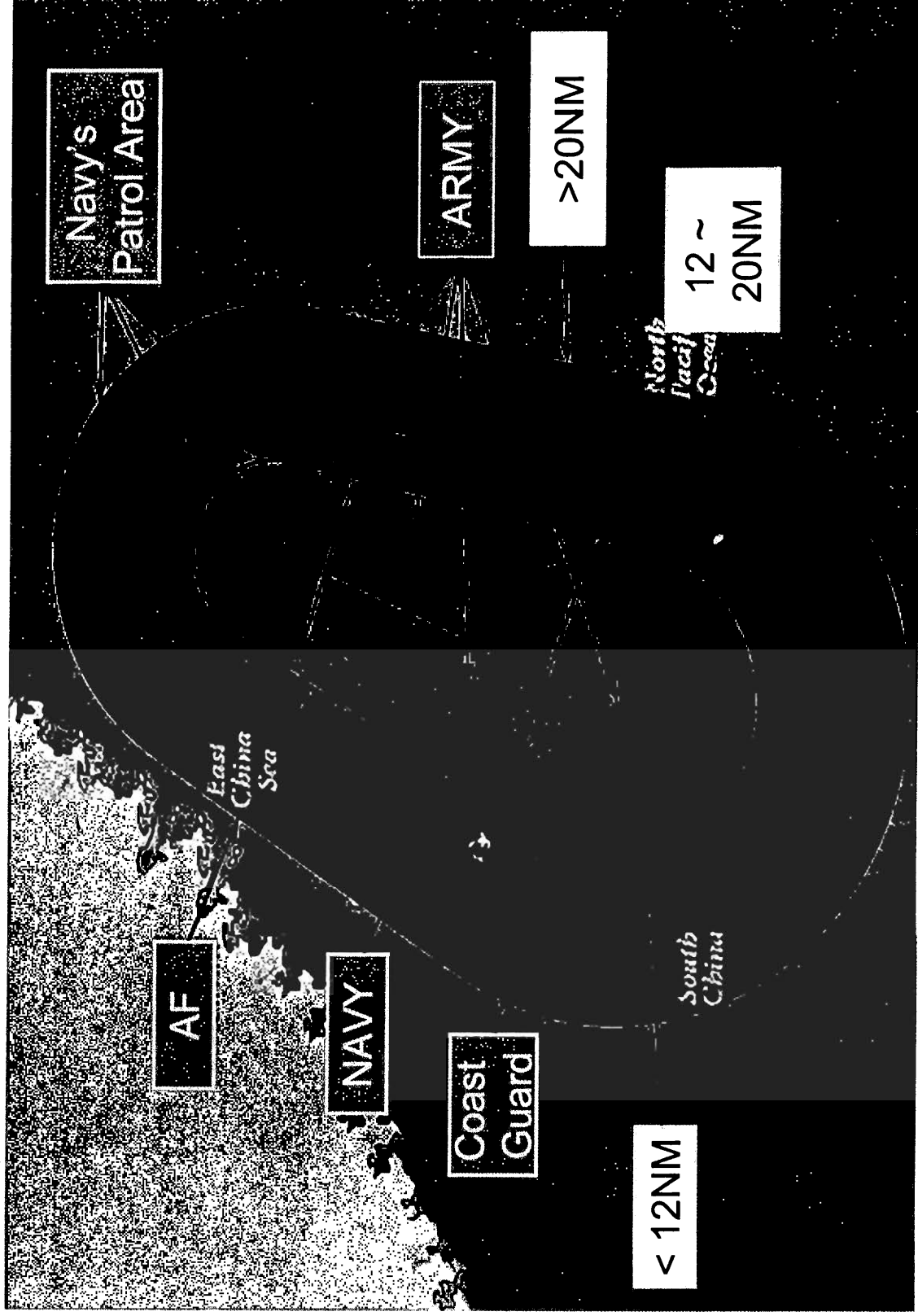


# Taiwan's C4ISR Capability



- RF Links between Army, Navy, and Air Force weapon platforms
- Multiple communication paths: TATDLS, UHF, VHF, and HF
- Aircraft displays SA and Target information

# Patrol Area of Armed Force, ROC



# Conclusion

- ◇ Dangers often come with happiness and business. The convenience and efficiency of information will never discriminate a friend or an enemy.
- ◇ In this advanced country where all kinds of IT has been developed at their best, once there is tremendous threat or sever attacks, the impact will be beyond our imagination.
- ◇ We hope that this attempt will help arouse the public attention toward cyber threats and participation to resolve these threats.



# **Proliferation Security Initiative: The Legal Dimensions**

Professor Paik Jin-Hyun  
(Seoul National University, Korea)

## **1. Freedom of Navigation v. Global Security**

One of the most important values of the sea is as means of transportation. As all states benefit to a greater or lesser extent from the free flow of world trade, global prosperity and security remains absolutely dependent on maritime transportation, through which over 99% of all goods are traded. Moreover, sea-borne trade is likely to expand considerably over the next several decades. Thus maintaining a stable navigation regime, the essence of which is freedom of navigation, is essential to global commerce and prosperity.

Sea-borne trade faces many risks and threats, which consequently endanger the prosperity and security of many states. The threats ships face come from diverse sources such as instability and conflicts in coastal areas, piracy or terrorist attacks against ships, or cyber attacks on the electronic communication systems on which the shipping system is based. Another challenge comes from the growing tendency to impose restrictions for environmental, jurisdictional or security reasons on rights of passage through territorial or international waters. Such tendency, if unchecked, would seriously undermine the fundamental principle of the law of the sea, that is freedom of navigation.

On the other hand, what ships carry may itself pose a threat to national, regional and global security in a various ways. For example, the passage of illegal drugs have long been considered to be a threat to local safety as the spread of such drugs damages social prosperity and stability at every level. Likewise, ships carrying illegal immigrants can be considered in a similar vein. More recently, especially since the events of 9/11, ships carrying weapons of mass destruction or related materials are drawing acute attention from many states, as the proliferation of such weapons constitutes one of the most serious threats to global security.

The freedom of navigation is essential not only to global commerce, but also to the

maintenance of a stable global ocean regime. On the other hand, the proliferation of weapons of mass destruction unquestionably pose a major threat to global security, and a more effective ways and means to stop the proliferation should be found. Then a real question is how to overcome the potential tensions between the fundamental principle of law of the sea, on the one hand, and the requirement of security, on the other; and strengthen both international security and international law. The challenges facing the recent initiative to stop and impede WMD trafficking should be understood and approached in this context.

## **2. PSI and Its Interdiction Principles**

The Proliferation Security Initiative, announced by President Bush on May 31, 2003 in Krakow, Poland, is an effort among eleven states<sup>1</sup> to respond to the challenge posed by the proliferation of weapons of mass destruction (WMD), their delivery system, and related materials worldwide. While the initiative has several facets such as intelligence sharing, its essence is an interdiction program. It aims to impede and stop trafficking of WMD, their delivery systems and related materials by any state or non-state actor engaged in or supporting WMD proliferation programs at any time and in any place. According to the statement of interdiction principles<sup>2</sup>, released in Paris September 4, 2003, eleven participating states are committed, among others, to undertake effective measures for interdicting the transfer of WMD-related materials to and from states or non-state actors of proliferation concern; adopt streamlined procedure for rapid exchange of relevant information concerning suspected proliferation activity; work to strengthen relevant national legal authorities as well as international law and frameworks to support these commitments; and take specific action in support of interdiction efforts, to the extent their national legal authorities permit and consistent with their obligations under international law.

The specific action states are expected to take include: (a) not to transport or assist in the transport of WMD-related materials to or from states or non-state actors of proliferation concern; (b) to take action to board and search any vessel flying their flag in their internal or territorial waters, or high seas, that is reasonably suspected of transporting WMD-related materials to or from states or non-state actors of proliferation

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<sup>1</sup> Australia, France, Germany, Italy, Japan, the Netherlands, Poland, Portugal, Spain, the United Kingdom and the United States

<sup>2</sup> The White House, Office of the Press Secretary, Proliferation Security Initiative: Statement of Interdiction Principles, September 4, 2003

concern, and to seize such cargoes; (c) to seriously consider providing consent to the boarding and searching of its own flag vessel by other states and to the seizure of WMD-related cargoes in such vessel; (d) to take appropriate action to stop or search in their internal waters, territorial seas, or contiguous zones vessels that are reasonably suspected of carrying such cargoes and to seize such cargoes that are identified; and to enforce conditions on such vessels entering or leaving their ports, internal waters or territorial seas, such as requiring that such vessels be subject to boarding, search, seizure of such cargoes prior to entry; (e) if their ports or other facilities are used as transshipment points for shipment of such cargoes to or from states or non-state actors of proliferation concern, to inspect vessels or other modes of transport reasonably suspected of carrying such cargoes, and to seize such cargoes that are identified.

The PSI is one of the various counter-proliferation strategies which have recently given prominence over more traditional non-proliferation efforts. However, it does not purport to replace the existing non-proliferation and export control regimes but rather supplement and strengthen them. According to its proponent<sup>3</sup>, PSI is not an organization but an activity. As such, the initiative is open to other states beyond its original eleven participants, and needs to be operated flexibly. In fact, the PSI participants claim, successful interdiction of trafficking in WMD-related materials requires the widest possible cooperation between various states.<sup>4</sup> However, participation would vary with the activity taking place, and the contribution participants could provide. Some states had particular experience, assets or expertise relevant to their particular capabilities; others could be expected to contribute to their particular capabilities. It is also a global initiative, not targeted at a specific state. However, it is widely known that the participating states focus mainly on the so-called rogue states, such as North Korea and Iran, and terrorist groups that threaten their neighbors with the use of WMD.

