GOOD ORDER AT SEA IN SOUTHEAST ASIA

GOOD ORDER AT SEA IN SOUTHEAST ASIA

RSIS POLICY PAPER

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EXECUTIVE SUMMARY

Good order at sea ensures the safety and security of shipping and permits countries to pursue their maritime interests and develop their marine resources in accordance with agreed principles of international law. Threats to good order at sea include piracy and armed robbery against ships, maritime terrorism, illicit trafficking in drugs and arms, people smuggling, pollution, illegal fishing and marine natural hazards. This paper reviews the current situation with good order at sea in Southeast Asia, and makes recommendations on how it might be improved.

Southeast Asia is a distinctively maritime region. Its archipelagic nature and relative lack of land-based transport infrastructure mean that shipping is extremely important in the region. The region sits astride key "choke points" for shipping between the Indian and Pacific Oceans, which are economically and strategically important to the economies of Northeast Asia, the United States, and the emerging maritime powers of Asia. Many countries see themselves as stakeholders in good order at sea in Southeast Asia, but ultimately it depends on the actions of regional countries to ensure it.

Most regional countries have extensive maritime interests. Most of these have trans-boundary and regional dimensions that should facilitate cooperation. Regional cooperation is fundamental to the maintenance of good order at sea, but at present this is underdeveloped in Southeast Asia. Particular problems that inhibit cooperation include inadequate resources, poor coordination between national agencies, and the lack of maritime boundaries in parts of the region, as well as a concern that cooperation may involve some loss of sovereignty or independence. For similar reasons, key international conventions that help establish good order at sea, and a range of new international measures to enhance security at sea, such as the Long Range Identification and Tracking (LRIT) system for ships and the Ship Security Alert System, are not effective in the region at present.

ASEAN and the ARF have taken some initiatives to enhance regional maritime cooperation, but the process could be speeded up, including both "top down" initiatives that might come out of the ARF and ASEAN and "bottom-up" steps using existing processes as "building blocks" to further the process of cooperation. The recommendations in this report are intended to support initiatives already taken by the ARF and ASEAN, and help in speeding up the process of cooperation.

The recommendations in the paper are grouped according to the following key outcomes:

- Enhanced Regional Cooperation. More might be done to institutionalize the process of regional cooperation for good order at sea, including the development, where appropriate, of institutional arrangements and capacity-building. More use might be made of existing institutions, and more attention given to regional "hot spots" where cooperation between adjoining countries falls short of that which is desirable.

- Improved Risk Assessment and Reduction. A more effective and cooperative approach is required to the analysis of threats and contingency planning for major maritime security incidents that might occur in the region.

- Wider Information Sharing. A higher level of good order at sea in Southeast Asia requires that regional countries takes steps to enhance the sharing of information between them relevant to the detection, prevention and suppression of threats to good order at sea. International "best practice" has been developed in this regard, but currently is generally not being followed in the region.

SUMMARY OF RECOMMENDATIONS

Regional Cooperation

- The ASEAN Maritime Forum process should be re-invigorated and the ARF ISM on Maritime Security supported as frameworks for developing a regionally institutionalized approach to good order at sea.

- All regional countries should ratify relevant international Conventions related to the provision of good order at sea.

- Agreements on regional maritime boundaries should be reached as soon as possible.

- Regional countries bordering a semi-enclosed sea should fulfill their obligations under UNCLOS Article IX, noting that CSCAP Memorandum No. 13 provides a useful guide to the fulfillment of these obligations.

- A formal trilateral mechanism should be introduced to provide for safety, security and environmental protection in the Sulu and Celebes Seas.

- Dialogue should be initiated between Indonesia, the IMO and user States regarding the provision of safety, security and environmental protection in the Lombok and Makassar Straits.

- The capability and role of ReCAAP should be expanded so that it becomes an effective "clearing house" for regional maritime security information through its focal points.

- Indonesia and Malaysia should seriously consider joining ReCAAP.

- Port administrations should be assisted, possibly through the APA, to build their capacity to suppress armed robbery against ships and other forms of maritime crime within anchorages and port approaches.

- The less well equipped, seafaring providing countries in the region should be assisted with building their capacity to implement and manage new requirements for the training and certification of seafarers, including the provision of seafarer identity documents.

Risk Assessment and Reduction

- Effective bilateral (or trilateral) agreements should be developed to manage an incident in areas where conflicting claims to sovereignty or maritime boundaries have not been agreed.

- Cooperative measures should be considered to control the proliferation of small arms and light weapons in the region, including the prevention of trafficking at sea in such weapons.

- More accurate analysis and assessments should be developed of the risks of piracy and armed robbery against ships.

- Regional cooperation for maritime search and rescue (SAR) should be strengthened.

- Cooperative contingency arrangements should be developed to manage a major incident involving a cruise liner or passenger ferry or offshore oil and gas installation in the region.

Information Sharing

- The Automatic Identification System (AIS) should be implemented on vessels below 300 gross tons and on vessels that are on local voyage.

- Regional countries should share AIS data via the Maritime Safety and Security Information System (MSSIS).

- A regional approach should be developed to the long-range identification and tracking of ships.

- Regional protocols should be established for handling alerts from the Ship Security Alert System SSAS alerts should be sent to the coastal states as well as to nearby ships in addition to being sent to the flag state.

- Regional navies should send liaison officers to participate in information sharing activities at the Information Fusion Centre (IFC) of the Changi Command and Control (C2) Centre.

INTRODUCTION

Good Order at Sea

Good order at sea ensures the safety and security of shipping and permits countries to pursue their maritime interests and develop their marine resources in an ecologically sustainable and peaceful manner in accordance with international law. A lack of good order at sea is evident if there is illegal activity at sea or inadequate arrangements for the safety and security of shipping.

At present we lack good order at sea in Southeast Asia. Problems in regional waters include piracy and armed robbery against ships, the threat of maritime terrorism, illicit trafficking in drugs and arms, people smuggling, pollution, illegal fishing and marine natural hazards, such as tsunamis and cyclones. Managing these problems requires regional cooperation, as well as cooperation between agencies at a national level. While much progress has been made, particularly in the Malacca and Singapore Straits, present levels of cooperation elsewhere fall short of what is desirable.

The lack of good order at sea is due to several factors. Difficulties arise in combating illegal activity at sea due to inadequate resources, ineffective national legislation, poor coordination between national agencies, and a shortage of trained personnel. The lack of maritime boundaries in parts of the region further complicates the situation.

In recent years, maritime security has been high on the agenda of both ASEAN and the ASEAN Regional Forum (ARF). ASEAN held a Workshop in Batam in September 2007 on the establishment of an ASEAN Maritime Forum. This would exchange ideas not only on maritime security issues but also on other broad, cross-cutting issues, such as the protection of the marine environment, illegal fishing, smuggling and maritime transportation.

The 15th Meeting of the ARF in Singapore in July 2008 agreed to establish an ARF Inter-Sessional Meeting (ISM) on Maritime Security to provide an annual platform for discussion of maritime security issues, including increasing cooperation and capacity-building, as well as specific concerns, such as piracy and armed robbery against ships and the smuggling of goods and persons.

This paper is intended to support these initiatives by ASEAN and the ARF. It makes policy recommendations to achieve outcomes, which enhance good order at sea in Southeast Asia. It focuses on issues at sea and does not address ones of onshore security, such as cargo screening, maritime theft and fraud, and the threat of terrorist attack on port infrastructure.

GEOGRAPHICAL SETTING

Southeast Asia is a distinctively maritime region. Most regional countries have extensive maritime interests. Maritime issues are major factors both in relations between regional countries and in relations between these counties and the rest of the world. These factors are also apparent in the size of regional merchant shipping fleets, the dependence on seaborne trade and seafood, an emphasis on maritime capabilities in military forces, and the attention given to offshore sovereignty and maritime jurisdiction.

The map in Figure 1 shows the maritime geography of Southeast Asia. This is very complex – one of the most complicated areas of maritime geography in the world. As a consequence of extended maritime jurisdiction under the 1982 UN Convention on the Law of the Sea (UNCLOS), virtually all sea areas of Southeast Asia are enclosed as territorial sea, exclusive economic zone (EEZ) or archipelagic waters. This puts a premium on the international law of the sea in the region, particularly with regard to navigational regimes and the rights and duties of States in the various maritime zones.

Figure 1 – Southeast Asia

Regional countries have a strong cultural affinity with the sea. Certain parts of the region, but particularly the Riau Archipelago near Singapore and the Sulu Archipelago in the southern Philippines, have a long history of piracy and sea raiding (see box), and maritime crime remains a problem in these areas.

Maritime boundary making in Southeast Asia is problematic. This is largely due to the geography of the region, with its concave areas of coast, numerous islands and longstanding sovereignty claims. Many boundaries (or at least their end points or "turning points") require agreement of three, or even more, countries. Furthermore, maritime boundaries cannot be agreed until sovereignty over islands and other features has been established.

ORGANISED RAIDING IN SOUTHEAST ASIA

Piracy has existed in maritime Southeast Asia ever since history was recorded in the region. For example, in the Philippines, raiding was a most celebrated form of warfare known as *mangayaw*.

Traditionally, piracy in Southeast Asia was not considered a rebellion against society and its laws. Pirates were not treated as *hostis humani generis*, or enemies of all mankind. Rather, piracy was incorporated into the laws of society and served socially constructive purposes. Local leaders authorised piracy, known as organised raiding in this case, as a means to control maritime trade transiting their sea areas, and in the process enrich themselves and their societies. In many cases, they also forced passing ships to call at their ports as a way of improving the economy and influencing their polities. Ship masters acquiesced as they would rather comply with sanctioned raiding, which afforded them some form of physical protection, than deal with more violent pirate groups without political patronage. With increased wealth came influence, power and prestige and the ability to trade with external powers.

The people who committed piracy were often the most respected warriors and leaders of traditional societies who engaged in a competitive prestige system, and not always the poor or the hardened criminals that we associate with piracy today. However, this did not meant that all piracy or raiding was legitimate as punishments were often meted out to raiders that operated without the consent of the local leader. Groups that conducted raiding in the region included the Bugis from Southern Sulawesi, the Orang Laut from Malacca, Johor, and Riau, the Vietnamese in the port town of Chiang-p'ing, located on the border between Vietnam and China, the Saribas Ibans from Borneo, and the Illanun from the Sulu Sultanate. The Tausug aristocrats from the Sulu region were also known to be patrons of raiders.

Piracy, or more accurately organised raiding, was rampant in the region during the latter half of the eighteenth century through to the first half of the nineteenth century. It was only by the mid to late-nineteenth centuries that the colonial powers of the Dutch, British and the Spanish started to think about how to cooperate to suppress piracy in the region. As European political influence in the region expanded, the European powers were able to implement a legal system that defined what legitimate maritime activities were, in contrast to the more flexible and fluid system governing such relations and activities in local policies.

With the enactment of new legislation, piracy became a criminal act and provided an excuse, or justification, for colonial powers to extend their influence into Southeast Asian territory as they conducted attacks on raiding bases in the region. Technological innovations brought about by the industrial revolution also helped the colonial powers to rein in organised raiding in the region. Innovations in steam power, fire arms, and communications gave the European powers a qualitative edge over that of the raiders. By the end of the nineteenth century, organised raiding was eliminated and local political patronage and a tradition of raiding had ceased to be legitimate bases for predatory maritime activities.

Major straits and booming ports are important features of the Southeast Asian maritime environment. The archipelagic nature of the region and its relative lack of land-based transport infrastructure mean that shipping is extremely important in the region. The region sits astride key access routes between the Indian and Pacific Oceans that are economically and strategically important to the economies of Northeast Asia, the United States, and the emerging maritime powers of Asia.

The maritime geography of Southeast Asia creates numerous straits, as well as other "choke points" for shipping. These straits occur both along the coast of mainland Asia where the island chain presses close into the coast (e.g. the Straits of Malacca and Singapore), and through the off-lying islands and archipelagoes (e.g. the San Bernadino Strait in the Philippines, the Balabac Strait North of Borneo, and the Sunda and Lombok Straits through the Indonesian archipelago).

Straits of Malacca and Singapore

The Straits of Malacca and Singapore are a narrow 805 km (435nm) stretch of water between Peninsular Malaysia, Singapore and Indonesia. They are the main shipping channel between the Indian Ocean and the Pacific Ocean. About one-quarter of the world's traded goods and a quarter of all oil carried by sea passes through the straits annually.

Oil is transported mainly from Persian Gulf suppliers to Asian markets such as China, Japan, and South Korea. In 2006, an estimated 12 million barrels per day were transported through the straits comprising 14.3 percent of world oil demand. Around 26 tankers, including three fully loaded supertankers heading for Asian ports, pass through the Singapore Strait daily. Because this strait is relatively shallow, only 23 meters deep at most points, the International Maritime Organization (IMO) has required an under-keel clearance of 3.5 metres for ships transiting the straits. This translates to ships of at most 200,000 deadweight tons (DWT) being allowed to navigate through the Straits. At its narrowest point in the Phillip Channel near Singapore, the navigable channel is only 2.8 km (1.5 nm) About 75,510 passages were made annually through the straits by 8,678 ships which carried in total 3 billion tonnes of cargo with the average deadweight tonnage being 39,581. In terms of value, cargo worth a total of US$390 billion is carried annually.