Still in its formative stage<sup>5</sup>, the PSI has already been subjected to controversies, which

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<sup>3</sup> See The New Proliferation Security Initiative : An Interview with John Bolton, Arms Control Today, <http://www.armscontrol.org>

<sup>4</sup> Chairman's Conclusions, Proliferation Security Initiative London Meeting, 9-10 October. Since the publication of the Statement of Interdiction Principles, the PSI participating states has made efforts to seek the support of other countries for the Statement. According to the Chairman's Conclusions, over fifty states have expressed support for the statement.

<sup>5</sup> Thus far, there have been four plenary meetings (in Madrid, Brisbane, Paris and London) and one experts meeting (in Washington DC in December, 2003). In addition, there have been five multilateral training exercises.

derive from two sources; one, its effectiveness as interdiction strategy, and the other, its legality. Some see it as a leaky sieve, unlikely to trap any sensitive items; others fear that it will be a pervasive dragnet, tantamount to a naval blockade that in the case of North Korea risks inciting war.<sup>6</sup> Likewise, the proponents of PSI argue that the initiative is legitimate and extremely efficient in its efforts against WMD, while others are concerned with PSI interceptions risking violations of international law. It remains to be seen whether PSI would prove to be an effective tool in addressing the global concern of proliferation of WMD, or create more problems or instability at sea rather than it resolves.

### **3. Legal Issues related to PSI**

Although the PSI did not intend to be a strict legal arrangement and there are still uncertainties concerning its operational modalities, its envisaged activities raise serious legal questions. Probably the most difficult elements of the PSI would be finding a legal authority to interdict WMD materials in territorial seas or on the high seas. Some of the legal issues that need to be discussed are as follows. The basic reference point for legal issues is the United Nations Convention on the Law of the Sea (UNCLOS), most provisions of which now are established as customary international law.

The first issue is related to innocent passage in the territorial sea, as the interdiction under the PSI would likely affect the passage right of foreign vessel. It is beyond dispute that a foreign vessel enjoys the right of innocent passage through the territorial waters of a coast state.<sup>7</sup> Moreover, UNCLOS clearly provides that ships carrying nuclear or other inherently dangerous or noxious substances also enjoy such rights.<sup>8</sup> In fact, what makes passage innocent or non-innocent is not the type of cargoes a ship carries but that of activities it engages in. Thus the PSI which calls for states to stop and search in their territorial sea vessels that are reasonably suspected of carrying WMDs or related materials and even to seize such cargoes appears to be in conflict with the right of innocent passage in foreign territorial waters.<sup>9</sup>

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<sup>6</sup> North Korea have said that "interdiction could result in war". Nicholas Kralev, "US Seeks Asian Aid for Ship Searches", The Washington Times, June 17, 2003.

<sup>7</sup> Article 19 of UNCLOS

<sup>8</sup> Article 23 of UNCLOS provides that "foreign nuclear-powered ships and ships carrying nuclear or other inherently dangerous or noxious substances shall, when exercising the right of innocent passage through the territorial sea, carry documents and observe special precautionary measures established for such ships by international agreements."

<sup>9</sup> PSI: Statement of Interdiction Principles, para. 4, d, (1).

The other issue is related to interdiction on the high seas. Although the Statement of Interdiction Principles are not very clear on the high sea interdiction, it could be interpreted to allow states to interdict on the high seas vessels that are reasonably suspected of carrying WMD goods.<sup>10</sup> However, such interdiction may be hard to justify under the current international law. Ships on the high seas are subject to the exclusive jurisdiction of their flag states. Only flag states may visit and enforce their laws against their own vessels on the high seas.<sup>11</sup> The limitations to the flag state jurisdiction on the high seas are piracy, slave trading, unauthorized broadcasting, and drug trafficking. In addition, ships without nationality are also subject to visit and boarding by other states.<sup>12</sup> Given these, any attempt to interdict foreign vessels on the high on the basis that vessels are suspected to carry WMD-related cargoes, in the absence of consent from flag states appear to be problematic.

Third legal issue is related to the concept of “states or non-state actors of proliferation concern”. The interdiction under the PSI is essentially aimed at the transport of WMD-related cargoes “to or from states or non-state actors of proliferation concern”, which the PSI defines as those countries or entities that are engaged in proliferation through: (a) efforts to develop or acquire chemical, biological, or nuclear weapons and associated delivery system; or (b) transfers of WMD, their delivery system, or related materials. According to the PSI, however, whether a particular state or non-state actor is a state or non-state actor of proliferation concern or not would be ultimately determined by the PSI participants involved. In other words, while shipments of WMD-related goods to or from some countries are subject to the interdiction, shipments of the same goods to or from others may not.<sup>13</sup> In practice, it is no secret that the interdiction focuses on the so-called rogue states. However, it seems questionable that such selective application of interdiction can be legally justified.

#### **4. Conclusion**

There appears to be some gap between the necessities of international security and the

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<sup>10</sup> See Statement of Interdiction Principles, para. 4, d, (2)

<sup>11</sup> Article 92 of UNCLOS

<sup>12</sup> Article 110 of UNCLOS

<sup>13</sup> For example, it is not difficult to envisage that shipments of WMD-related materials to or from Israel, India and Pakistan would be treated differently from the shipments to or from North Korea or Iran.

current state of international law.<sup>14</sup> While the interdiction of weapons shipments could lessen dangers posed by both rogue states and terrorists, it would undermine the legal regime of ocean, which is essential to enhancing maritime security, if it is executed without due regard to existing legal constraints. It would be ironic that the initiative designed to strengthen global security in one aspect may result in the erosion of global security in the other aspect. Therefore, it is urgent for the PSI participants and international community to be aware of potential tensions between two important interests and try to find a proper way to accommodate those conflicting interests. In fact, it appears that the PSI participating states understand that there are circumstances where authority under current national and international law do not exist or are questionable at best. It also appears that they are discussing the prospect for seeking additional authority, either to clarify an existing ambiguity or fill a gap where no authority exists.<sup>15</sup> There can be various ways to fill a gap, such as obtaining the United Nations Security Council resolution or amending the Convention on the Suppression of Unlawful Acts against the Safety of Maritime Navigation to allow interdiction. The PSI must not result in subverting freedom of the seas, which is a fundamental constituting principle of ocean. The real challenge facing the PSI is thus to find a way to strengthen both global security and international law.

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<sup>14</sup> Benjamin Friedman, The Proliferation Security Initiative: The Legal Challenge, Bipartisan Policy Group Policy Brief, September 2003.

<sup>15</sup> See The New Proliferation Security Initiative: An Interview with John Bolton, Arms Control Today, <http://www.armscontrol.org>

## **Maritime Security in East Asia in 2025: Critical Uncertainties**

By: S. Enders Wimbush

In almost any scenario describing Asia 20-30 years from now, it is easy to envisage a maritime security environment that is more complex, more fluid, and significantly more dangerous. The number of forces affecting maritime security will be greater, and will converge, intersect and collide in new ways. I have spent the last two years traveling throughout Asia listening to strategists and security planners describe the security scenarios they see unfolding in Asia in the next two decades, especially maritime security scenarios, and the list is not pretty. The protection of Sea Lines of Communication (SLOC) will be part of this new landscape of challenges, but so will be piracy, international terrorism, the proliferation of weapons of mass destruction through maritime channels, energy competition, humanitarian disasters, environmental catastrophes, refugee flows, public health breakdowns, non-combatant protection and removal, and more.

Although several other regional navies, particularly the Japanese Navy in Northeast Asia and the Indian Navy in South Asia, will certainly have to assume pivotal roles, I assume that U.S. naval presence will be essential for maintaining maritime security in this region because only the U.S. Navy currently has the capacity to deal with the growing number of interactive maritime security challenges across so wide an expanse of the Asian maritime world. Maritime Asia without the U.S. Navy is a world of profound uncertainty and almost certain conflict. Yet the world 20 years from now could well be characterized by military contingencies that will stretch the U.S. Navy to its limits. Linking its capabilities to regional partners will be essential.

How will we deal with this new world of maritime challenges? My intention today is to raise a number of questions without attempting to answer them. I do not wish to be understood to be predicting the future. We need to be cautious not to assign a linear quality to discussions about today's maritime security issues – that is to assume that the future can be known by looking at today's trends and tendencies and projecting them forward, perhaps adding a bit of ambiguity on the margins. I doubt that tomorrow's maritime world will look much like today's. To the contrary, the future maritime security landscape in East Asia will be dominated by critical uncertainties that, if played out one way or another, could have profound and very different effects on the maritime security environment and how we think about it.

What are these critical uncertainties? I see five that are of particular concern. The first critical uncertainty on the emerging maritime security landscape is the future of the U.S. – Japan relationship and, consequently, the viability of the U.S. military presence in Northeast Asia. How will the United States be able to deal with the tyrannies of time and distance if the U.S. presence in Japan and, to a lesser extent, Korea is constrained or eliminated? Since the end of WWII and the Korean War, America's Asia strategy has relied heavily on our physical presence there. Our military bases in these two countries today represent nearly the total U.S. forward presence in Asia. Historically these important allies have supported American interests and

American presence in their countries because they understood that their fundamental security interests aligned with ours. This may be changing. South Korea's fear of the United States becoming an unwelcome trigger for conflict with North Korea, punctuated in the last 18 months by demonstrations and an unprecedented level of anti-Americanism, is one of many recent examples of Northeast Asia's shifting strategic visions. Another is unsettled Japanese opinion about what kind of security it requires and its diminishing warmth toward the notion that the United States should continue to play the leading role in providing it.

Japan, in particular, has a number of plausible security options that span a wide spectrum of responses--from going it alone, to acting in cooperation with the United States, to not acting at all. One option, to sign up to a full risk and burden-sharing alliance with the United States, may no longer be its preferred one, yet American planners, perhaps mistakenly, tend to see this as Japan's default position. Japan's recent out-of-region involvements in East Timor and today in Iraq, suggest that Japan now seeks to play a much larger regional role, which would be a healthy development. In many of my discussions with strategists and policy makers throughout the region, I find that most welcome a more active and visible Japan. But I would argue that the jury is still out: strategically, Japan has yet to decide what its role should be, what it wants to become, and how much it is prepared to invest and sacrifice to get there. How this plays out will have a profound impact on the way all of us think about maritime security in East Asia.

Without a strong naval presence in Japan, the United States will be forced to project power from Guam or Diego Garcia, from the continental United States, or from some other distant location. Even if the United States were to maintain its military presence in Japan, these forces would still be at a strategic distance from South and Southeast Asia and the vital sea-lanes that run through Indonesia, where many strategists believe the most challenging maritime security situations and probable military contingencies will occur. Increasingly, the U.S. Navy will need new basing, logistics, and intelligence nodes from South Asia to the South China Sea if it is to be a sustained and visible presence, and be able to respond quickly to contingencies in the region. Yet today, no such infrastructure is in place. The arch stretching from Japan to the Persian Gulf is notable for the almost total absence of U.S. forward presence.

The second critical uncertainty, therefore, is this: Which U.S. allies and friends will step up to provide the kind of access that will be necessary for allowing the U.S. Navy to sustain operations over these long distances, and what will the character of these new relationships be?

U.S. operations in Asia will require intelligence, surveillance and reconnaissance over exceptionally long distances and across multiple theaters. Current U.S. assets would be insufficient both quantitatively and in capability to provide the expected level of visibility into the range of threats and contingencies discussed throughout this conference. Strong alliances, therefore, would be able to fill in the United States' resource gap, providing relevant cultural and human intelligence, and generally augmenting the Navy's ability to operate in unfamiliar regions (e.g., South Asia, the region of fewest U.S. port calls). In the search for new partners, the United States will almost certainly discover that it must engage with a range of new players. The burgeoning U.S.-India relationship is particularly important in this regard. Can we also expect a vibrant U.S.-Vietnam relationship in the future, or perhaps a revived U.S.-Philippines connection that centers on maritime security issues?

A third and related critical uncertainty is how Asians themselves organize to deal with maritime security issues. Regional forums like ASEAN, APEC, and SAARC are good talking shops, but they are notably lacking in military means and a willingness to take on tough security challenges within their region. Can we envision these organizations evolving in the direction of more assertive engagement in maritime security problems, including developing a credible military component? Can we imagine the creation of a new security architecture for Asians to address these issues, perhaps in concert with the United States? I recently attended a conference where Japanese participants argued that any new security architecture for maritime Asia had to be centered on the U.S.-Japan alliance, while others from the region argued that China will view any new security architecture for Asia that includes the United States to be primarily directed against China. If we are to think about giving new teeth to existing security organizations, or about creating a new security architecture to compensate for the inability of existing regional organizations to come to grips with increasingly serious maritime security issues, how do we reconcile these conflicting views of what is required?

The fourth critical uncertainty centers on Asia's rise as the world's primary energy (oil, gas, and coal) consuming region. In fact, the U.S. Energy Information Agency (EIA) estimates that over half of the world's projected incremental demand over the next two decades will occur in developing Asia. The 1997 economic crisis in Asia slowed this trend, but did not reverse it. The Middle East's strategic importance will grow for most Asian actors. Asian dependence on oil imports is expected to rise to approximately 77 percent by 2010, of which 93 percent is predicted to come from the Middle East.

Almost all Asian countries will be faced with multiple energy fronts, as opposed to one or two. For example, in a decade, India's gas will come from three or four directions – from the Middle East, Central Asia, Bangladesh and Southeast Asia. In the case of Japan and China, its energy will be coming from all directions – the Middle East, Central Asia, the Russian Far East, Southeast Asia, Africa, and possibly Western China. The shift to natural gas, which is the preferred fuel among Asian states, changes the strategic geography in Asia by giving energy consumers new choices. However, this shift also reinforces the importance of traditional and potential oil suppliers – the Middle East, Indonesia, and the Caspian Sea--since gas tends to co-locate with oil.

We are keenly aware of the challenges that increased energy transport portends for the SLOCs, with threats of piracy and environmental disaster looming. Of equal concern, in my view, is how Asian states' energy strategies come to be articulated in their national security and military strategies. What kinds of military strategies will states develop to ensure an uninterrupted supply of energy to themselves and, perhaps, to deny an uninterrupted supply to their adversaries? What kinds of hedging strategies can we imagine, and what are their maritime components? In Asia, the links between maritime security strategies and energy security strategies will become increasingly interlinked.

A final critical uncertainty is particularly sobering. When I try to imagine the future maritime security landscape in East Asia, I am struck by the number of potential contingencies that might not be deterred by conventional measures of state power, at least by today's standards.

A recent article in *The Atlantic Monthly* (September 2003) by William Langewiesche entitled “Anarchy at Sea” brought this point home vividly. Within several decades, there may be more than 65,000 large merchant ships sailing the oceans in addition to tens of thousands of smaller coastal vessels. Many of these vessels, perhaps the majority, sail under “flags of convenience,” often from places like Liberia, Panama, Cambodia, and even countries that are nowhere near the sea, such as Mongolia or Bolivia. Thousands of these ships are from one-ship companies whose origins are intentionally blurred to prevent close scrutiny of their cargoes and to obscure who actually owns them. Ships’ identities are changed often when crews simply paint over the vessel’s name with something new and otherwise obliterate distinctive markings. Who owns a ship, who operates it, what it looks like physically, and what it carries are often unknown or obscured. It is not unusual to find ships renamed several times per year, flagged in one country, and operated by nationals from another for the benefit of shadowy shipping companies located in yet another state. International organizations have proved incapable and inept at dealing with these problems.

It is difficult to envision an improvement in this situation for the next 20 years or so, short of massive international cooperation, the introduction of tracking and scanning technologies, and aggressive intelligence collection and sharing that can tell us who is going where and with what: a difficult if not unlikely scenario. We are likely to be faced with maritime security scenarios that simply cannot be deterred. How do we organize to deter where we can, but more importantly to respond when deterrence fails?

# **The Shifting of Maritime Power and the Implications for Maritime Security in East Asia**

By: Joseph Ho

## **Introduction – The Nexus Between Maritime Power and Economic Power**

For a long time the link between economic power and maritime power has been obvious and intuitive. The possession of maritime power facilitates the attainment of economic power and the quest for economic power is a motivation for the development of maritime power. A prime example of this link between maritime power and economic power can be found in the mercantilist era of Pre-World War I colonialism, where goods sought new markets in the areas that were colonised. In fact, from a very early stage, prominent personalities like Sir Walter Raleigh had also recognised the nexus between sea power and economic power.

*Whosoever commands the sea commands the trade; whoever commands the trade  
of the world commands the riches of the world, and consequently the world itself.*

*Sir Walter Raleigh*

The mercantilist period can be said to be the precursor of modern globalization, and can best be described as globalization by force as the people in the new markets did not have much choice but to accept the goods introduced by their colonial masters, mainly due to a lack of alternative action. Of course, these goods still expanded the available choice and enhanced the quality of life of the colonized peoples. However, in this new age of globalization, where information is ubiquitous and rapidly becoming commoditized, Sir Walter Raleigh's dictum still remains true because of a few factors: first, over 70 percent of the world's surface is covered by ocean; second, over 90 percent of international trade when measured in weight and volume travels by water, which includes most of the world's raw materials; third, the majority of the world's major cities and urban populations lie within 200 kilometres of a coastline; and fourth, international law provides for freedom of the seas in which any nation can use the open ocean for purposes of trade or defence without infringement on another's sovereignty, subject to international agreements on pollution and exploitation of resources.<sup>1</sup>

However, maritime power is not just about naval warfare or possession of a large and powerful navy. The term is more encompassing and has a much broader concept. A country that is said to be a sea or maritime power should have at least the following five components:<sup>2</sup>

- Access to international trade and commerce through the sea,
- Access to raw material and natural resources through the sea,

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<sup>1</sup> Sam J. Tangredi, "Globalization and Sea Power: Overview and Context" in Sam J. Tangredi (ed), *Globalization and Maritime Power* (Washington, D.C.: National Defense University Press, December 2002), p. 4.

<sup>2</sup> Expanded from the original list of four elements espoused by Tangredi. Ibid, p. 3.

- Access to and ability to exploit ocean resources,
- The ability to use naval and maritime economic power as instruments of diplomacy and deterrence in time of peace, and
- The ability to operate navies in war.

## **The Asia-Pacific Century**

Much has been written and said about the 21<sup>st</sup> century being the Asia-Pacific century as the region is expected to experience phenomenal growth rates unprecedented in the history of world development. Although it is easy to dismiss these claims as pure hyperbole given the series of economic crises that have dogged the region since 1997, projections done by both U.S. intelligence agencies and wealth management institutions seem to point to an inescapable conclusion: that we are already witnessing the beginnings of an Asia-Pacific century.

Currently, the combined 2002 GDPs of China, India and Japan are already half that of the United States in nominal terms.<sup>3</sup> By 2015, the CIA's long term growth model has forecasted that the combined GDPs of China, India and Japan would surpass that of the United States and the European Union at US\$19.8 trillion, US\$14 trillion and US\$11.6 trillion respectively in 1998 dollars (See Figure 1).<sup>4</sup> By 2050, Goldman Sachs has projected that the situation will become even more astounding with the combined GDPs of China, India and Japan slightly more than twice that of the United States and about four times that of Russia, United Kingdom, Germany, France and Italy combined in 2003 dollars (See Figure 2).<sup>5</sup> In 2050, the largest economies in the world will be China, United States and India respectively, with Japan a distant fourth. In the short span of a single generation, the economic center of gravity will have shifted to Asia.