The straits are likely to be even busier in future due to increasing trade flows and energy demands in Asia. The trend of increasing traffic is apparent from traffic data reported via the Malacca Straits Ship Reporting System, or STRAITREP[1]. A study done by the Ministry of Land, Infrastructure

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1 The STRAITREP is a Mandatory Ship Reporting System adopted by the IMO to aid in navigational safety in the Straits of Malacca and Singapore whereby ships transiting the Straits will have to report details of their passage to the respective Vessel Traffic Services (VTS) in Malaysia and Singapore. STRAITREP data from 1999 to 2007 indicate that traffic in the Malacca Straits increased by 61% within the eight-year period.

and Transport of Japan projected that the volume of cargo will increase to 4.7 billion tonnes in 2010 and to 6.4 billion tonnes in 2020. Similarly, the number of vessels might increase to 117,000 in 2010 and 141,000 in 2020. However, the current economic recession and downturn in international shipping may lead to a revision of these projections.

The straits are now covered by the Cooperative Mechanism for the Straits of Malacca and Singapore established in September 2007 to encourage user States and other stakeholders to voluntarily cooperate with Indonesia, Malaysia and Singapore to enhance safety, security and environmental protection in the Straits. It comprises three elements: a Cooperation Forum, an Aids to Navigation Fund, and specific Projects. The Forum brings together the littoral States, user States and other interested stakeholders. The Fund is intended to enable user States and other stakeholders to make voluntary contributions to enhance navigational safety and environmental protection by maintaining and replacing aids to navigation such as lighthouses and buoys. While some contributions to the fund have been forthcoming, international ship-owners have so far shown some reluctance to contribute.

Lombok / Makassar Straits

The Lombok Strait is important for vessels moving between Australia and Singapore, and elsewhere in East Asia. Fully-laden tankers of the size of about 230,000 deadweight tons and above traversing from the Indian Ocean also use the deeper Lombok-Makassar Straits route due to the limitations of the 3.5 metre under-keel clearance imposed by the Malacca Straits Traffic Separation Scheme as well as the limits of a 23-metre depth in the Strait. The Lombok Strait in Indonesia is wider, deeper, and less congested than the Straits of Malacca and separates the islands of Lombok and Bali. The minimum passage width in the Lombok Strait is 19 km (10 nm) and the depths are greater than 150 metres. The Lombok Strait is therefore considered the safest route for supertankers.

Most ships transiting the Lombok Strait also pass through the Makassar Strait between the Indonesian islands of Borneo and Sulawesi, which has an available width of 18 km (10 nm) and a length of 966 km (522 nm). To the north, the Makassar Straits joins the Celebes Sea, while to the south, it meets the Java Sea. About 604 passages were made annually by 418 ships which carried in total 36 million tonnes of cargo with the average deadweight tonnage being 60,702. The total value of cargo carried is worth US$40 billion annually.

Lombok and Makassar Straits lie entirely within Indonesian archipelagic waters. They are subject to the regime of archipelagic sea lanes (ASL) passage under UNCLOS Article 53. UNCLOS Article 43, which provided the legal basis for the Cooperative Mechanism in the Malacca and Singapore Straits, does not apply to ASL passage. However, Indonesia may still wish to explore similar arrangements for the Lombok and Makassar Straits with the objective of enhancing safety, security and environmental protection in these important straits.

Sunda Strait

The Sunda Strait is the strait between the Indonesian islands of Java and Sumatra. It connects the Java Sea to the Indian Ocean. The strait stretches in a roughly north-east/south-west orientation and is 81 km (44 nm), with its narrowest width being 24 km (13 nm) at its north-eastern end between Cape Tua on Sumatra and Cape Pujat on Java. It is very deep at its western end but as it narrows it becomes much shallower, with a depth of only 20 metres in parts of its eastern end. This makes it notoriously difficult to navigate, with sandbanks, strong tidal flows and man-made obstructions such as oil rigs off the Java coast.

The strait's narrowness, shallowness and lack of accurate charting make it unsuitable for many modern large ships. For example, deep-draught ships of over 100,000 DWT or of more than 18 metres draught do not transit the strait, and as a result, it is not heavily used. About 1,320 passages were made annually by 2,278 ships which carried in total 111 million tonnes of cargo with the average deadweight tonnage being 48,783. The total value of cargo carried is worth US$5 billion annually.

Philippine Straits

Important seaborne trade also passes through the Philippine archipelago from either the Pacific Ocean or the Makassar Strait to East Asia. Important shipping routes in the area include one across the Sulu and Bohol seas between the Surigao and Balabac straits used by shipping travelling between Southeast Asia and the Pacific; one from the Makassar Strait across the Sulu Sea to the Mindoro Strait used by ships travelling between the Indian Ocean and Australia and southern China; and one passing between Mindoro and Luzon and then through the San Bernardino Strait to the East and North of Samar. Some of these straits are very narrow. The Philippines also has a complex network of inter-island shipping routes with a high incidence of major shipping disasters.

Major Ports

The growth of ports in Southeast Asia reflects the growth of regional trade. Seaborne trade and ports have generally grown at a higher rate than regional economies. Container ports in the region now account for an estimated 30 per cent of the world's trans-shipment traffic. Figure 2 shows some of the major ports and key shipping routes in Southeast Asia.

Major regional ports include Singapore, Port Klang and Tanjung Pelepas in Malaysia, and Tanjung Priok in Indonesia. Based on 2007 data, Singapore was the top container port in the world, handling 27.9 million twenty-foot equivalent units (TEUs); Port Klang was the 16th largest container port in the world handling 7.1 million TEUs; Tanjung Pelepas was the 18th largest container port in the world, handling 5.5 million TEUs; and Tanjung Priok was the 23rd largest port in the world, handling 3.9 million TEUs. Preliminary data suggests that Singapore continues to be the top container port in the world in 2008, handling 29.9 million TEUs.

Besides container ports, there are also major oil ports in the region like Balikpapan, Dumai and Port Dickson. Balikpapan is the largest of these, handling tankers of up to 250,000 DWT at an offshore mooring. Balikpapan is the site of a large refinery and is the centre of oil exploration and exploitation in the rich oil fields in the southern portion of the Makassar Strait. Dumai is rich in both fuel and palm oil while Port Dickson is the gateway to Malaysia's oil industries, with a large number of oil tankers plying between Port Dickson and other ports of Malaysia. Singapore is also a major oil refining centre and a top bunkering port.

Figure 2 – Major ports and shipping routes in Southeast Asia
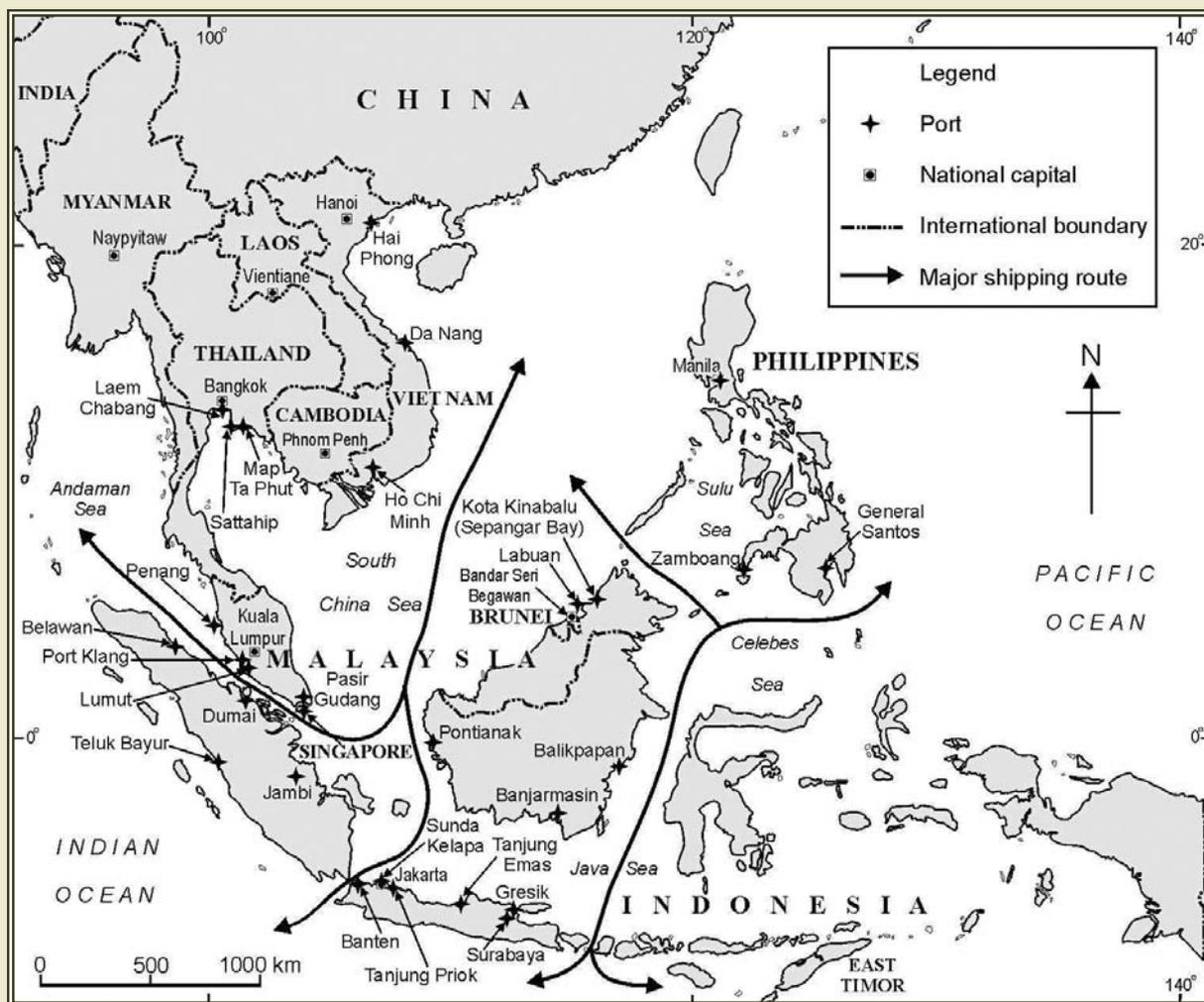
MARINE RESOURCES

The marine environment of Southeast Asia is extremely complex and rich in marine resources, both living and non- living. It has an abundance of coral reefs, mangroves and seagrass beds which supports a rich array of marine animals and plants - probably the most diverse marine flora and fauna in the world. However, the preservation and protection of this environment, the conservation of species, and the exploitation of its resources is seriously complicated by conflicting and overlapping claims to maritime jurisdiction and the lack of agreed maritime boundaries.

Living Resources

Fisheries are in crisis in most areas of the world, and Southeast Asia is seriously affected by the depletion of fish stocks. Southeast Asia is not only a major producer of fish products but is also a major consumer of these products, which constitute about half of the region's protein intake.

While over fishing is the major problem, this problem has been exacerbated by the serious degradation of coastal habitats. Fish stocks are affected by harmful practices such as the clearing of mangroves, the exploitation of coral reefs and the destruction of sea grass beds. Other problems include sedimentation of estuaries, land-based pollution, saw-milling, dynamiting, the use of very fine mesh nets, and other forms of illegal fishing. Aquaculture was initially seen as a solution to the problem of depleted fish stocks but many aquaculture programs have been disappointing and have caused problems of pollution and natural habitat destruction. Furthermore, not all species can thrive in a fish farm.

Cooperative management of fish stocks is underdeveloped in Southeast Asia. No regional country is party to the 2001 UN Agreement on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks set up to manage fish stocks that straddle or migrate across national EEZs and high seas.

Non-Living Resources

Regional countries are increasingly looking towards possible oil and gas reserves beneath the sea for future economic prosperity and security. Southeast Asian waters are underlain by sedimentary basins that either produce oil and gas or contain major hydrocarbon deposits. Concerns over energy security and competition over oil and gas resources have led to incidents in the South China Sea, the Ambalat area off Sabah in the Celebes Sea, and most recently between Myanmar and Bangladesh.

Oil and gas exploration industries are thriving in the Asia Pacific due to the growing energy demands of China, India, Japan and South Korea. In particular, Southeast Asia is the most active area in the world for fixed offshore oil and gas platform projects, with 37 projects under construction and 135 projects currently being planned. Southeast Asia also has 29 projects with floating platforms in hand.

MARITIME BOUNDARIES

Table 1 shows the current situation with maritime boundaries in Southeast Asia. It is not a good picture. Of the approximately 60 maritime boundaries required in the region, less than twenty per cent have so far been fully resolved, and not much progress is being made with delimiting outstanding ones. Very few of the EEZ boundaries required in the region have actually been agreed. This means that resource development can have problems and enforcement against illegal fishing can be difficult.