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<sup>3</sup> The 2002 GDPs of the United States, China, Japan, and India are US\$11,145bn, US\$1,299bn, US\$3,986bn and US\$501.2bn respectively in nominal terms. See Economic Intelligence Unit, *Country Report: United States of America* (London: November 2003), p. 5; "Country Forecast: China," *Economic Intelligence Unit*, November 2003, p.11; "Country Forecast: Japan," *Economic Intelligence Unit*, November 2003, p. 12; and "Country Forecast: India," *Economic Intelligence Unit*, November 2003, p.12.

<sup>4</sup> National Intelligence Council, *Global Trends 2015: A Dialogue About the Future with Nongovernment Experts* (Washington D.C.: National Intelligence Council Publication, December 2000), pp. 34-38.

<sup>5</sup> The forecasted 2050 GDPs of China, United States, India, and Japan, are US\$45 bn, US\$35 bn, US\$27 bn and US\$7 bn respectively in 2003 dollars. See Dominic Wilson and Roopa Purushothaman, "Dreaming with BRICs: The Path to 2050," *Goldman Sachs Global Economics Paper No. 99*, 1 October 2003, p.4.

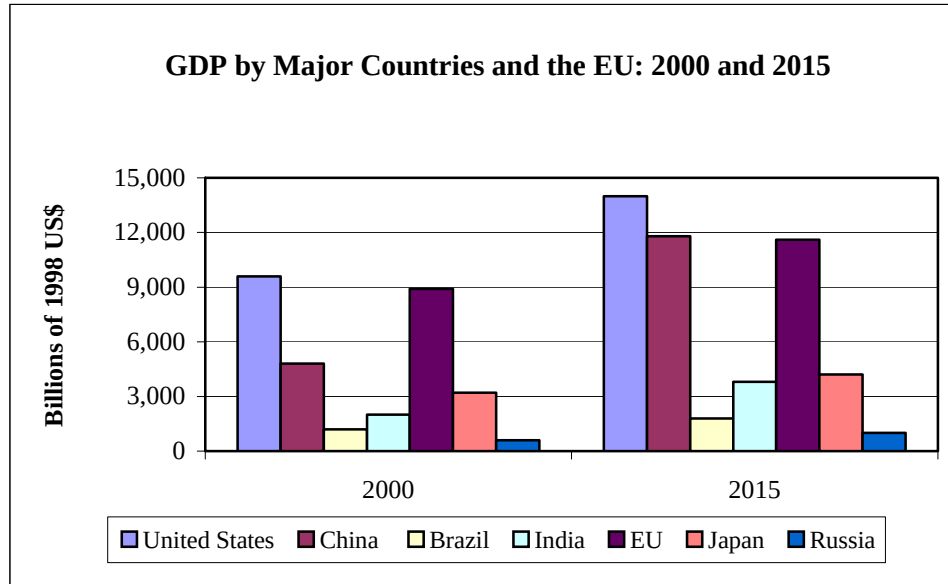


Figure 1: GDP by Major Countries and the EU: 2000 and 2015 (Source: CIA's Long Term Growth Model)

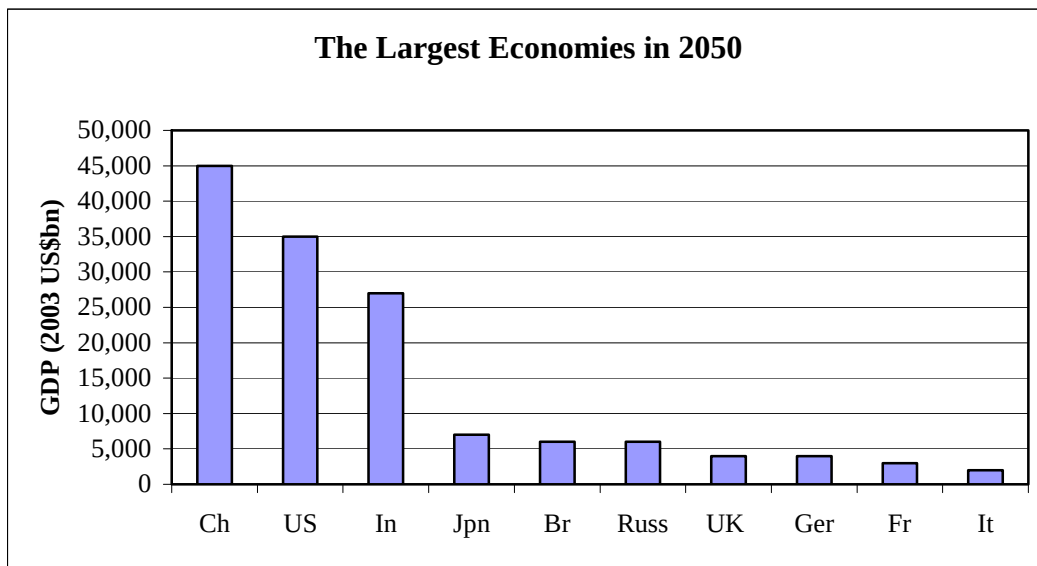


Figure 2: The Largest Economies in 2050 (Source: Goldman Sachs BRICs Model Projections)

As the economic center of gravity shifts to the Asia-Pacific region, it is natural and inevitable that maritime power also shifts to the area given the nexus between maritime power and economic power. Again, the shift in maritime power may have already started if one observes current trends in four areas: (1) trade flows into and within Asia, (2) increasing energy demand in Asia, (3) strength of regional merchant fleets, and (4) spending on regional navies. Let us look at each trend in turn.

## **Trends Indicating a Shift in Maritime Power**

### **1. Increasing Trade Flows into and within Asia**

Intra-Asian trade flows have increased steadily in recent years (See Figure 3), while Asian trade with the United States and Europe is also increasing. China's trade expansion in particular has remained prodigious, as its exports and imports have risen by 30 percent between 2000 and 2002 even as world trade stagnated.<sup>6</sup> China has become the fourth largest merchandise trader in 2002, and across the globe, China has become a major supplier and a major export destination for many countries. For example:

- Trade between ASEAN and China has increased. China has become Singapore's top export destination for the first nine months of 2003, eclipsing Malaysia and the United States for the first time. For Malaysia and the Philippines, China is climbing the export destination rankings.<sup>7</sup> In Indonesia, China's share of foreign direct investment approvals has risen dramatically to 67 percent in 2001, from a previous average figure of less than 1 percent.<sup>8</sup> In Thailand, following the signing of a free trade agreement in 2002, bilateral trade has increased and exports to China have grown 62 percent to US\$4.5 billion in the first ten months of 2003. It would probably be only a matter of time before the same scenario will emerge for the other ASEAN countries as China's current trade deficit with ASEAN countries stands at US\$7.6 billion.
- China has become Korea's top export partner. From January to September 2003, South Korea exported goods totalling US\$23.1 billion to China, overtaking its exports to the United States (US\$22.8 billion), and it is expected that China will become South Korea's chief trade partner by 2005. In fact China's current trade deficit with South Korea stands at US\$13.1 billion.<sup>9</sup>
- Trade between Japan and China rose 28 percent to a record US\$5.7 billion in October 2003, and its total sales to China and Hong Kong that month accounted for 63 percent of its export growth. Japan's two-way trade with China in the first half of 2003 totalled US\$60.4 billion, a 34 percent increase, the fourth consecutive year that Japanese exports to China have posted record growth. For the first time, Japan's exports to China, Hong Kong and Taiwan have exceeded its exports to the United States. China's trade deficit with Japan stands at US\$5 billion.<sup>10</sup>

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<sup>6</sup> World Trade Organisation, *International Trade Statistics 2003* (Switzerland: World Trade Organisation, 2003), p.2. Available at [http://www.wto.org/english/res\\_e/statistics\\_e/its2003\\_e/its03\\_toc-e.htm](http://www.wto.org/english/res_e/statistics_e/its2003_e/its03_toc-e.htm)

<sup>7</sup> Bryan Lee, "China Now S'pore's Top Export Market," *The Straits Times Interactive*, 18 November 2003. Available at <http://straitstimes.asia1.com.sg/>

<sup>8</sup> Devi Asmarani, "Chance to Reduce Reliance on West," *The Straits Times Interactive*, 17 November 2003. Available at <http://straitstimes.asia1.com.sg/>

<sup>9</sup> Lee Kim Chiew, "Asian Exporters Ride China Wave," *The Straits Times Interactive*, 1 December 2003. Available at <http://straitstimes.asia1.com.sg/>

<sup>10</sup> Ibid.



Figure 3: Share of China in Exports of Main Asian Traders (First 8 Months of 2003)  
(Source: Morgan Stanley in *The Straits Times* (Singapore), 1 December 2003)

- China also overtook the United States to become Taiwan's largest export market in 2001. In 2002, Taiwanese goods worth US\$29.4 billion, a quarter of its total exports, went to the Chinese mainland, up 37.4 percent from 2001. In fact, China's trade deficit with Taiwan stood at US\$31.5 billion in 2003.<sup>11</sup>
- Trade between China and India has also grown ten-fold in the past decade.<sup>12</sup> From US\$2 billion in 2000, India is projecting its bilateral trade with China to grow to US\$7 billion in 2003 and US\$10 billion in 2004.<sup>13</sup>
- The European Union's imports from China as a percentage of its total imports increased by 1.5 percent to 8.3 percent while its exports to China as a total percentage share of its exports increased by 0.7 percent to 3.4 percent (See Figure 4).<sup>14</sup>

<sup>11</sup> Ibid.