Table 1
Maritime Boundaries in Southeast Asia

Country	Territorial Sea	EEZ	Continental Shelf	Remarks
Australia-Indonesia	NR	Yes	Yes	
Australia-East Timor	NR	No	No	Joint Zone
Brunei-Malaysia	No	No	No	
Indonesia-East Timor	No	No	No	
Indonesia-Malaysia	Yes	No	Yes	
Indonesia-Singapore	Yes	No	NR	
Indonesia-Thailand	NR	No	Yes	
Indonesia-Philippines	No	No	No	
Indonesia-India	NR	No	Yes	
Indonesia-Vietnam	NR	Yes	Yes	
Indonesia-China	NR	No	No	
Malaysia-Singapore	No	No	NR	
Malaysia-Thailand	No	No	Yes	Joint Zone
Malaysia-Philippines	No	No	No	
Malaysia-Vietnam	NR	No	No	Joint Zone
Myanmar-Bangladesh	No	No	No	
Myanmar –India	No	No	No	
Myanmar-Thailand	No	No	No	
Cambodia-Thailand	No	No	No	
Cambodia-Vietnam	No	No	No	Joint Zone
Thailand-India	NR	No	Yes	
Thailand-Vietnam	NR	Yes	Yes	
China-Vietnam	Yes	No	No	
Philippines- China	NR	No	No	
Philippines-Palau	NR	No	No	

Notes: NR = Boundaries are not required because either the countries are too far apart to have the relevant boundary (i.e., over 24nm in the case of a territorial sea boundary), or so close together that a territorial sea boundary only is required.
Sources: *Limits in the Seas - National Claims to Maritime Jurisdiction*, No 36, 7th Revision, 1995; Prescott and Schofield, Maritime Boundaries of the World, 2nd ed., 2005

It will be noted that there are widespread areas of Southeast Asia where maritime boundaries have not been agreed between neighbouring states, most notably in the South China Sea. Other areas include the northern Malacca Strait where there is no EEZ boundary between Malaysia and Indonesia, the eastern approaches to the Singapore Strait where sovereignty over key features is divided between Malaysia and Singapore, and the Ambalat region to the East of Borneo. In early November 2008, Bangladesh and Myanmar naval vessels were in a stand-off in an area of the Bay of Bengal claimed by both countries where possible hydrocarbon reserves are believed to exist but no maritime boundaries have been agreed.

Piracy and Armed Robbery at Sea

The situation with piracy and armed robbery against ships in Southeast Asia has improved significantly in recent years. Table 2 shows the number of attacks (actual and attempted) in Southeast Asia for each year from 2001 to 2008. Figure 3 show how the number of reported attacks in the region has been consistently trending downward.

Most attacks in the region are on vessels at anchor, in port or entering or leaving a harbour. For example, of the 75 actual and attempted attacks in 2008, 35 were on vessels that were not at sea. Figure 4 shows the location of the actual attacks in Southeast Asia from 2005 to 2008. Many of those attacked in 2008 were tankers, but this is mainly because Indonesian anchorages around ports such as Belawan, Dumai and Balikpapan that have oil and chemical facilities are usually crowded with product tankers awaiting cargoes. These attacks are mainly of a minor nature and are best countered by more effective policing by port authorities, including active patrolling of ports and anchorages.

Table 2
Piracy in Southeast Asia – Actual and Attempted Attacks
2001-2008

Location	2001	2002	2003	2004	2005	2006	2007	2008	Total
Cambodia/Vietnam	8	12	15	4	10	3	5	11	74
Indonesia	91	103	121	94	79	50	46	28	728
Malacca Straits	17	18	28	38	12	11	7	6	208
Malaysia	19	14	5	9	3	10	9	12	100
Philippines	8	10	12	4	0	6	7	7	62
Singapore Straits	7	5	2	8	7	5	4	6	48
Thailand	8	5	2	4	1	1	2	0	31
Myanmar/Burma	3	0	0	1	0	0	0	0	9
South China Sea	4	0	2	8	6	1	6	5	33
TOTAL	165	167	187	170	118	87	86	75	1318

Source: IMB, *Piracy and Armed Robbery against Ships – Annual Reports 2008*; ReCAAP Information Sharing Centre, *Annual Report 2008*.

Apart from common theft and robbery, hijacking and kidnap-for-ransom cases have been consistently reported over the last five years. (Refer to Table 3) Having said that, these figures are relatively small when compared to the current situation in Somalia and the Gulf of Aden, Although the authorities had some successes in tracking down and apprehending the perpetrators, such incidents serve as a reminder of the potential severity of piratical attacks that they do not only involve the loss of valuables onboard.

Table 3
Piracy in Southeast Asia — Types of Attacks
2001-2008

Types of Attacks	Boarding	Detained	Fired-upon	Hijack	Robbery	Violent Boarding
2001	28	0	4	9	71	5
2002	12	1	1	23	84	6
2003	27	6	4	14	74	6
2004	28	7	1	21	57	8
2005	15	0	3	12	58	5
2006	12	0	0	9	41	0
2007	16	0	0	5	34	0
2008	13	0	1	4	47	0

Source: IMB, *Piracy and Armed Robbery against Ships – Annual Reports 2008*; ReCAAP Information Sharing Centre, *Annual Report 2008*.

Figure 3
*Piracy in Southeast Asia — Regional Trend by Quarter*
2001-2008
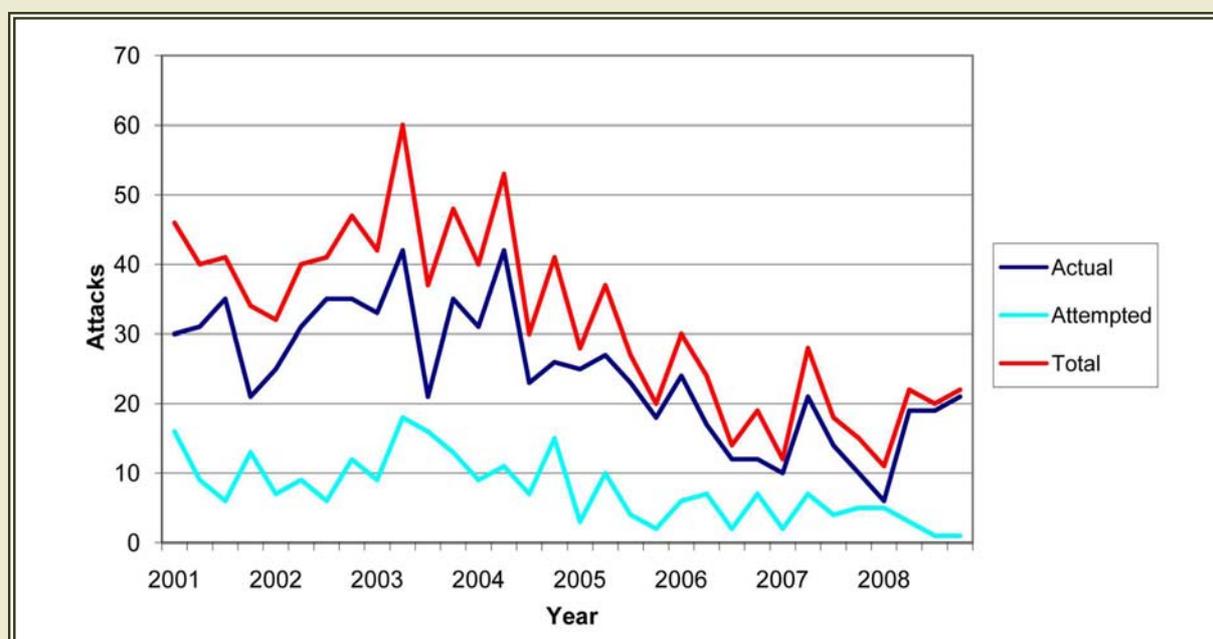
The Southern area of the South China Sea is one area where attacks are still occurring on vessels underway. As shown in Table 4, a significant number of attacks occurred in these waters during 2008. It is not inconceivable that they involved the same group of attackers. Most attacks involved robbers armed with knives and machetes boarding the vessels and stealing personal valuables, cash and ship's property. However, the tug *Whale 7* and its barge were hijacked, their crews put ashore, though the vessels were later recovered some weeks later.

Table 4
Actual Attacks on Vessels underway in Southern Area of South China Sea, 2008

Date	Ship Name	Vessel Type	Location
24.03	Ocean Seal	Lift Barge	Off Anambas Is
13.04	Monalisa	Product Tanker	Off Mangkai Is
13.04	Spar Cetus	Bulk Carrier	Off Mangkai Is.
25.04	Pataravin 2	Product Tanker	NE of Singapore Str.
30.04	PU2008 PU3306	Tug Barge	Off Pulau Tioman
03.06	Medbothian	Container Ship	Off Anambas Is
04.06	Red Wing	Chemical Tanker	Off Anambas Is
29.06	Wecoy 6	Tug	Off Pulau Tioman
07.09	Whale 7 Sinobest2503	Tug Barge	Off Pulau Tioman
30.09	J.K.M. Muhieddine	Bulk Carrier	Off Anambas Is.
02.10	Sun Geranium	Chemical Tanker	NE of Pulau Tioman
03.10	Diamond Coral	LPG Tanker	Off Mangkai Is
01.12	Entebe Star 21	Tug (with barge)	Off Pulau Tioman

Source: IMB, *Piracy and Armed Robbery against Ships –Annual Report 2008*; ReCAAP Information Sharing Centre, *Annual Report 2008*.

Figure 4
Location of Actual Attacks of Piracy and Sea Robbery
2005-2008
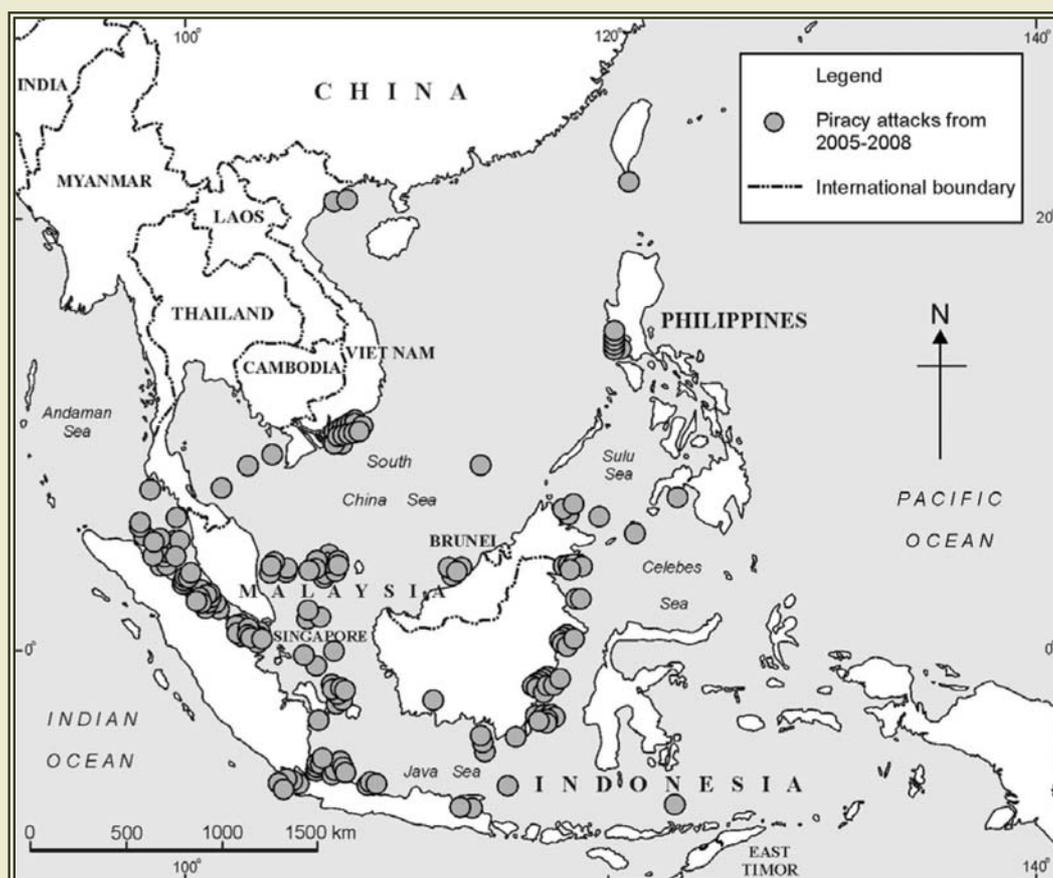
The Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP), agreed in November 2004, is a very significant achievement that provides the basis for regional cooperation to counter piracy and armed robbery against ships. It involves all ASEAN nations (except Indonesia and Malaysia), Japan, China, Korea, India, Bangladesh and Sri Lanka. It includes an information network and a cooperation regime to prevent piracy and armed robbery against ships in Asian waters.

The measures taken by regional countries both at sea and onshore have largely been effective. The Malacca Strait Patrols (MSP), initiated by Indonesia, Malaysia and Singapore, with Thailand being its most recent member, comprises the Malacca Strait Sea Patrol, the "Eyes-in-the-Sky" air patrols, the Intelligence Exchange Group, and a Joint Coordinating Committee to oversee the activities of the MSP. The MSP is a concrete set of practical cooperative measures undertaken by the littoral states to ensure the security of the Straits of Malacca and Singapore.