<sup>12</sup> V.K. Raghunathan, "Friendly Giants," *The Straits Times Interactive*, 17 November 2003. Available at <http://straitstimes.asia1.com.sg/>

<sup>13</sup> Lee Kim Chiew.

<sup>14</sup> World Trade Organisation, p.2.

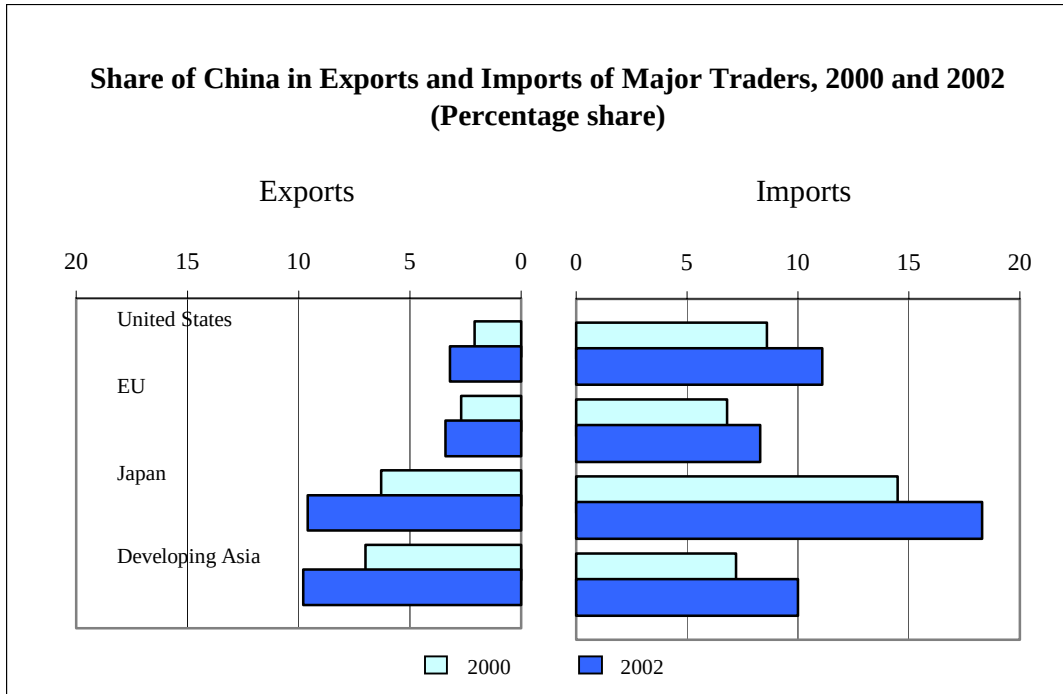


Figure 4: Share of China in Exports and Imports of Major Traders, 2000 and 2002  
(Source: World Trade Organisation, International Trade Statistics 2003)

- Between 2000 and 2002, US imports from China as a percentage share of its total imports increased by 2.5 percent to 11.1 percent, while its exports to China as a percentage share of its total exports increased by 1.1 percent to 3.2 percent (See Figure 4).<sup>15</sup> The imbalance in export and import growth by the United States explains its US\$120 billion trade deficit with China.<sup>16</sup>

## 2. Rising Energy Demand in Asia

The second trend is that resource demand, particularly energy demand, in Asia is rising in tandem with its economic development. Asia as a whole currently uses about as much energy as the United States. By 2020, Asia's energy consumption will roughly double while U.S. consumption will rise by just slightly more than 25 percent. Specifically, Asia is predicted to increase its natural gas consumption by 191 percent, oil consumption by 88 percent, and coal consumption by 97 percent. (See Table 1).<sup>17</sup>

<sup>15</sup> Ibid.

<sup>16</sup> Lee Kim Chiew.

<sup>17</sup> See Thomas P.M. Barnett, "Asia's Energy Future: The Military-Market Link" in Sam J. Tangredi (ed), *Globalization and Maritime Power* (Washington D.C.: National Defense University Press, December 2002), pp. 190-191. For more recent data, see Energy Information Administration (EIA), *International Energy Outlook 2003* (Washington D.C., May 2003).

Table 1: World Energy Consumption by Region, 1990-2020 (Sources: 1990 and 2000: Energy Information Administration (EIA), *International Energy Annual 2001* (Washington D.C., February 2003); 2010 and 2020: EIA, System for the Analysis of Global Energy Markets (2003))

| Region / Country                            | Energy Consumption (Quadrillion BTU) |              |              |              |
|---------------------------------------------|--------------------------------------|--------------|--------------|--------------|
|                                             | 1990                                 | 2000         | 2010         | 2020         |
| <b>Industrialised Countries:</b>            |                                      |              |              |              |
| North America <sup>a</sup> .....            | 100.6                                | 118.7        | 137.2        | 159.4        |
| Western Europe <sup>b</sup> .....           | 59.9                                 | 66.8         | 72.1         | 77.3         |
| Industrialised Asia <sup>c</sup> .....      | 22.3                                 | 27.5         | 30.8         | 34.4         |
| <b>Eastern Europe / Former Soviet Union</b> | 76.3                                 | 52.2         | 65.9         | 76.7         |
| <b>Developing Countries:</b>                |                                      |              |              |              |
| Developing Asia <sup>d</sup> .....          | 52.5                                 | 80.5         | 110.1        | 151.9        |
| Middle East .....                           | 13.1                                 | 20.3         | 25.0         | 32.0         |
| Africa .....                                | 9.3                                  | 11.9         | 14.4         | 18.0         |
| Central and South America .....             | 14.4                                 | 21.0         | 25.2         | 23.4         |
| <b>Total .....</b>                          | <b>348.4</b>                         | <b>398.9</b> | <b>480.6</b> | <b>583.0</b> |

<sup>a</sup>United States and Canada. <sup>b</sup>Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom. <sup>c</sup>Japan, Australia and New Zealand. <sup>d</sup>Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, China, Fiji, French Polynesia, Guam, Hong Kong, India, Indonesia, Kiribati, Laos, Malaysia, Macau, Maldives, Mongolia, Myanmar (Burma), Nauru, Nepal, New Caledonia, Niue, North Korea, Pakistan, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, South Korea, Sri Lanka, Taiwan, Thailand, Tonga, Vanuatu, and Vietnam.

Today, North America is the biggest energy consumer in the world and accounts for just under a third of the world's energy consumption. Asia is second at 24 percent of the world's consumption. By 2020, Asia will have the same energy consumption as North America and Western Europe combined. Despite the increase in energy consumption, there is sufficient supply to go around as proven oil reserves have increased by almost two-thirds over the past 20 years and natural gas reserves have also doubled in the same time period. Coal supplies are also plentiful and enough to last for the next 200 years.

However, Asia is only close to self-sufficiency in coal. For natural gas, Japan, South Korea and Taiwan already consume most of the region's methane supply. To support the expected increase in consumption in natural gas, the region will have to turn to Russia as well as the Middle East. As the absolute demand for oil rises, Asia has also to import oil from outside the region, particularly from the Middle East.<sup>18</sup> This increased energy demand will mean an increasing reliance on the sea as most of the energy is transported by sea.

### 3. Strength of the Merchant Fleet

The third trend is that the strength of the merchant fleet in Asia has been increasing relative to the proportion of the world's fleets. By July 2003, Asia owned about 40 percent of the merchant fleets amongst the top 20 owners in the world, and 41 percent by tonnage. If we include the United States, then the Asia Pacific region owns about 46 percent of the merchant fleets and 48.1 percent by tonnage, and the figure looks set to increase in the future. Already construction of the world's largest shipyard with a frontage of 8km is underway in Shanghai,

<sup>18</sup> Ibid, p.192.

China.<sup>19</sup> The construction is expected to take up to 10 years and be completed by 2015. It will position China to become the world's largest shipbuilder. This development will further consolidate East Asia's position as home to the world's largest shipbuilders with Chinese, South Korean and Japanese shipbuilders already accounting for 12.8 percent, 36.2 percent and 28.8 percent, respectively, of the global order book in terms of tonnage.<sup>20</sup>

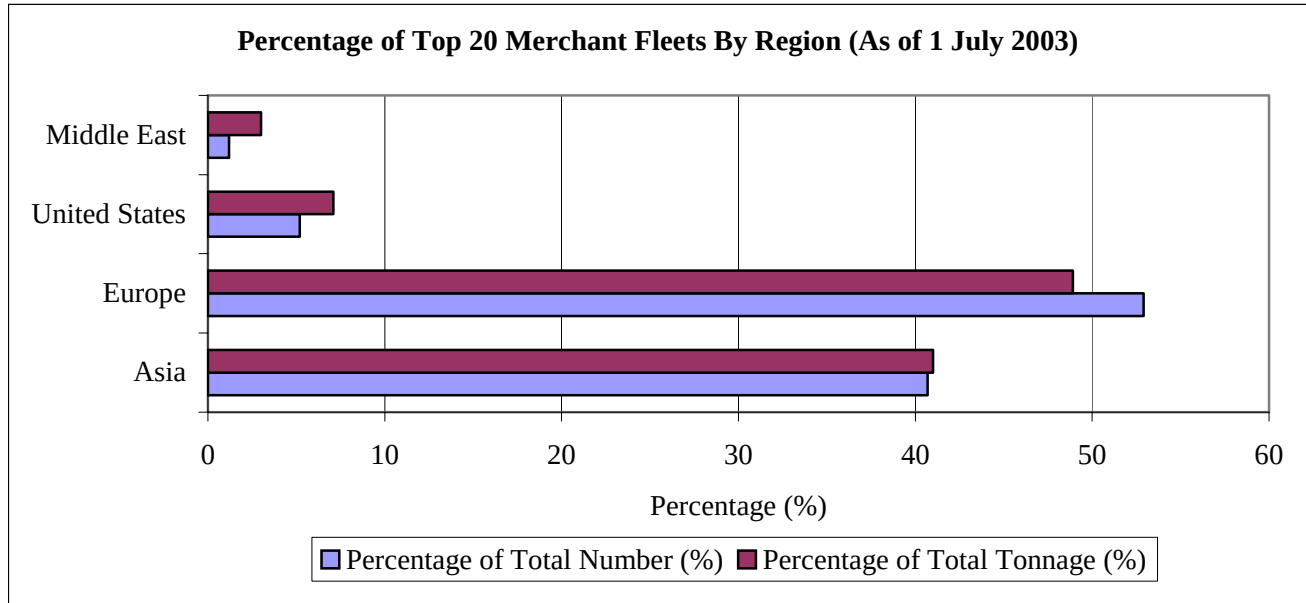


Figure 5: Percentage of Top 20 Merchant Fleets By Region (As of 1 July, 2003)  
(Source: Lloyd's Register Fairplay in U.S. Department of Transportation Maritime Administration website)

#### 4. Growth of Regional Navies

The fourth trend concerns the capabilities of East Asian navies, which are set to grow as regional countries continue to modernise their naval fleets. Asia-Pacific governments are expected to double their current expenditure on new naval ships by the end of this decade partly to protect their natural resources and partly to insure against regional conflict. Military reforms and modernisation programmes have been initiated in the region, with East Asia's Regional Defence Expenditure as a percentage of GDP rising to 2.08 percent in 2002 (See Figure 6).<sup>21</sup> The growth in emphasis on defence and in particular on naval capabilities is expected to continue into the future. AMI International's Robert Keil has projected that regional governments will spend a total of US\$14 billion annually by 2009 on their navies. The expected growth is in contrast to the European market, which will cut its \$13 billion annual bill by up to 25 percent within the same time frame.<sup>22</sup>

<sup>19</sup> "Shanghai to Build 'World's Biggest Shipyard'," *The Straits Times Interactive*, 30 December 2003. Available at <http://straitstimes.asia1.com.sg/>

<sup>20</sup> Sam Chambers, "Special Report – China: Nation's Shipbuilding Ambitions Laid Bare," *Lloyd's List International*, 27 November 2003, p 13.

<sup>21</sup> The International Institute for Strategic Studies, *The Military Balance 2003•2004* (London: Oxford University Press, 2003), pp 294-298.

<sup>22</sup> "Regional Naval Bills Expected to Double, Say Experts," *The Straits Times Interactive*, 11 November 2003. Available at <http://straitstimes.asia1.com.sg/>

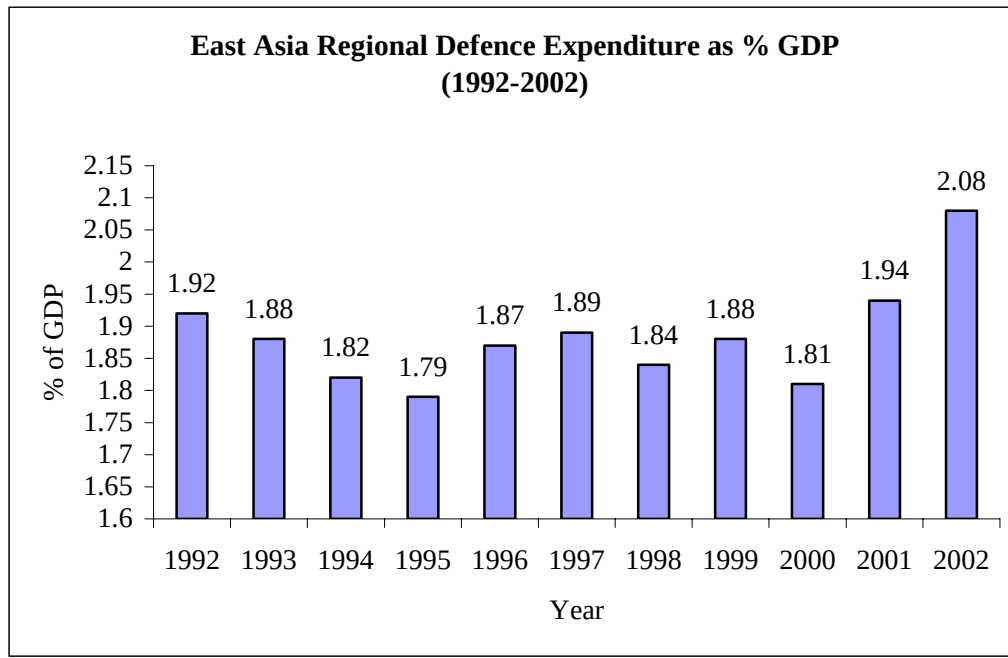


Figure 6: East Asia Regional Defence Expenditure as a Percentage of GDP  
(Source: The International Institute for Strategic Studies' The Military Balance: 2003•2004)

## Alternative Global Futures

The trends of increased trade flows, increased energy demands, increased strength of merchant fleets and increased spending on navies in the region all point to a shift of maritime power to Asia. As maritime power in the region increases, what kind of future scenarios might be in store? In the U.S. National Intelligence Council's study on global trends by 2015, four alternative future global scenarios – inclusive, pernicious, competitive, and “post-polar” -- were postulated based on outcomes of the globalization process.<sup>23</sup>

### (i) Inclusive Globalization

The inclusive globalization scenario depicts a positive outcome of globalization where a majority of peoples benefit from globalization as global cooperation increases. Incidents of conflict are small within and among states that benefit from the globalization process, and internal conflicts persist in and around the minority of states that are left behind in the process.

### (ii) Pernicious Globalization

The pernicious globalization scenario paints a negative outcome where elites thrive while the majority of populations fail to benefit from globalization. As a result, internal conflicts increase, which are fuelled by frustrated expectations, inequities and heightened communal tensions.

### (iii) Regional Competition

<sup>23</sup> National Intelligence Council, pp. 83-85.

The regional competition scenario postulates that regional identities will sharpen in Europe, Asia and the Americas. Each region then becomes preoccupied with its own economic and political priorities. Although, military conflict among and within the three major regions does not materialise, internal conflicts increase in and around the countries that are left behind, as in the inclusive globalization scenario.

**(iii) Post-Polar World**

The post-polar world scenario postulates waning US influence in world affairs due to domestic politics and a stagnating economy that forces it to withdraw and rationalise its military presence globally. Europe becomes inward, looking and Asia prospers in spite of the absence of the United States. As a result of the absence of the United States, longstanding national rivalries among the Asian powers are ignited, and conflict is postulated between traditional rivals China and Japan.

In three of the four scenarios, internal conflicts are postulated, with these conflicts spilling over to its neighbors, while one scenario suggests regional conflict. Hence, the ability to manage and resolve conflicts that arise will become a key determinant of regional stability if the wealth effects from regional economic progress are to spread and for the majority of people to benefit from globalization. In the maritime arena, the two main challenges are:

- To ensure the security of the sea lanes in order to ensure the continued unimpeded flow of resources and goods, and
- To prevent maritime conflicts between states due to resource and trade competition as the region and their navies grow.<sup>24</sup>

The main threat to resource and trade security will mainly arise from piracy and maritime terrorism in and around the vital sea lanes and choke points in East Asia, of which the Malacca Straits is the key thoroughfare for merchant shipping. Inter-state maritime conflict may also arise due to competition for resources, territorial boundary disputes and from traditional nationalistic rivalries.

## **Resource and Trade Security**

### **1. Piracy**

According to the International Chamber of Commerce's International Maritime Bureau, the number of piracy attacks on shipping throughout the world has reached a high of 445 in 2003. Since data was collected in 1992, this was the second highest figure collected, with 469 incidents occurring in 2000. Southeast Asia and the Far East accounted for 43 percent of the world's number of incidents, of which 16 percent occur within the Malacca and Singapore

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<sup>24</sup>. Nazli Choucri and Robert North, *Nations in Conflict: National Growth and International Violence* (San Francisco: Freeman, 1975), pp. 283-284.

Straits.<sup>25</sup> The lethality of the attacks has also increased, as the number of crew/passenger deaths and the number of crew missing as a result of pirate attacks have increased by almost three times worldwide in comparison to 2002.<sup>26</sup> The Malacca Straits and the Singapore Straits are the busiest straits in the world, with about 200 ships plying through daily. An increase in piracy rates and lethality can drive up shipping costs through higher insurance rates. Estimates of the cost of pirate attacks have totalled about US\$16 billion a year.<sup>27</sup> The emphasis on combating piracy is important, as it is possible that terrorists may conduct piracy as a means for raising revenues.<sup>28</sup>

Indonesia's Chief of Naval Staff, Admiral Bernard Kent Sondakh is responding to the increasing trend of piracy in Indonesia's waters by promoting a package of reforms and modernizing the Navy's workhorse platforms to push the Indonesian Navy toward an emphasis on coastal interdiction and increased patrols.<sup>29</sup> The government of Riau Province, which sits astride the Singapore Straits, and whose islands reach far into the South China Sea, has also agreed to purchase small, fast patrol boats built domestically by PT Pelindo in Tanjung Pinang.<sup>30</sup>

Malaysia and Singapore have also taken action to keep piracy rates low in the Malacca and Singapore Straits. Malaysia has built a string of radar tracking stations along the Straits of Malacca to monitor traffic, and has acquired new patrol boats.<sup>31</sup> Singapore has implemented measures to step up maritime security, including an integrated surveillance and information network for tracking and investigating suspicious movements; intensified navy and coast guard patrols; random escorts of high-value merchant vessels plying the Singapore Straits and adjacent waters; and the re-designation of shipping routes to minimise the convergence of small craft with high-risk merchant vessels.<sup>32</sup>

## **2. Maritime Terrorism**

Another threat to resource and trade security is the specter of maritime terrorism. In the new era of globalization, ports have evolved from being traditional interfaces between sea and land to providers of complete logistics networks. One may differentiate container ports by their

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<sup>25</sup> ICC International Maritime Bureau, "Piracy and Armed Robbery against Ships Annual Report: 1 January – 31 December 2004," January 2004, pp 5-6.