With the exception of security in some ports and anchorages and in some limited areas of open sea, the situation with piracy and sea robbery in the region appears to be under control. There are no grounds for the operational involvement of non-regional countries in providing security at sea against piracy and sea robbery in Southeast Asia. Nevertheless, contributions from non-regional countries would still assist in building the capacity of regional countries to provide security in ports, anchorages, and littoral waters.

Maritime Terrorism

In Southeast Asia, the vulnerability of the maritime sector to attack by terrorists has been of concern. This is due to the economic importance of the sector; the incidence of piracy and sea robbery in the region; and the presence of terrorist groups that might attack maritime targets. The risks include terrorist attacks at sea and the use of the sea by terrorist groups for movement of personnel, arms and other materials.

Possible scenarios in Southeast Asia range from highly speculative and most unlikely to credible. Most commonly postulated is physical blocking of the Malacca and Singapore Straits. The traffic separation scheme (TSS) in the vicinity of One Fathom Bank off Port Klang in the Malacca Strait is 0.6 nautical miles wide and this is often identified as an area where the strait could be blocked. However, the distance from coast to coast outside the TSS is much greater and would still allow the passage of most vessels. The most likely cause of any diversion of traffic away from the straits would be a result of the shipping community considering the Straits insecure, perhaps due to the threat of sea mining for example, rather from than the physical blocking of passage.

Ferries, and potentially cruise liners, are vulnerable to attack. Passenger ferries are numerous in the region and have been involved in recent years in some major disasters with large loss of life. Cruise liners are also becoming more common in the region.

With passenger ships and ferries, it is not so much the bomb that might do the damage but rather the fire and panic that can follow an explosion with so many people in a relatively confined area. Measures to defeat attacks against ferries are a national responsibility involving for example, better screening of passengers and their luggage and enhanced security onboard. However, regional dialogue is required to develop "best practice" solutions and cooperative management of incidents.

Several known terrorist groups have used the sea to a varying extent and have placed bombs onboard ferries. Those that have exploited the sea most effectively usually do so out of operational necessity, i.e. to facilitate the movement of personnel, arms and other supplies. Hence, the direct threat posed by terrorist at sea is significantly less than a land based target.

Trafficking at Sea

The sea is the preferred medium for the illegal movement of goods and people. Larger quantities of cargo can be shipped at sea generally with less risk of detection. Illicit shipments can also be trans-shipped at sea and brought into a country in a vessel, such as a local fishing boat, without detection by local authorities.

Drugs

Trafficking in drugs by sea remains a major source of income for many transnational organized criminal groups. Sometimes this has involved land routes, but more frequently it has involved transfers at sea, or simply floating the product ashore. There is an increasing problem in the region with the manufacture and trafficking in methamphetamines ("ice") and other amphetamine type stimulants (ATS). "Ice" has replaced heroin as the most lethal drug in the region, and its manufacture and use is increasing. This is a worrying trend because the physiological impact of "ice" is far more serious than that of heroin, cocaine, cannabis, ecstasy or other ATS. Ephedrine and pseudoephedrine, which are major precursor chemicals for the manufacture of methamphetamines and other ATS, are manufactured in Asia, and moved mostly by sea. In comparison to the rest of the world, large quantities of ATS have been seized in East Asia and Southeast Asia since 1998. (Refer to figure 5)

Figure 5
Global ATS seizures by region in metric ton equivalents
1985-2006
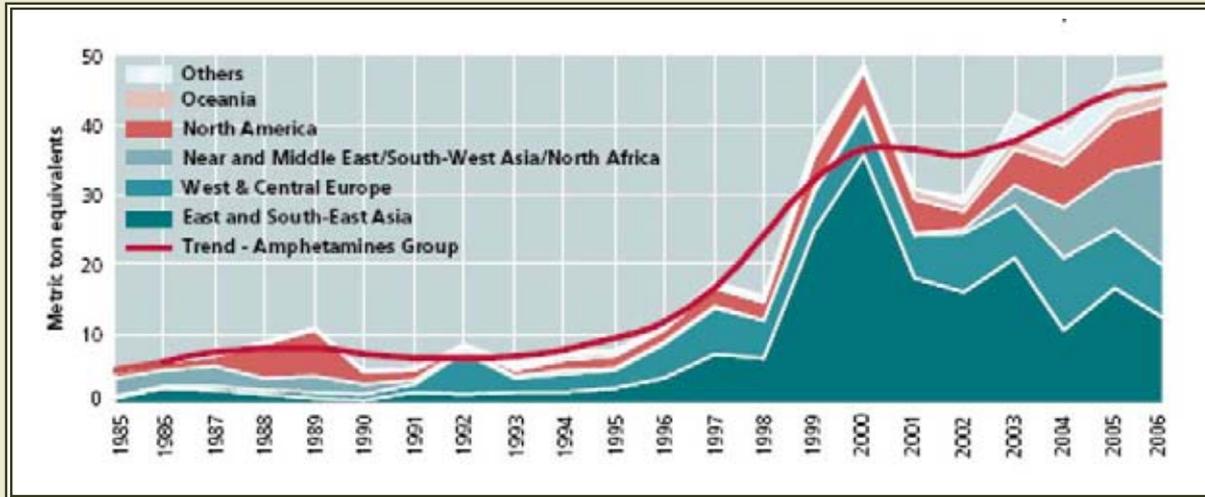
Source: UNODC, Annual Report Questionnaire Date/ Delta; World Customs Organization (WCO), Customs and Drugs Report 2006 (June 2007)

For smuggling of bulk quantities, traffickers have taken even the most daring action of the use of commercial containerized cargo. This mode of transport is deemed successful as precautions were taken to deter suspicion from customs authorities. These tactics include, hiding of drugs in commercial goods, falsely declaration of commercial goods to avoid customs thorough checks and shipment using secondary port name. Cyber trafficking has become a new mode of drugs trade over the internet. The ease of purchase and transactions over the internet has made drugs trade become more efficient and hard to control. These purchases are often delivered by legitimate shipping companies unaware of the content.

Most importantly, drug traffickers recognized that because of the huge volume of worldwide commercial trade, i.e. almost 80 percent of world trade, is transported by sea, it is almost impossible for custom authorities to inspect every single container / cargo without causing major delays and huge economic losses.

People

Southeast Asia is an important hub for human smuggling from Afghanistan, Pakistan and the Middle East countries to the United States, Canada, Australia, New Zealand and a number of South Pacific states. (Refer to figure 6) There is also evidence of human trafficking of women and children for sex or forced labour purposes.

Illegal people movement in the region may be either short-term for family reunions or other social visits, or long-term mainly to seek work. Malaysia is particularly concerned about illegal migration by sea across the Malacca Strait from Indonesia or down the Strait from Thailand, Myanmar or Bangladesh. There is much traditional movement of people by sea between southern Philippines and Sabah, as well as the movement of people between Sumatra, Malaysia and

southern Thailand. These movements may be exploited both by criminal and terrorist groups. People move illegally into the Philippines from East Kalimintan through Sandakan and the Sulu archipelago to Zamboanga and elsewhere in Mindanao; and from Manado in North Sulawesi through the Greater Sunda Islands to General Santos and Cotabato in Mindanao.

Organized groups take advantage of corrupt officials and politicians as well as weak governmental institutions within the region to broaden their actions and increase their profits. It is becoming more profitable than drugs trafficking. Furthermore, legal punishment is not as serious compared to drugs and arms trafficking. One of the main obstacles in dealing with human trafficking is victims are often parties who have consented to the trafficking actions. Even though they have been ill- treated, they refused to report to the authorities fearing that they will be deported back to their country. This makes it even difficult to clamp down the trafficking problem.

Figure 6
Reported Human Trafficking – Main origin, Transit and destination Countries
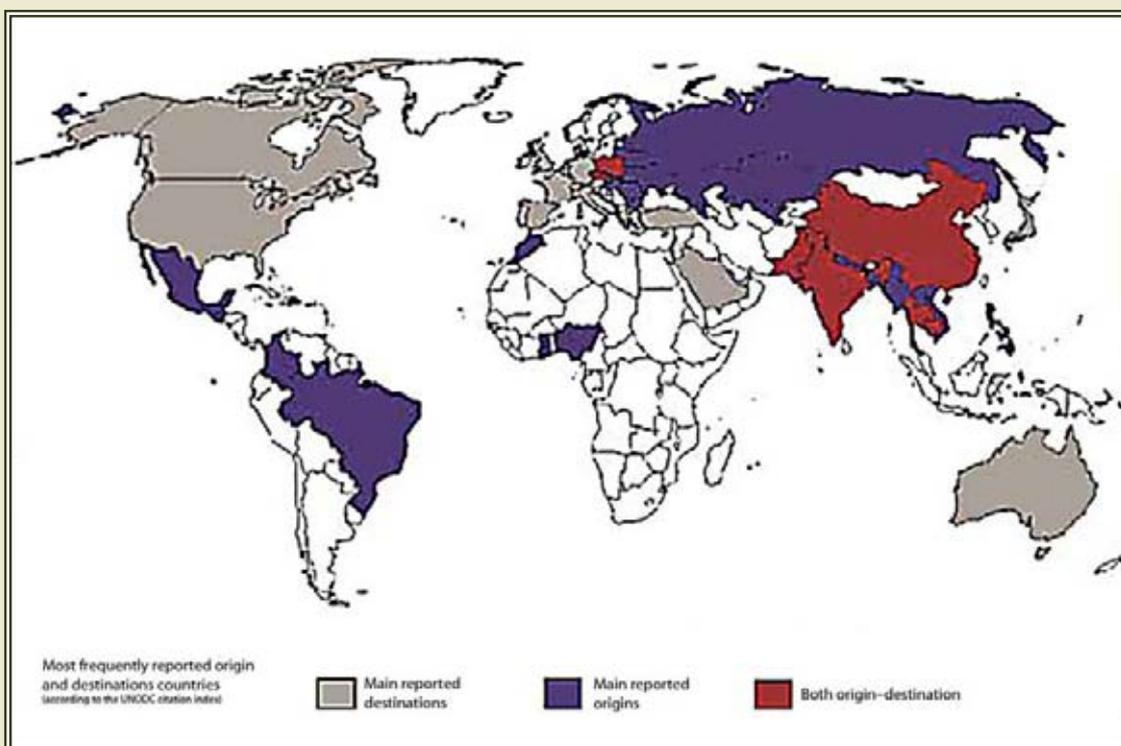
Source: United Nations Office on Drugs and Crime

Arms

Small arms and light weapons are widely available in the region and trafficking by sea is the preferred means of movement. The proliferation of small arms and light weapons is a major factor underpinning the incidence of maritime crime in Southeast Asia. Past conflicts in Indochina have provided a major source of these weapons. Thefts of weapons from military bases and police stations have also occurred. Sri Lanka is concerned that arms have also flowed to the Tamil Tigers (LTTE) from Southeast Asia.

The proliferation of small arms and light weapons is a major factor underpinning the incidence of maritime crime in Southeast Asia. Illegal trafficking occurs across the Malacca Strait and the Andaman Sea from southern Thailand into Aceh, Bangladesh, India and Sri Lanka, and is also prevalent into and out of the Philippines. Given the proliferation of small arms and light weapons in Southeast Asia, it is not surprising to find that pirates and armed robbers are making greater use of them.

Illegal Fishing

Illegal, unregulated and unreported (IUU) fishing has become a serious problem in the region, especially for Indonesia. With the depleted fish stocks in the region, many coastal villagers have lost their basic means of livelihood, and are tempted into illegal activity. The Regional Plan of Action was agreed in 2007 to promote responsible fishing practices and combat illegal fishing in SE Asia.

Problems with fisheries enforcement arise due to the lack of EEZ boundaries in parts of the region e.g. in the northern Malacca Strait. Incidents, including in the South China Sea, sometimes involve attacks on fishing vessels of one country by the fishers of another, or reportedly between the law enforcement agencies of different countries.

Marine Pollution

Coastal states in the region, particularly Indonesia and Malaysia, are very concerned about protecting the marine environment, particularly from illegal dumping at sea and ship-sourced marine pollution. These are threats to the fishing industry, coastal tourism and fragile marine environments generally. Ship-sourced marine pollution may be either accidental arising from a marine accident, such as a collision or grounding, or intentional as a consequence of normal ship operations, such as tank cleaning or pumping bilges. International conventions are in place to control intentional pollution but costs are involved in using waste reception facilities onshore and some ship masters will still pollute if they think they can get away with it.

There are occasional reports of incidents of ship-sourced marine pollution both in the Malacca Strait and the South China Sea. Factors leading to this situation would include the extent of shipping traffic in the region and the lack of effective monitoring and surveillance systems, although the technology for detecting oil spills had advanced in recent years. Synthetic Aperture Radar imaging is now available to identify and trace oil spills.