<sup>26</sup> Ibid, p. 10.

<sup>27</sup> Donna J. Nincic, "Chokepoints as Scarce Resources" in Sam J. Tangredi (ed), *Globalization and Maritime Power* (Washington, D.C.: National Defense University Press, December 2002), pp. 147-149.

<sup>28</sup> The average take of sea robbers/pirates have been put at between US\$5,000 to US\$15,000 per incident. See Adam J. Young and Mark J. Valencia, "Conflation of Piracy and Terrorism in Southeast Asia: Rectitude and Utility," *Contemporary Southeast Asia*, Volume 25, Number 2, August 2003, pp.270-274.

<sup>29</sup> Robert Karniol, "Indonesian Navy to Focus on Coastal Interdiction," *Jane's Defence Weekly*, 12 November 2003.

<sup>30</sup> Indonesia's provincial governments have gained considerable authority, formerly held by the central government, as part of an ongoing devolution of powers to the provinces that started in 2001. Funding for coastal patrol craft will come from the provinces' operating budget, which is now considerably larger than in the past as a result of the devolution process. This important initiative provides economic security to the sponsoring province, creates jobs in the shipbuilding industry, and at the same time provides much needed equipment to the navy without the expenditure of scarce capital funds. See John B. Haseman, "Indonesia Expands Arms Purchasing," *Jane's Intelligence Review*, 1 December 2003.

<sup>31</sup> Nick Brown, "Malaysia asks for Help to Fight Piracy," *Jane's Navy International*, 1 November 2003.

<sup>32</sup> Richard Scott, "IMDEX: Singapore Stresses Counters to Maritime Terrorism," *Jane's Defence Weekly*, 1 November 2003.

ability to handle the latest generation of container ships. According to a study by Ocean Shipping Consultants for example, it is expected that by 2010, 8,000-TEU (Twenty-Foot-Equivalent Unit) ships will be dominant in all trades. A container ship of 18,000 TEUs, whose displacement will maximise the available depth of the Malacca Straits, is already on the drawing board.<sup>33</sup> Hence, the dual trend of ports having to be providers of complete logistics networks and being able to handle large container ships coming on line mean that high-volume, mainline trade will focus on just a few megaports, making these ports the critical nodes of global seaborne trade.<sup>34</sup>

It has been estimated that the global economic impact from a closure of the port of Singapore alone could easily exceed US\$200 billion per year from disruptions to inventory and production cycles. This cost far exceeds the US\$8 billion per year cost of diverting all ships around Australia if the Malacca, Sunda, Lombok and Makassar Straits, and the South China Sea were closed.<sup>35</sup> The shutting down of ports on the west coast of the United States in October 2002 had cost the United States up to a billion dollars a day, and highlights the importance of hub ports as crucial nodes in world trade.<sup>36</sup>

Hub ports therefore are potential lucrative targets for terrorists. The terrorists may link up with pirates to hijack carriers of liquefied petroleum gas and turn them into floating bombs to disable ports.<sup>37</sup> The destruction that may be caused by such floating bombs is severe, as the detonation of a tanker carrying 600 tonnes of liquefied petroleum gas would cause a fireball of 1,200 metres in diameter destroying almost everything physical and living within this range. Even beyond this range, a large number of fatalities and casualties would occur.<sup>38</sup>

Other possible scenarios for maritime terrorism include the sinking of a merchant ship at critical choke points in the Singapore Straits to block shipping and slow down maritime trade flows,<sup>39</sup> or the detonation of a “dirty bomb” in a hub port. A dirty bomb is a conventional bomb configured to disperse radioactive material, and could be smuggled through a container in a container ship.<sup>40</sup>

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<sup>33</sup> A single 8,000-TEU ship requires less capital expenditure for new construction, and offers up to 20 percent savings in annual operating costs compared to the current benchmark offered by 6,000-TEU ships. The size limit for container ships that ply the Malacca Straits is 18,000 TEUs, as these ships will reach the limits of the depth in the Straits. See Daniel Y. Coulter, “Globalization of Maritime Commerce: The Rise of Hub Ports” in Sam J. Tangredi (ed), *Globalization and Maritime Power* (Washington D.C.: National Defense University Press, December 2002), pp. 135-138.

<sup>34</sup> Flynn has identified the world’s shipping mega ports as Long Beach, Los Angeles, Hong Kong, Singapore, Hamburg, Antwerp, and Rotterdam. See Stephen E. Flynn, “America the Vulnerable,” *Foreign Affairs*, January/February 2002, pp. 60-74.

<sup>35</sup> Daniel Y. Coulter, p 139.

<sup>36</sup> George Bush, “Remarks by President George W. Bush Re: West Coast Ports Work Stoppage,” *White House Briefing - Federal News Service*, 8 October 2002.

<sup>37</sup> Michael Richardson, “Terror at Sea: The World’s Lifelines are at Risk,” *The Straits Times Interactive*, 17 November 2003. Available at <http://straitstimes.asia1.com.sg/>

<sup>38</sup> Ben Sheppard, “Maritime Security Measures,” *Jane’s Intelligence Review*, 1 March 2003.

<sup>39</sup> Goh Chin Lian, “Shippers Want Better Policing of the Straits,” *The Straits Times (Singapore)*, 10 May 2004, p. H4.

<sup>40</sup> Michael Richardson, *A Time Bomb for Global Trade: Maritime Related Terrorism in an Age of Weapons of Mass Destruction* (Singapore: Institute of Southeast Asian Studies, 2004), pp 112-114.

Maritime terrorism is taken seriously in Southeast Asia as there have been indications that terrorist groups have begun to look at the maritime domain as a new avenue for attacks. For example, in March 2003, 10 pirates on speedboats boarded a chemical tanker, Dewi Madrim, off the coast of Sumatra in Indonesian waters. What was significant about this attack is that the pirates gained control and took over navigation of the ship before leaving an hour later with the ship's cash, property, equipment and crew's personal belongings.<sup>41</sup> This demonstrated advanced capabilities that could be more lethal in the hands of terrorists. More recently, in the northern reaches of the Malacca Straits, three very fast grey colored speedboats approached an LPG tanker. The boats followed the tanker for 40 minutes but fled when the crew sounded the ship's whistle and directed search lights at the speed boats.<sup>42</sup> The recent sinking of a car carrier after a collision with a Very Large Crude Carrier (VLCC) in the Singapore Straits also highlights the plausibility of sinking ships at critical choke points to block off the Singapore Straits.<sup>43</sup>

Maritime terrorism, however, is not limited to physical disruption or destruction. The threat to megaports could also include cyber attacks, which can disrupt port operations and reduce port efficiency. As a hub port, Singapore has already taken measures to protect itself against cyber terrorists through legislation, and implementing technical measures in its systems and networks.<sup>44</sup>

### **3. Inter-State Conflict**

A further maritime challenge is the possibility of inter-state conflict. Inter-state conflict can arise in the region as a result of competition for resources and from traditional nationalistic rivalries. Sources for concern include several competing resource, territorial, and boundary claims. These claims include the Spratly Islands, the Paracel Islands, the Kurile Islands, the Senkaku or Diaoyu Tai Islands, and the Liancourt Rocks. Except for the Spratlys, which are claimed by the six parties of Brunei, China, Malaysia, Philippines, Taiwan and Vietnam, the other claims are bilateral in nature and hence more likely to be resolved. For example, the Paracels are disputed between China and Vietnam, the Kuriles between Russia and Japan, the Senkaku or Diaoyu Tai Islands by Japan and China, and Liancourt Rocks between Japan and South Korea.

Oil and gas reserves, and productive fishing grounds allegedly surround the Spratly Islands. The Spratlys also sit astride the strategic sea lines of communications (SLOCs) in the South China Sea. The complex jurisdictional claims have led claimants to place an increasing emphasis on their ability to enforce their sovereignty claims militarily by maintaining a military presence on the islands. Only Brunei does not maintain a military presence on one or more of the islands. The result is a mosaic of small, isolated, somewhat fortified outposts, and multiple overlapping claims to maritime jurisdiction scattered across the southern South China Sea.

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<sup>41</sup> ICC International Maritime Bureau, p. 25.

<sup>42</sup> ICC International Maritime Bureau, "Weekly Piracy Report," 25 -31 May 2004, para 2, 5. Available at [http://www.iccwbo.org/ccs/imb\\_piracy/weekly\\_piracy\\_report.asp](http://www.iccwbo.org/ccs/imb_piracy/weekly_piracy_report.asp).