The most serious case of oil spill in recent years was reported in June 2005 at the southern coast of Malaysia and less than a decade ago in 1997; two tankers collided in the Singapore Strait resulting in the worst oil spill in Singapore with 28,500 tons of heavy marine fuel oil spilled in our waters. Even though quick actions had been taken to control the spill, it still resulted in great disruption in ship traffic along the straits.

Although the volume of chemicals transported by sea is significantly lower than the seaborne trade in oil, it is nevertheless increasing. The consequence of a chemical spill can be more wide reaching than that of oil and there is growing international awareness of the need for safe and effective contingency arrangements for chemical spills. The wide variety of chemicals transported, their varying physical and chemical properties, the different ways in which they behave in the environment and the potential for effects on human health mean that response to chemical spills is not as straightforward as for oil. Despite the damage that a spill of hazardous and noxious substances can cause to human health, living resources and marine life, the response measures to a potential chemical spill in the region is weak or non-existent as compared to the measures taken to combat oil spills. However, some initiatives are already underway. For example, under the Cooperative Mechanism to enhance the safety, security and environmental protection of the Malacca and Singapore Straits between the littoral states and the users, there is a project proposed by Malaysia for cooperation and capacity building on Hazardous and Noxious Substance (HNS) preparedness and response in the Straits of Malacca and Singapore including the setting up of HNS Response Centres over two years at a cost of US$3.5million. So far, Australia, China, United States and the International Tanker Owners Pollution Federation Limited (ITOPF) have pledged to support this project. Despite this initial start, more effort is still needed by the littoral states, in cooperation with the users, to implement HNS response measures along the key sea lanes in Southeast Asia.

Maritime Accidents

Good order at sea requires contingency plans in place to deal with a major maritime accident, such as one involving a cruise liner or a terrorist attack, or even the crash of an airliner at sea.[2] Regional search and rescue exercises (SAREX) are conducted under an agreement between ASEAN countries and ASEAN and China have also talked about SAR cooperation but so far this has been limited to "table top" exercises.

The first ASEAN Joint SAREX was conducted in 2001, covering both the aeronautical and maritime search and rescue activities. In November 2006, seven ASEAN countries, namely Malaysia, Myanmar, Singapore, Cambodia, Brunei, Vietnam and Indonesia, conducted a three-day joint SAREX in Malaysia aimed at ensuring that all regional SAR agencies are able to coordinate assistance during major emergencies. There are also various bilateral SAREX arrangements and exercises between the ASEAN countries, such as SAREX INDOPURA between Singapore & Indonesia, and SAREX MALBRU between Malaysia & Brunei.

With current search and rescue regions (SRR), Singapore has accepted SAR responsibility for a large part of the South China Sea, and has promulgated the Singapore Plan for SAR Services and Passenger Ships. However, SRR boundaries do not accord with national maritime boundaries,

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2   The loss of the Adam Air B737 aircraft in January 2007 is an example. Although the incident involved an aircraft, it occurred over the sea off the West coast of Sulawesi. The initial SAR operation appears to have been less than effective. "Fate of Adam Air plane carrying 102 remains mystery", Indanesia.com, 5 January 2007. (http://news.indahnesia.com/item/200701053/fate_of_adam_air_plane_carrying_102_remains_mystery.php)

and this along with the current low level of ratification of the SAR Convention by littoral countries, suggests that there could still be problems with mounting a large-scale maritime SAR operation in the region unless bilateral agreements have been arranged.

Figure 7
Search and Rescue Regions in Southeast Asia
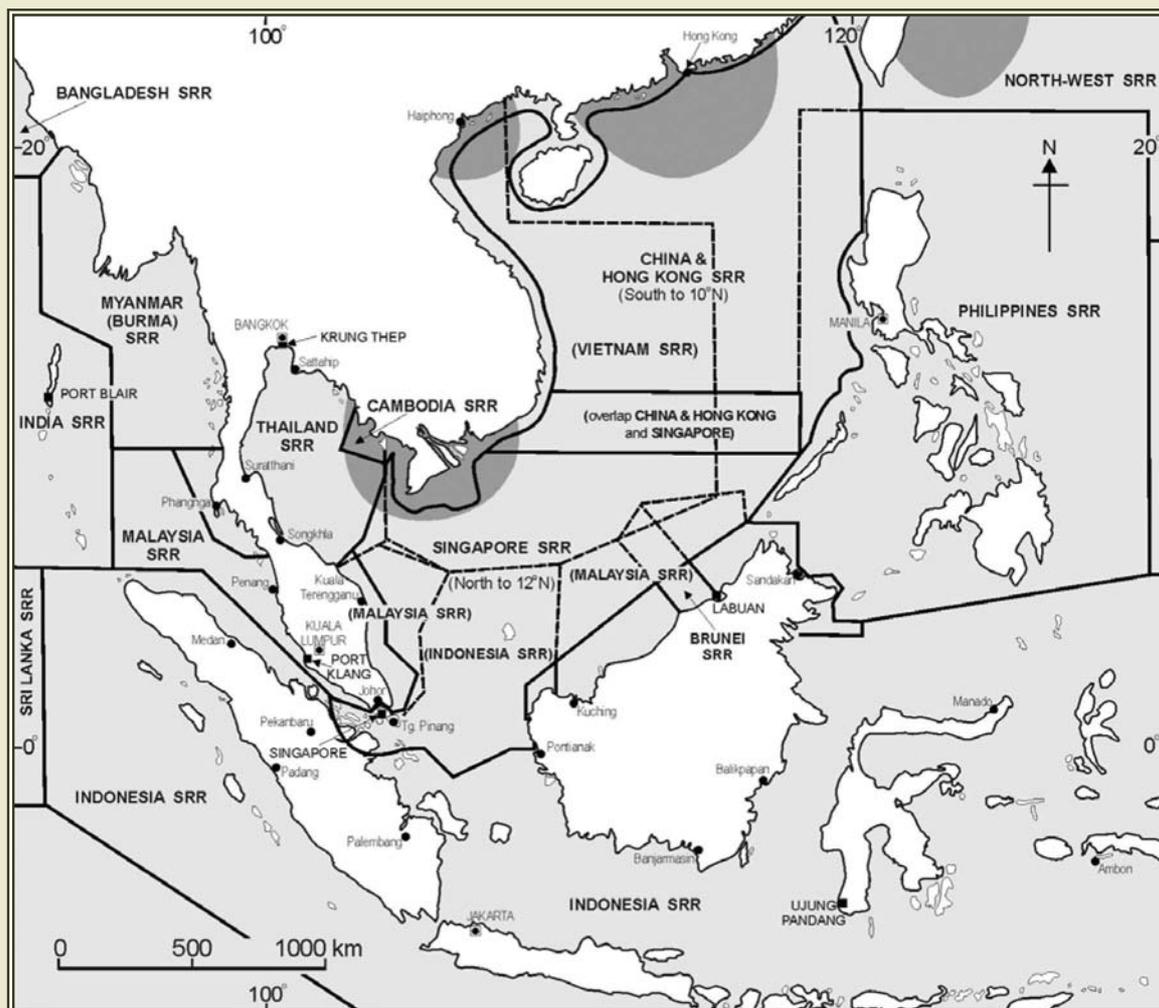
Source: Admiralty Light and Radio Signals

Seafarers and Maritime Security

Southeast Asian countries are both leading ship-owning and seafarer providing nations. Indonesia, Myanmar and the Philippines are three of the most important sources of international seafarers in the world. In 2006, the global deployment of Philippine seafarers rose to over 260,000 – constituting about one-fifth of total global seafaring employment, and an increase of 4.9 percent from 2005.

It is ultimately seafarers who ensure that ships are safely and securely operated but new security and safety measures have placed additional burdens upon them. The implementation of the International Ship and Port Facility Security (ISPS) Code has placed additional responsibilities, workload, and training and certification requirements upon seafarers without any commensurate increase in pay or conditions of service. If the security situation become less benign, governments or the insurance industry may have to incentivise shipowners to employ additional security personnel onboard.

The maritime administrations of individual countries face a demanding task in putting in place management arrangements for the new security measures. As well as the ISPS Code, implementing the 2003 International Labour Organizations' Seafarers' Identity Documents Convention places an additional burden. This convention came into force in 2005 creating the first globally applicable system of biometric identification for secure identity documents for international seafarers.

PARTICULAR AREAS OF CONCERN

The following regional sea areas are identified as ones where there is a relatively high level of illegal activity at sea and problematic maritime enforcement, in most of the areas due to the lack of maritime boundaries:

- The Sulu Archipelago between Sabah and Mindanao and separating the Sulu and Celebes Seas. Major shipping routes pass through these seas.

- The Riau Archipelago to the South of Singapore, including near the East-bound Traffic Separation Scheme (TSS) (there has been an upsurge of activity in this area during 2008)

- The southern part of the South China Sea between Pulau Tioman and the Anambas islands, and including the Riau Archipelago.

- The Northern Malacca Strait between Sumatra and the West coast of Malaysia. Although the Strait here is wide, no EEZ boundary has been agreed between the two countries.
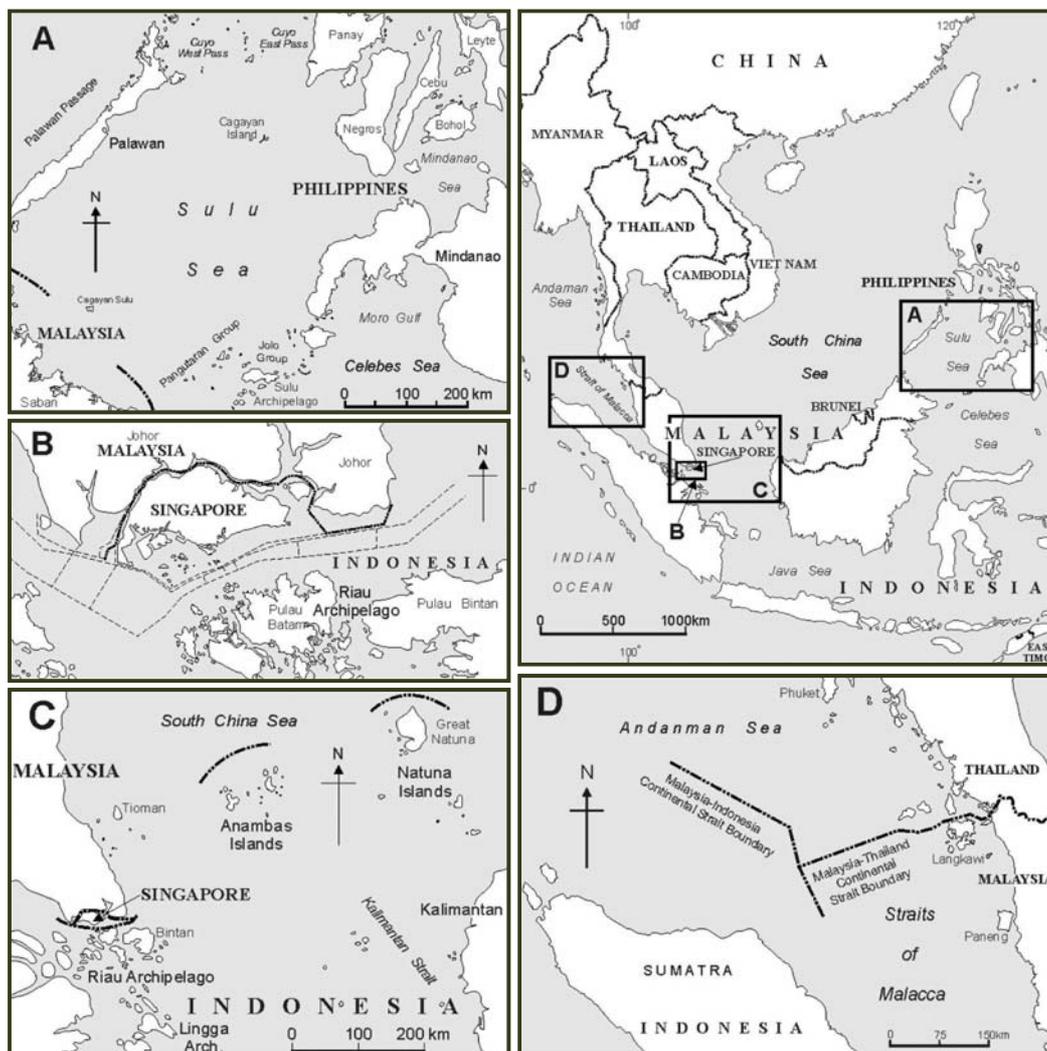
Some recent measures to enhance good order at sea in Southeast Asia have already been discussed. They include ReCAAP, the Cooperative Mechanism for the Malacca and Singapore Straits, and the Regional Plan of Action for Responsible Fishing. However, there are other measures that have been developed at a global level to enhance maritime security and provide good order at sea that so far have not been fully implemented in the regional level – at least not on a region-wide, cooperative basis.

International Instruments

Key international conventions that help establish good order at sea are shown in the box. Table 5 shows the current state of ratification by Southeast Asian countries of these key conventions. Despite frequent enjoiners from both ASEAN and the ARF to ratify these conventions, there remain major gaps in the level of their ratification. Cambodia and Thailand are not parties to UNCLOS. Only two regional countries are parties to the SAR Convention. The 1988 SUA Convention has not been ratified by Cambodia, Indonesia, Laos, Malaysia, Myanmar and Thailand. No country has yet ratified SUA 2005. The SOLAS and MARPOL Conventions have been ratified by most regional countries although some of their key protocols and annexes have not been. The OPRC Conventions have not been well ratified by regional countries and whilst the UN Convention against Transnational Organized Crime is quite well ratified in the region, its Protocols on Human Trafficking, Migrant Smuggling and Trafficking in Firearms have not been well ratified.

KEY INTERNATIONAL CONVENTIONS FOR GOOD ORDER AT SEA

- **UNCLOS** - the 1982 UN Convention on the Law of the Sea (UNCLOS) provides the broad principles for oceans governance and the framework for other international regimes and treaties.

- **SOLAS** - the 1974 Safety of Life at Sea (SOLAS) Convention – deals with the safety and security of merchant ships, and includes the International Ship and Port Facility Security (ISPS) Code.

- **MARPOL** - the International Convention for the Prevention of Pollution from Ship, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), has the objective of preventing pollution of the marine environment by ships.

- **SAR** - the 1979 Convention on Maritime Search and Rescue (SAR Convention) encourages cooperation between Parties and SAR organisations with regard to search and rescue operations at sea.

- **SUA** - the 1988 Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA), and its Protocol covering offshore facilities, extends coastal State enforcement jurisdiction against acts of violence at sea beyond territorial limits.

- **SUA 2005** - the SUA 2005 Convention brings together the 1988 Convention and its 2005 Protocol to create new measures related to maritime terrorism and shipment of WMD.

- **TOC 2000** - the UN Convention against Transnational Organized Crime (CTOC) is the main international legislation to counter organized crime and commits states to introduce a range of measures, including the creation of domestic criminal offences to counter the problem; the adoption of new frameworks for mutual legal assistance; extradition; law enforcement cooperation; technical assistance and training.

- **OPRC Convention 1990** - the OPRC Convention 1990 requires parties to establish measures for dealing with oil pollution incidents either nationally or in cooperation with other countries.

- **OPRC-HNS Protocol 2000** - the OPRC-HNS Protocol 2000 aims to provide a global framework for international cooperation in establishing systems for preparedness and response in combating incidents involving HNS at the national, regional and global levels.

Table 5
Status of Conventions and Agreements – Southeast Asian Countries

	UNCLOS	SOLAS	MARPOL	SAR	SUA 1988	SUA 2005	TOC 2000	OPRC 1990	OPRC-HNS 2000
Brunei	X	X(a)	X(a)		X		X(a)		
Cambodia		X	X(a)				X		
Indonesia	X	X(a)	X(a)						
Laos	X						X(a)		
Malaysia	X	X(a)	X(a)				X(a)	X	
Myanmar	X		X (a)				X(a)		
Philippines	X	X(a)	X(a)		X		X(a)		
Singapore	X	X	X	X	X		X(a)	X	X
Thailand		X(a)	X(a)					X	
Vietnam	X	X	X(a)	X	X				

Notes: X signifies that the Convention has been ratified and X (a) denotes that not all protocols and annexes to the Convention have been ratified.
Sources: International Maritime Organization, UN Division for Ocean Affairs and the Law of the Sea and UN Office on Drugs and Crime webpages.

To ensure good order at sea in the region, there is a need for greater attention to these conventions, enhanced legal education and better domestic legislation. Greater awareness of the benefits of the conventions is required, as well as acceptance of the principal that the sum of mutual benefits outweighs any perceived individual costs. The articulation and enactment of sound and effective legislation is extremely important. These conventions are not self-executing and require domestic legislation to put them into force.

Maritime Situational Awareness

In order to maintain good order at sea and combat transnational threats in regional waters, countries must first be aware of what is occurring in their maritime environment and have in place a responsive enforcement capacity. Currently, the weight of surveillance is borne by sea based patrols or air patrols. An example is the Malacca Straits Patrols (MSP) comprising the Malacca Straits Sea Patrols (MSSP) and the 'Eye in the Sky' (EiS) air patrols. These patrols are complemented by shore based radar surveillance in some cases like the network of coastal radars to provide vessel traffic services (VTS) in the Straits of Malacca and Singapore.

Although coastal radar surveillance is not widespread due to cost, some regional countries are enhancing their radar surveillance capability. Indonesia, with the support of the United States, is establishing 12 radar stations to provide surveillance for the Malacca Straits and 7 radars for surveillance of the Makassar Straits.

Maritime situational awareness can be improved dramatically if regional countries use the information provided by existing ship safety systems mandated by the International Maritime Organisation (IMO) and share such information. Examples of such identification systems include the Automatic Identification System (AIS) and Long Range Identification and Tracking (LRIT). The US had developed the Regional Maritime Awareness Capability (RMAC), which is a coastal surveillance programme utilising AIS and ground-based radars and sensors to provide users with situational awareness in their maritime domain.

Automatic Identification System (AIS)

The Automatic Identification System (AIS) is a broadcast system used by ship and Vessel Traffic Services (VTS) principally for the identification and locating of vessels. AIS provides a means for ships to electronically exchange ship data at regular intervals (every 2 to 10 seconds) including: identification, position, course, and speed, with other nearby ships and VTS stations. It is intended to assist the ship watchstanding officers and allow maritime authorities to track and monitor vessel movements.

Despite the advantages of having AIS information to aid in preventing collisions at sea and for improving maritime situational awareness, not all ships are required to be fitted with AIS. The SOLAS Convention requires AIS to be fitted aboard vessels on international voyages that are:

(1) self-propelled commercial vessels of 65 feet or more in length, (2) tankers, (3) passenger vessels that are above 150 gross tons, and (4) vessels that are above 300 gross tons, and all passenger ships regardless of size.

As demonstrated by the attacks on the USS Cole and the tanker Limburg, maritime attacks on shipping have mainly utilised small boats laden with explosives. Hence, tracking such small craft would increase the overall safety and security of shipping. Under the Cooperative Mechanism to enhance the safety, security and environmental protection of the Malacca and Singapore Straits between the littoral states and the users, there is a proposal by Singapore for a demonstration project of Class B Automatic Identification System (AIS) transponders on small vessels of less than 300 gross tonnes which are not required to do so under the SOLAS Regulations. The demonstration project will allow the tracking of the movements of small craft in the Malacca and Singapore Straits and will be carried out over 18 months at a cost of US$99,000. So far, Australia, Japan, Singapore and South Korea have pledged to support this project.

 Also, despite the usefulness of AIS data in improving situational awareness, regional countries do not have systems in place to share AIS data. This is unlike the North Atlantic Treaty Organisation (NATO) which has an architecture for the sharing of global AIS data via the Maritime Safety and Security Information System (MSSIS). To date, 44 countries have participated, with Singapore being the only regional participant at present.

Long Range Identification and Tracking (LRIT)

On 19 May 2006, the IMO adopted a resolution which required the establishment of an international system for the Long Range Identification and Tracking (LRIT) of ships. The new regulation on LRIT is included in SOLAS Chapter V on the Safety of Navigation through which LRIT will be implemented as a mandatory requirement for the following ships on international voyages: (1) passenger ships, including high-speed craft, (2) cargo ships, including high-speed craft, of above 300 gross tons, and (3) mobile offshore drilling units. The LRIT is to be installed on the requisite vessels by the 31 December 2008.

The LRIT information ships will be required to transmit include the ship's identity, location and date and time of the position, which will be reportedly automatically to their Flag Administration at least 4 times a day or on demand. Data derived through the LRIT will be available only to the recipients who are entitled to receive such information. The recipients include: (1) Contracting Governments to receive information about ships which have indicated their intention to enter a port facility, or a place under its jurisdiction, (2) Contracting Governments to receive information about ships navigating within a distance of 1,000 nautical miles from its coast, and (3) SAR services of Contracting Governments for the purpose of search and rescue of persons in distress at sea.

The Flag Administration can decide at any time not to provide LRIT information to other Contracting Governments in order to meet security or other concerns. To be able to exchange LRIT information with other Contracting Governments on an international basis, the national LRIT Data Centre will have to be integrated to an International LRIT Data Exchange which is currently operated and financed by the United States on an interim basis.

Ship Security Alert Systems (SSAS)

The requirement for merchant ships to be equipped with Ship Security Alert Systems (SSAS) is among recent amendments to the 1974 SOLAS Convention. All ships covered by this convention are required to have a Ship Security Alert System. When activated, the SSAS shall initiate and transmit a ship-to-shore security alert to a competent authority designated by the ship's Administration, or Flag State, including only three details; the identity of the ship, the ship's location, and an indication that the ship is under threat or that its security has been compromised. The SSAS is a silent alarm and will not raise any alarm onboard the ship. There must be at least two activation points or buttons, one must be on the navigation bridge and the others are to be situated in at least one other location of the ship.

Although good in concept, the weakness of the SSAS is that the nearby responders to threats, like the coastal states, nearby ships or security forces are not the initial parties alerted. The initial recipient of the alerts is the ship's Flag State, or an authority designated by the Flag State, which in practice is usually the ship's owner. This raises questions about whether the response to a ship's alert will be timely as the Flag State or ship's owner could be thousands of miles away from the scene of the potential security threat, whilst everyone nearby remained completely unaware of the potential danger. The timeliness of response to a security threat will be improved tremendously if coastal states were to be one of the recipients of the alerts generated by the SSAS. In addition, if the surrounding ships were also alerted, they could either render assistance or take avoidance action if required. Alerts to the coastal state and nearby ships could be effected through the ship's AIS which could be modified to display that a ship has activated the SSAS.

CHANGI COMMAND AND CONTROL (C2) CENTRE

Artist's Impression of the Changi C2 Centre
(Picture Courtesy of Republic of Singapore Navy)

In the complex post-9/11 security environment, security agencies will have to deal with an expanded spectrum of threats, some of which are transnational and non-conventional in nature, demanding greater international cooperation as well as domestic interagency collaboration. To this end, the Republic of Singapore Navy (RSN) is building the Changi C2 Centre that will enable multi-agency cooperation at home as well as facilitate greater cooperation and interoperability among international security partners in multilateral exercises and operations. The Changi C2 Centre will house three key entities: the Singapore Maritime Security Centre (SMSC), the Information Fusion Centre (IFC), and the Multinational Operations and Exercise Centre (MOEC).

The Singapore Maritime Security Centre (SMSC) is a one-stop information and response coordination centre to meet the maritime security needs of Singapore. Currently, key maritime agencies such as the RSN, the Maritime and Port Authority (MPA) and the Police Coast Guard (PCG) are all housed in different locations. With the C2 Centre, these agencies would be housed under one roof to enhance situational awareness and improve inter-agency cooperation.

The Multinational Operations and Exercise Center (MOEC) is designed to be a conducive venue for militaries, governmental, or non-governmental organization, to interact in the planning and command and control of forces and resources in various operation and exercise settings. The MOEC will provide facilities to support the conduct of bilateral and multilateral exercises, such as those held under the ambit of the Five Power Defence Arrangements (FPDA), and the Western Pacific Naval Symposium (WPNS). Should the need arise, the MOEC can also be used to facilitate international cooperation in areas such as humanitarian assistance and disaster relief (HADR). The MOEC will have the capacity to support up to

two concurrent multinational exercises or operations involving up to 180 personnel at any one time. Within the MOEC are Command & Control Information Systems that will enable a shore based Task Force Headquarters to conduct operational planning, command & control, communicate and send information to deployed ships at sea.

The Information Fusion Centre (IFC) is envisioned as a platform for fostering regional cooperation in information sharing among navies and other agencies. The IFC will fuse information shared by partner navies and agencies, and share this across a network of users, heightening the maritime situational awareness of every participant in the network, which will help cue participating countries to take actions to respond to potential threats and developing situations early. At the heart of the IFC is the Regional Maritime Information Exchange System (ReMIX), which is a WPNS initiative to share maritime security related information. There will be a reference database of more than 150,000 vessels and a software tool that is designed to flag suspicious vessels that warrant closer surveillance. The Malacca Straits Patrol Information System (MSP-IS) is an element of the ReMIX.

The Changi C2 Centre seeks to break new ground for greater national and international collaboration. When completed in July 2009, the Changi C2 Centre will not only enhance domestic inter-agency cooperation, but will also serve as a key node in a region-wide information sharing network to enhance maritime situational awareness. Hence, the facilities at the Changi C2 Centre for multi-national operations and exercises can strengthen inter-operability and enhance the region's capacity to address shared security challenges and contingencies.

CONCLUSIONS AND RECOMMENDATIONS

The 2008 Report of the UN Secretary-General to the UN General Assembly on Oceans and the Law of the Sea noted how all countries share in both the benefits of safe and secure oceans, and the responsibility for addressing major threats and challenges to maritime security. Most maritime issues are trans-boundary in nature, and give rise to shared interests between regional countries that should facilitate cooperation.