<sup>43</sup> Ben Nadarajan, "Car Carrier Sinks Near Singapore," *The Straits Times Interactive*, 24 May 2004. Available at <http://straitstimes.asia1.com.sg/>

<sup>44</sup> Ho Ka Wei and Ben Nadarajan, "Thwarting the Cyber Terrorist," *The Straits Times Interactive*, 14 November 2003. Available at <http://straitstimes.asia1.com.sg/>

These developments have continued unchecked, and the claims remain unresolved. Indeed, the disputes over the Spratlys remain the most troubling due to the number of claimants involved and the strategic locations of the islands along the strategic sea-lanes in the South China Sea. These islands remain the principal source of tension in Southeast Asia and retain the potential for confrontation to escalate into a regional conflict.<sup>45</sup>

A related issue to the Spratlys dispute is China's U-shaped territorial boundary line drawn in the South China Sea, with areas within the line being claimed as historic waters. The claim, which dates back to December 1947, implies that a major portion of the South China Sea belongs to China. It is problematic as the claim is not in accordance with the spirit of the United Nations Convention on the Law of the Sea, to which China acceded on June 7, 1996.

## **Overcoming Challenges - Positive Developments**

Despite the challenges posed to resource and trade security through piracy and maritime terrorism, and the possibility of inter-state maritime conflict, recent developments have made the resolution of these challenges more likely. Growing cooperation through the development of a web of relationships in East Asia has increased the security of access to resources and trade, and thus has decreased the likelihood of inter-state conflict.

### **1. Development of a Web of Relationships in Asia**

The region as a whole is beginning to be more integrated politically and economically with constant dialogues and summits being held to discuss regional issues of concern. ASEAN's expansion to include all 10 Southeast Asian states, and the upgrading of dialogues with Japan, South Korea and China to summit level, heralded a new era of cooperative engagements. The ASEAN Regional Forum (ARF) also has served to bring the United States, Russia, China and India into a multilateral forum to discuss security issues of regional concern. China and India acceded to the Treaty of Amity and Cooperation (TAC) at the ASEAN summit in Bali in October 2003, and Japan did likewise during the Japan-ASEAN Commemorative Summit in December 2003. Such actions promote stability in the region as the signatories commit themselves to seek cooperation and renounce the use of force to settle disputes.

In tandem with the increase in political dialogue in the region, a web of economic relationships has also emerged in the form of bilateral Free Trade Areas (FTA). China offered to establish an FTA with ASEAN within 10 years. Japan has proposed a comprehensive economic partnership with ASEAN, and is starting negotiations of FTAs with the Philippines, Thailand and Malaysia. Wanting to remain engaged, India has also signalled intentions to sign an FTA with ASEAN within the next 10 years. ASEAN itself is also working toward bringing about an ASEAN Economic Community by 2020.

Maritime cooperation has likewise increased in the region, with anti-terrorism and piracy as the primary rationales. The key powers, China, India, Japan and the United States, have demonstrated a desire to increase their maritime influence in the region. Specifically:

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<sup>45</sup> Clive Schofield, "The Trouble with Islands," *Jane's Intelligence Review*, 1 September 2003.

- ASEAN and China signed a declaration on conduct in the South China Sea, which was concluded on the 4 November 2002.<sup>46</sup> The declaration calls for self-restraint, encourages the peaceful settlement of disputes and respect for freedom of navigation and overflight rights. Erection of new structures is also banned on the presently uninhabited islands in the South China Sea. The agreement further promotes voluntary military consultations as well as prior notification of joint military exercises that will be conducted within the vicinity of the islands.<sup>47</sup> The main weakness of the declaration, however, is its non-binding nature.
- Japan has initiated an anti-piracy program that involves 16 nations, including the 10 ASEAN members, India, China and South Korea, titled Regional Co-operation Agreement on Against Piracy, or ReCAAP. The Japanese Coast Guard has also been dispatching patrol ships and aircraft to various countries in Asia since 2000 amidst growing piracy in Asian waters.<sup>48</sup>
- The US has bestowed major non-NATO ally status on the Philippines and Thailand, and relations have started to warm with Vietnam, as evidenced by the visit of Vietnamese Defence Minister to Washington, and the port call of the USS Vandergrift to Ho Chi Minh City in November. U.S. relations with Australia, Japan, South Korea and Singapore continue to be close.<sup>49</sup>
- There is a growing web of cooperation amongst ASEAN countries and increasing numbers of bilateral exercises being conducted. For example, Singapore and Malaysia hold a bilateral naval exercise annually, The Philippines and Malaysia have conducted combined naval patrols near Sabah, and the Five Power Defence Arrangement (FPDA), which includes Singapore, Malaysia, Australia, New Zealand, and the United Kingdom, is also expanding its exercise focus from conventional threats to include counter-terrorism drills. The first of such exercises is to be held in the South China Sea in late 2004.<sup>50</sup> The Philippines, Indonesia and Japan have held anti-piracy exercises. Indonesia and Singapore have cooperated to prevent sea robbery in its common waters through the Indo-Sin Coordinated Patrols (ISCP).<sup>51</sup>

The web of relationships between the United States, regional powers and ASEAN countries, together with naval and coast guard presence, serve to act as a deterrent to dissuade potential actors from conducting acts of maritime terrorism or piracy. However, a lack of

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<sup>46</sup> Leszek Buszynski, "ASEAN, the Declaration on Conduct, and the South China Sea," *Contemporary Southeast Asia*, Volume 25, Number 3, December 2003, p. 343.

<sup>47</sup> Ibid.

<sup>48</sup> See Neo Hui Min, "Greatest Threat at Sea? A Terrorist-Pirate Link-Up," *The Straits Times Interactive*, 14 November 2003. Available at <http://straitstimes.asia1.com.sg/>. See also "Japan to Send Patrol Vessel to Singapore for Anti-Piracy," *Kyodo News*, 19 November 2003.

<sup>49</sup> "US Strategic Plan for the 21<sup>st</sup> Century: The Pacific," *Stratfor Global Intelligence Report*, 19 November 2003.

<sup>50</sup> David Boey, "Military Drills to Include Terror Threat," *The Straits Times Interactive*, 8 June 2004. Available at <http://straitstimes.asia1.com.sg/>.

<sup>51</sup> Felix Siew, "Coordinated Patrols by S'pore and Indo Navies deter Sea Robberies," in *October News, CyberPioneer*, October 2001. Available at <http://www.mindef.gov.sg/cyberpioneer/setbackissues.html>

agreement on the specifics of cooperation could hinder actual arrests and anti-piracy efforts in the region. One contentious issue remains that of hot pursuit, allowing the ships of one country to continue a chase and conduct arrests in the waters of a neighbouring country.<sup>52</sup> The web of relationships in the political, economic and military spheres also provides a mechanism for the resolution of conflicts before they arise.

## **2. Opening up of Arctic Routes and Resources**

Besides political developments and the increasing nature of cooperation in the region, natural developments may also improve trade and resource security in the region in the longer term. The United States Intergovernmental Panel on Climate Change has forecasted that the global average temperature will increase by 1.4 to 5.8 degrees Celsius over the next century. The temperature increases is expected to be greater for areas over land than over water, and greater in polar than in temperate regions. The largest temperature changes are predicted to occur in the Arctic, and preliminary observations already support the magnitude of the Arctic change. Projections have indicated that increases for the Arctic will exceed global averages by 40 percent, although such projections have remained highly seasonal, with an increase by mid-century in summer temperature of only 1 to 2°C but of 8 to 9°C in winter. The variance of the warming is almost as large as the magnitude of warming itself with a variance ranging from 1 to 2°C in summer to 5 to 6°C in winter. Such warming will result in a reduction in Arctic ice, which may open Arctic sea routes to commercial shipping and fishing, and the Arctic regions to hydrocarbon removal.<sup>53</sup>

The opening up of Arctic sea routes is anticipated by 2050 and possibly as soon as in 10 to 20 years time. The opening of the trade routes through the Arctic will translate to significant reductions in transit distances between Europe and East Asia, Europe and the west coast of the United States, and between East Asia and the east coast of the United States. For example, the Northern Sea Route between Europe and East Asia is 40 percent shorter than that through the Suez Canal. This new route will mean a reduction of traffic in the Malacca Straits, and will consequently reduce the vulnerability of Europe-Asia trade to piracy and maritime terrorism. In addition the opening up of the Northern Sea Route will also allow access to Siberia's huge oil and natural gas reserves, which are estimated to be comparable to those of the Middle East. Again, the diversification of sources of energy supply will reduce the vulnerability of energy supply to Asia and improve overall stability in the region.

## **Conclusion – Towards an Inclusive Globalization Scenario**

The Asia-Pacific century looks set to be established with China, India and Japan leading the pack in Asia proper. Fuelling the Asia-Pacific engine will be the continued economic growth of China as well as the growth of India, Japan, and the United States. Maritime power will also shift to East Asia as a result of three factors: increasing trade flows into and within East Asia; rising energy demand which necessitates an increasing reliance on the sea as a mode of transport;

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<sup>52</sup> Adam J. Young and Mark J. Valencia, pp. 279-280.

<sup>53</sup> Jessie C. Carman, "Economic and Strategic Implications of Ice-Free Arctic Seas" in Sam J. Tangredi (ed), *Globalization and Maritime Power* (Washington, D.C.: National Defense University Press, December 2002), p. 172.

and increase in the merchant fleet to facilitate transportation of energy resources as well as goods and raw materials via the sea.

Maritime power is also shifting towards East Asia as regional countries modernize their navies in order to secure their trade routes, ensure their access to natural resources and seek to insure against potential disruptions to maritime security such as piracy, maritime terrorism and inter-state conflicts. How this surge in regional maritime power is accommodated, and how regional and extra-regional countries like China, India, the United States, Japan, Russia and Korea manage the power politics that emerge will be a key determinant of regional stability. A worthy goal for all concerned is the continued nurturing of regional multilateral frameworks to full maturity in order for any regional conflicts to be resolved in accordance with the rule of international law, and the move towards an inclusive globalization process which will benefit the majority of people.

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