Regional cooperation is fundamental to the maintenance of good order at sea in Southeast Asia. To achieve this, effective multilateral institutions are required through which the requisite cooperation can be developed. There have been some achievements in this regard, notably in the Malacca and Singapore Straits and to some extent in the Gulf of Thailand, but much more might still be done to develop and maintain good order at sea in Southeast Asia. For instance, in order to overcome negotiation deadlocks over maritime boundaries, the states within the Gulf of Thailand have repeatedly opted to create maritime joint development zones in order to exploit hydrocarbon resources believed to be located in areas of overlapping claims. During the PEMSEA (Programme on Building Partnerships in Environmental Management for the Seas of East Asia) 4th Sub-regional meeting on the Gulf of Thailand in 2005, states also agreed to build capacity in combating sea-based sources of marine pollution, especially in response to oil spills. The "triborder sea area" between Indonesia, Malaysia, and the Philippines in the Sulu and Celebes seas is a particular area requiring a more institutionalized approach to maritime cooperation.

It is important that the benefits of cooperation are recognized and accepted. However, there are often factors that inhibit cooperation. There can be concern that cooperation may involve a loss of sovereignty and independence, or could prejudice claims to sovereignty or a negotiating position in maritime boundary discussions. To overcome this concern, any bilateral or multilateral instrument providing for cooperation should make clear, where necessary, that agreement is without prejudice to any claim to territorial sovereignty, sovereign rights over resources, or jurisdiction over territory or maritime zones.

Key Outcomes

The recommendations in this paper are grouped according to the following three key outcomes:

- further institutionalization of the process of regional cooperation for good order at sea, including the development, where appropriate, of institutional arrangements and capacity-building;

- enhancement of processes for risk assessment and reduction; and

- development of more effective arrangements for information sharing and data collection.

Regional Cooperation

The first desirable outcome is to do more to institutionalize the process of regional cooperation for good order at sea. ASEAN and the ARF have made some first steps in this regard but the process should be speeded up, including both "top down" initiatives that might come out of the ARF and ASEAN and "bottom-up" steps using existing processes as "building blocks" to further the process of cooperation. To facilitate this process, it is important that regional countries move quickly to ratify relevant international conventions rather than just paying "lip service" to their existence. Outstanding maritime boundaries should also be resolved as soon as possible.

At a "top down" level, the ASEAN Maritime Forum (AMF) and the ARF ISM on Maritime Security both offer possible frameworks under which regional cooperation for good order at sea might be developed. The ASEAN Maritime Forum was first mooted at the ASEAN Foreign Ministers' meeting in Jakarta in June 2004, but was still under discussion in September 2007 at the Workshop on the Establishment of an ASEAN Maritime Forum held in Batam. The AMF is currently envisaged as comprising Track 1.5, Track 2, and business sector representatives and is likely to make recommendations to the various sectoral Senior Officials Meetings for their consideration. The ARF ISM on Maritime Security on the other hand, involves only government officials and the first meeting was held in Surabaya, Indonesia on the 5-6 March 2009. The meeting was co-chaired by Indonesia, Japan and New Zealand.

The Batam Workshop in September 2007 recognised that the ASEAN Maritime Forum might consider maritime issues involving enclosed and semi-enclosed seas. This is a reflection of the fact that several such seas are located within Southeast Asia, notably the South China Sea, Celebes Sea, Sulu Sea, Gulf of Thailand, Andaman Sea, and the Timor Sea. Under Part IX of UNCLOS, countries bordering a semi-enclosed sea have a strong obligation to cooperate with regard to the management of marine living resources, the protection of the marine environment and marine scientific research. However, the opening sentence of UNCLOS Article 123 sets a more general obligation to cooperate, and that responsibility might be interpreted as including the maintenance of good order at sea.

The Council for Security Cooperation in Asia Pacific (CSCAP) recently promulgated CSCAP Memorandum No. 13 - *Guidelines for Maritime Cooperation in Enclosed and Semi-Enclosed Seas and Similar Sea Areas of the Asia Pacific*. These are a set of fundamental, non-binding principles to guide maritime cooperation in enclosed and semi-enclosed seas, and help develop a common understanding and approach to maritime issues. They provide a useful guide to the further development of regional maritime cooperation.

At a "bottom up" level, ReCAAP and existing ASEAN regional associations offer potential for the development of initiatives that would promote good order at sea. ReCAAP has many strengths, including its identification of focal points in participating countries and its capacity-building programme. Despite the limitation that Indonesia and Malaysia are both not parties to ReCAAP

at present, it provides a useful "building block" for a more integrated approach to good order at sea. Given that the piracy and armed robbery situation is under control, ReCAAP may consider addressing other transnational challenges, like arms and human smuggling. Special consideration must also be given to invite Malaysia and Indonesia to join ReCAAP. Also, Malaysia and Indonesia should seriously consider joining ReCAAP as it is in their interests to do so. By delaying their joining of ReCAAP, they are signalling that they are not cooperative when it comes to addressing transnational issues and it would therefore be unreasonable for them to expect others to cooperate with them in addressing other transnational issues in return.

The ASEAN Ports Association (APA) is another existing organization with potential to contribute to processes for good order at sea, particularly as most incidents of armed robbery against ships in the region occur in ports and anchorage. However, a perusal of the association's *Best Practices Manual on Safety, Health, Environment and Security*, issued in November 2005, suggests that its security focus at present is entirely on the land side of a port with consideration of issues such as access control and the prevention of pilferage with no reference to security on the waterside of a port or to the ISPS Code.

Recommendations

- The ASEAN Maritime Forum process should be re-invigorated and the ARF ISM on Maritime Security supported as frameworks for developing a regionally institutionalized approach to good order at sea.

- All regional countries should ratify relevant international Conventions related to the provision of good order at sea.

- Agreements on regional maritime boundaries should be reached as soon as possible.

- Regional countries bordering a semi-enclosed sea should fulfill their obligations under UNCLOS Article IX, noting that CSCAP Memorandum No. 13 provides a useful guide to the fulfillment of these obligations.

- A formal trilateral mechanism should be introduced to provide for safety, security and environmental protection in the Sulu and Celebes Seas.

- Dialogue should be initiated between Indonesia, the IMO and user States regarding the provision of safety, security and environmental protection in the Lombok and Makassar Straits.

- The capability and role of ReCAAP should be expanded so that it becomes an effective "clearing house" for regional maritime security information through its focal points.

- Indonesia and Malaysia should seriously consider joining ReCAAP.

- Port administrations should be assisted, possibly through the APA, to build their capacity to suppress armed robbery against ships and other forms of maritime crime within anchorages and port approaches.

- The less well equipped, seafaring providing countries in the region should be assisted with building their capacity to implement and manage new requirements for the training and certification of seafarers, including the provision of seafarer identity documents.

Risk Assessment and Reduction

There are numerous threats to good order at sea in Southeast Asia. These range from low-level threats with little impact on the region generally to the major and catastrophic ones that would have serious implications for regional stability and prosperity. Generally there is a correlation between the low likelihood of a particular threat and its consequences with the more improbable threats having the greatest impact.

Minor threats include piracy and armed robbery (as currently conducted in the region), ship-sourced marine pollution, illegal fishing, a limited terrorist attack on a ferry, and smuggling. Major threats include a marine natural disaster arising from a cyclone or tsunami, a more serious terrorist attack, or a clash between maritime security forces in an area of conflicting claims to sovereignty. The mitigation of the risks of these threats requires more attention to preventive diplomacy and maritime confidence and security building measures, including bilateral or multilateral agreements in areas of disputed sovereignty or where maritime boundaries have not been agreed. The proliferation of small arms and light weapons in the region increases the dangers with some of these threats.

The region's ability to deal with these threats requires a cooperative approach to the analysis of the threats and contingency planning. Piracy and armed robbery at sea are an example of a common threat in the region that would benefit from more detailed analysis of the incidents that do occur. For example, the vulnerability of a ship to an attack while underway depends on factors such as the type of ship, its speed, location and the nature of is voyage, but no regional organization is conducting detailed research into these factors.

Search and rescue (SAR) and marine natural disaster relief are associated tasks that offer possible "useful building block" for regional cooperation. An incident on a passenger ferry, cruise ship, or offshore oil and gas installation are the types of incident, for which cooperative regional contingency planning would be useful.

Recommendations

- Effective bilateral (or trilateral) agreements should be developed to manage an incident in areas where conflicting claims to sovereignty or maritime boundaries have not been agreed.

- Cooperative measures should be considered to control the proliferation of small arms and light weapons in the region, including the prevention of trafficking at sea in such weapons.

- More accurate analysis and assessments should be developed of the risks of piracy and armed robbery against ships.

- Regional cooperation for maritime search and rescue (SAR) should be strengthened.

- Cooperative contingency arrangements should be developed to manage a major incident involving a cruise liner or passenger ferry or offshore oil and gas installation in the region.

- Regional countries should cooperate with users and other stakeholders to implement HNS response measures along the key sea lanes in Southeast Asia.

Information Sharing

A higher level of good order at sea in Southeast Asia requires that regional countries takes steps to enhance the sharing of information between them relevant to the detection, prevention and suppression of threats to good order at sea. Arrangements should be in place to ensure that incidents of piracy and armed robbery at sea are promptly reported to the relevant authorities. This information sharing and prompt reporting should also help to ensure that offenders are prosecuted according to national legislation.

Several current measures are already available to provide for information sharing and prompt reporting of incidents, but for a number of reasons these are not well adhered to in the region. As has been noted, Indonesia and Malaysia are not parties to ReCAAP, and IMO measures, notably AIS, LRIT and SSAS, are not effectively implemented in the region at present.

Recommendations

- The Automatic Identification System (AIS) should be implemented on vessels below 300 gross tons and on vessels that are on local voyage.

- Regional countries should share AIS data via the Maritime Safety and Security Information System (MSSIS)

- A regional approach should be developed to the long-range identification and tracking of ships.

- Regional protocols should be established for handling alerts from the Ship Security Alert System SSAS alerts should be sent to the coastal states as well as to nearby ships in addition to being sent to the flag state.

- Regional navies should send liaison officers to participate in information sharing activities at the Information Fusion Centre (IFC) of the Changi Command and Control (C2) Centre.

INTRODUCTION

This document puts forward the proposed Guidelines for Maritime Cooperation in Enclosed and Semi-Enclosed Seas and Similar Sea Areas of the Asia Pacific, which have been developed by the Study Group on Facilitating Maritime Cooperation in the Asia Pacific established by the Council for Security Cooperation in Asia Pacific (CSCAP). The Guidelines are a set of fundamental, non-binding principles to guide maritime cooperation in the enclosed and semi-enclosed seas of the region, and to help develop a common understanding and approach to maritime issues in the region.

Background

Many of the seas in the Asia Pacific region are enclosed or semi-enclosed seas within the definition in Article 122 of the 1982 UN Convention on the Law of the Sea (UNCLOS).[3] UNCLOS Article 123 states that:

> States bordering an enclosed or semi-enclosed sea **should** cooperate with each other in the exercise of their rights and in the performance of their duties under this Convention. To this end they **shall** endeavour, directly or through an appropriate regional organization:
>
> (a) to coordinate the management, conservation, exploration and exploitation of the living resources of the sea;
>
> (b) to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment;
>
> (c) to coordinate their scientific research polices and undertake where appropriate joint programmes of scientific research in the area;
>
> (d) to invite, as appropriate, other interested States or international organizations to cooperate with them in the furtherance of the provisions of this article.

This is a strong obligation, but cooperation in the management of regional enclosed and semi-enclosed seas falls short at present of what is desirable. This is due largely to the existence of sovereignty disputes and overlapping boundary claims that inhibit the process of cooperation and a perception that cooperation involves some giving up of sovereignty.

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3 The regional seas which fall within this definition include: Sea of Japan, Yellow Sea, East China Sea, Gulf of Tonkin, South China Sea, Celebes Sea, Sulu Sea, Gulf of Thailand, Andaman Sea, Timor Sea, Arafura Sea.

While resource management, the protection of the marine environment and marine scientific research are mentioned specifically as areas for cooperation, the opening sentence of UNCLOS Article 123 sets a more general obligation to cooperate. That responsibility might be interpreted as including security and safety, including the maintenance of law and order at sea.

Less than half the maritime boundaries required in the seas of Southeast and Northeast Asia have been agreed. In many cases, sovereignty disputes over offshore islands and other features inhibit further progress with maritime boundary delimitation. These disputes are unlikely to be resolved in the short-term, and in the meantime, important areas of cooperation are not being addressed, including cooperation for maintaining law and order at sea (including against piracy, maritime terrorism, proliferation of weapons of mass destruction (WMD), and illegal trafficking in arms, drugs, protected resources or people), search and rescue, navigational safety, and marine environmental protection.

Importance of these Guidelines

The importance of these Guidelines flows from the nature and complexity of the regional geographical environment, the significance of maritime issues in the region, and the propensity for illegal activities and disputes to occur at sea. Maritime cooperation in the enclosed and semi-enclosed seas will contribute to regional stability by easing tensions and reducing the risks of conflict.

In putting forward these Guidelines, the Study Group acknowledges that several important management regimes, including conflict avoidance mechanisms, are already in place for the enclosed and semi-enclosed seas of the Asia-Pacific. These include:

- The ASEAN-China Declaration on the Conduct of Littoral states in the South China Sea 2002
- The Japan-China Mutual Prior Notification Regime for Scientific Research in Waters of Interest to each other
- Various bilateral Fisheries Cooperative Agreements and Joint Development Zones

The Guidelines seek to build on these existing mechanisms and extend the valuable lessons that have already been learned through the development of these mechanisms.

Purpose of Guidelines

The Guidelines serve several purposes:

- First, they should serve as a basis for preventive diplomacy, constituting an important regional confidence-building measure that lays down general principles for regional maritime cooperation in line with the ASEAN Regional Forum's (ARF's) long term objective of becoming a mechanism for conflict prevention. They should serve to encourage cooperation, particularly in enclosed or semi-enclosed seas with overlapping claims to maritime jurisdiction.

- Secondly, they serve as a step in the process of enhancing oceans governance in the Asia Pacific region based on UNCLOS and the notion of integrated management of oceans issues.

- Thirdly, the Guidelines should help promote a stable maritime regime in the region with the free and uninterrupted flow of seaborne trade, and nations able to pursue their maritime interests and manage their marine resources in an ecologically sustainable manner in accordance with agreed principles of international law.

Legal Status of the Guidelines

The proposed Guidelines are non-binding in nature. They set down broad principles of cooperative behaviour, and do not create legally binding obligations between states. In keeping with their non-binding but persuasive nature, the guidelines are framed in exhortatory rather than obligatory language.

Previous CSCAP Memorandums

The previous CSCAP Memorandums are relevant to these Guidelines:

- CSCAP Memorandum No. 4 – Guidelines for Regional Maritime Cooperation (December 1997)

- CSCAP Memorandum No. 5 – Cooperation for Law and Order at Sea (February 2001)

- CSCAP Memorandum No. 6 – The Practice of the Law of the Sea in the Asia Pacific (December 2002)

Recommendation

It is recommended that these Guidelines be endorsed by the ARF.

GUIDELINES FOR MARITIME COOPERATION IN THE ENCLOSED AND SEMI-ENCLOSED SEAS OF THE ASIA PACIFIC

The participating states of the ASEAN Regional Forum:

Conscious that the issues of oceans management are closely interrelated and need to be considered as a whole;

Affirming the duty among all States to utilise the oceans for peaceful purposes;

Acknowledging the importance of resolving sovereignty and jurisdictional disputes peacefully and without resort to force;

Supporting the intention of the ASEAN Regional Forum (ARF) to foster a regional environment conducive to maintaining the peace and prosperity of the Asia Pacific region;

Taking into account the provisions of the 1982 United Nations Convention on the Law of the Sea (UNCLOS), particularly those in Part IX;

Taking into account emerging practice with regard to maritime cooperation in all parts of the world;

Acknowledging the importance of seaborne trade in the Asia Pacific region;

Mindful of the interests which countries share in the marine environment, and in a spirit of cooperation, friendship and goodwill; and

Convinced that these guidelines will promote regional maritime cooperation and contribute to the peace, good order and continuing prosperity of the Asia Pacific region;

Hereby adopt the following non-binding Guidelines for Maritime Cooperation in the Enclosed and Semi-enclosed Seas of the Asia-Pacific.

DEFINITIONS

1. For the purposes of these Guidelines:

"archipelagic waters" means those waters enclosed by the archipelagic baselines of an archipelagic State drawn in accordance with Article 47 of the UNCLOS;

"continental shelf" means the submarine area of seabed and subsoil as defined by Part VI of the UNCLOS;

"enclosed or semi-enclosed sea" means a gulf, basin or sea surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States, as defined by Part IX of the UNCLOS;

"exclusive economic zone" means an area superjacent to the sea-bed, the sea-bed and subsoil, as defined by Part V of the UNCLOS;

"high seas" means those waters to which the provisions of Part VII of the UNCLOS applies;

"littoral states" means states in the Asia-Pacific region bordering on an enclosed or semi-enclosed sea;

"marine environment" includes the oceans and all seas and adjacent coastal areas, as well as the seabed and ocean floor and subsoil thereof;

"marine scientific research" means ship or air-based activities undertaken in the marine environment for peaceful purposes and for the benefit of humanity as a whole to enhance scientific knowledge regarding the nature and natural processes of the seas and oceans, the seabed and subsoil;

"overlapping claims" refers to marine areas over which two or more states claim sovereignty or sovereign rights;

"pollution of the marine environment" means the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities, as defined by Part I of the UNCLOS;

"sea lines of communication" is the term used to describe shipping routes used for seaborne trade; and

"territorial sea" means the belt of sea which is claimed by the coastal State as territorial sea in accordance with Section 2, Part II of the UNCLOS.

NON-PREJUDICIAL

2. Nothing contained in these Guidelines should be interpreted as prejudicing the position of any littoral state in its claims to territorial sovereignty, sovereign rights over resources, or jurisdiction over territory or maritime zones.

RIGHTS AND DUTIES

3. Littoral states recognise:

   - the sovereignty and responsibilities of states in respect of their internal waters, territorial seas, and archipelagic waters;

   - the sovereign rights, jurisdiction and duties of coastal states with regard to exclusive economic zones and continental shelves; and

   - the rights, jurisdiction and duties of other states in the various maritime zones as provided by the UNCLOS, other conventions, treaty obligations and general international law.

MARITIME COOPERATION

4. Littoral states recognise the importance of cooperation for the management of the marine environment, particularly for enclosed and semi-enclosed seas.

5. Littoral states acknowledge and appreciate the progress already being made with activities to prevent conflict and promote cooperation in the enclosed and semi-enclosed seas of the Asia-Pacific. These experiences provide valuable lessons in practical maritime cooperation.

6. Littoral states accept the importance of an inclusive approach to maritime cooperation, noting the interests of relevant stakeholders.

USE OF FORCE

7. Littoral states agree to use the sea for peaceful purposes only and without resorting to the threat or use of force except as provided for in the Charter of the United Nations.

SEA LINES OF COMMUNICATION

8. Littoral states recognise the importance of the freedoms and rights of navigation, in accordance with the provisions of UNCLOS, to the maintenance of seaborne trade in the Asia Pacific region.

HUMANITARIAN ASSISTANCE

9. Littoral states recognise the benefits of working together on the prevention, mitigation and management of maritime natural disasters, including preparedness and early warning systems, the exchange of information, compilation of data bases, planning, disaster reduction and relief activities, as well as training and education programs.

SEARCH AND RESCUE

10. Littoral states are encouraged to promote greater sharing of maritime Search and Rescue (SAR) experience and expertise, as well as facilitate coordination and cooperation in SAR training and procedures.

11. Littoral states are encouraged to consult with regard to the ratification, implementation and participation in relevant conventions and instruments concerning maritime SAR.

12. Littoral states are encouraged to develop cooperative arrangements on SAR operations with other states surrounding enclosed and semi-enclosed seas.

NAVIGATIONAL SAFETY

13. Littoral states are encouraged to promote navigational safety by measures such as adequate charting, notices to mariners, navigational aids, and notification of recommended shipping routes, as appropriate.

14. Littoral states are encouraged to consult with regard to the ratification, implementation and participation in relevant conventions and instruments concerning maritime safety.

15. Littoral states are encouraged to cooperate to promote navigational safety including in areas of overlapping maritime claims within enclosed and semi-enclosed seas.

CONTINGENCY PLANNING

16. Littoral states should ratify and take all necessary measures to implement the International Maritime Organization (IMO) Conventions on preparedness, response and cooperation to deal with spills of oil or noxious and hazardous substances.

17. Littoral states are encouraged to cooperate with each other and with the private sector in the development of regional and sub-regional contingency plans to mitigate the effects of marine natural hazards and to manage the consequences of a major maritime disaster, including a serious environmental threat, such as an oil spill, or an accident on an offshore oil or gas installation.

LAW AND ORDER AT SEA

18. Littoral states recognise the importance of cooperation in the maintenance and enforcement of law and order at sea, including the prevention of piracy and armed robbery against ships, poaching of marine resources, the illicit transport of people, drugs, arms and weapons of mass destruction, and other illegal activities.

19. Littoral states are encouraged to institute regular meetings to enhance cooperation and coordination in their maritime enforcement activities.

INFORMATION SHARING

20. Littoral states recognize the importance of information for the exercise of their rights and the fulfillment of their obligations in enclosed or semi-enclosed seas, and are encouraged to work towards arrangements for the sharing of information with other littoral states.

21. Littoral states are encouraged to discuss and form mechanisms with other littoral states for future information exchange with other littoral states on military exercises, especially in areas where there are overlapping claims.

PROTECTION AND PRESERVATION OF THE MARINE ENVIRONMENT

22. Littoral states recognise their individual and collective obligation to protect and preserve the marine environment.

23. Littoral states should consult with regard to:

- cooperation in taking all measures necessary to prevent, reduce, monitor and control pollution of the marine environment from all sources;

- the ratification, implementation and participation in relevant conventions and instruments concerning all aspects of protection, preservation and monitoring of the marine environment;

- measures to implement the relevant IMO Conventions that establish liability to ensure that funds for compensation and clean-up are available; and

- the development and implementation of contingency plans to respond to pollution incidents in the marine environment.

MARINE RESOURCES

24. Littoral states are encouraged to consult in the formulation and harmonisation of policies for the conservation, management and sustainable utilisation of marine living resources that straddle maritime zones, or which are highly migratory, or occur in the high seas.

25. Littoral states are encouraged to consult in the formulation and harmonisation of policies for the exploration and exploitation of marine non-living resources which occur across two or more zones of national jurisdiction, especially in cases where a shared resource can be exploited, wholly or in part, from one or more of the zones of national jurisdiction.

PROVISIONAL ARRANGEMENTS

26. Littoral states are encouraged to consider entering into provisional arrangements of a practical nature in areas of overlapping claims in accordance with UNCLOS Articles 74 and 83; and should seek to reach agreement on the sharing of resources in areas of overlapping claims or the resources accruing therefrom in an equitable manner, bearing in mind relevant state practice in the Asia Pacific.

27. Littoral states which cooperate in areas of overlapping claims have the right to declare that their cooperation shall not prejudice or diminish in any manner whatsoever their position with respect to existing sovereignty and maritime boundary claims.

28. Littoral states are free to declare that their cooperation with other states in an area of overlapping claims does not constitute any form of recognition of the legitimacy of the sovereignty claims or maritime boundary claims of other states in the overlapping area.

MARINE SCIENTIFIC RESEARCH

29. Littoral states are encouraged to cooperate, directly or through competent international, regional or sub-regional organisations, for the purpose of promoting studies, undertaking programs of scientific research and encouraging the exchange of information and data acquired about the marine environment, particularly about pollution of the marine environment and changing sea levels.

30. Littoral states should promote the establishment of regional marine scientific and technological research centres in accordance with UNCLOS Article 276.

31. Littoral states are encouraged to consult on efforts to harmonise their respective procedures, in accordance with Part XIII of UNCLOS, for granting consent to proposed marine scientific research projects in their exclusive economic zones and on their continental shelves.

CAPACITY-BUILDING

32. Littoral states recognise the benefits of technical cooperation and capacity-building, and are encouraged to implement relevant programs in the maritime sector designed to build infrastructures, institutions and capabilities for policy formulation and implementation. This includes information sharing and development of databases.

33. Littoral states are encouraged to cooperate on capacity building, including the development and promotion of training and educational programs for the management of the marine environment, particularly for the maintenance of safety and law and order at sea, the preservation and protection of the marine environment, and the prevention, reduction and control of marine pollution. Such cooperation might include:

- the offer of places on national training courses to other parties;

- sharing curriculum and course information;

- the exchange of naval and law enforcement personnel, scientists and other experts;

- the exchange of views on maritime issues;

- holding conferences, seminars, workshops and symposiums on maritime subjects of common interest;

- fostering cooperation among maritime training institutions and research centres; and

- cooperation in the collection and analysis of biological and ecological data.

34. Littoral states are encouraged to seek assistance in capacity building from international aid agencies and developed countries.

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ABOUT RSIS

The S. Rajaratnam School of International Studies (RSIS) was inaugurated on 1 January 2007 as an autonomous School within the **Nanyang Technological University (NTU)**, upgraded from its previous incarnation as the **Institute of Defence and Strategic Studies (IDSS)**, which was established in 1996.

The School exists to develop a community of scholars and policy analysts at the forefront of Asia-Pacific security studies and international affairs. Its three core functions are research, graduate teaching and networking activities in the Asia-Pacific region. It produces cutting-edge security related research in Asia-Pacific Security, Conflict and Non-Traditional Security, International Political Economy, and Country and Area Studies.

The School's activities are aimed at assisting policymakers to develop comprehensive approaches to strategic thinking on issues related to security and stability in the Asia-Pacific and their implications for Singapore.

For more information on the School, visit www.rsis.edu.sg

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