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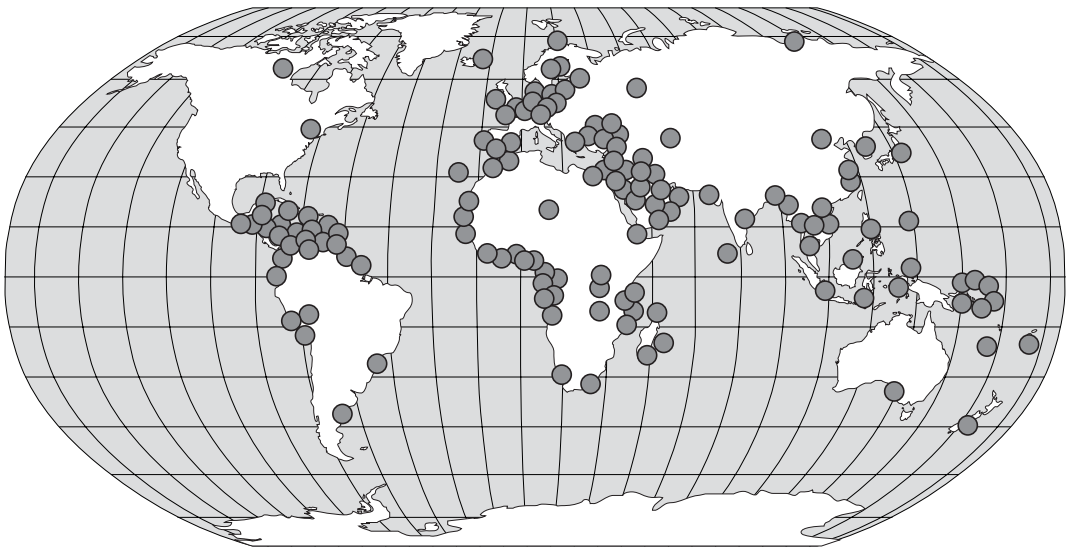
COAST GUARDS OF THE WORLD

AND EMERGING MARITIME THREATS

Dr Prabhakaran Paleri



OCEAN POLICY RESEARCH FOUNDATION

COAST GUARDS OF THE WORLD

AND EMERGING MARITIME THREATS

Dr Prabhakaran Paleri

OCEAN POLICY RESEARCH FOUNDATION
(Ship and Ocean Foundation)

Map on the Cover Page: World Coast Guards. The map is not to scale and as per exact locations. The map is subject to change. For general reference only.

Disclaimer:

The views expressed in this publication are exclusively that of the author and do not represent the policies and opinions of any government or organisation.

This publication is dedicated to the valiant men and women of the coast guards of the world who work in the service of humanity.

Key Words

Chapter 1

Geostrategic entity, ocean, ocean based land view, military approach, geoproperty rights, capability limitations, maritime, global common, transnational ocean crimes, ocean divisions, landlocked, islands, unlawful activities, coastal, global warming, disputes, fractal, United Nations, collective security, geopolitical gravity, incidents at sea, supranational, protectorates, maritime threats, vantage points, ocean property, legal continental shelf, exclusive economic zone, territorial waters, win-win game strategy, transnational crimes, coastal population, geometrics, sea line of communication, ocean dependency.

Chapter 2

Coast guards, maritime force, combat navy, intentional law, warfighting, counter piracy operations, pirates, threats, law enforcement, service, duties and functions, asymmetry, territorial sea, continental shelf, contiguous zone, exclusive economic zone, embedded, fishing zone, voluntary service, maritime zones, continental margin, island nation, coastal territory, island territory, coastal entity, landlocked entity, ocean entities, land entities, ancient, evolution, ensign, joint coast guard,

Chapter 3

Threat, threat matrix cube, maritime domain, Maritime domain awareness, Maritime domain awareness, perils of the sea, mission statements, at sea, from the sea, trafficking, preemption, crime at sea, smuggling, armed robbery, maritime fraud, maritime terrorism, militant piracy, poaching, bio pollution, stealth, territorial aggression, other-than-war situation, ocean dependant, regional cooperation

Chapter 4

Concept, capabilities, constraints, agent of change, generic term, entity-specific, range of functions, role cropping, regional order, global commons, military, paramilitary, operational philosophy, cooperative engagement, elemental functions, decision-making, amalgamation, value analysis, identity of mind, cost-benefit analysis, operational efficiency, international outlook.

Chapter 5

Conventional military threats, globalised complex risks, teeth to tail ratio, futuristic outlook, power projection, preventive deterrence, chartered duties, collectivity, projections, territorial insecurity, interactive, global participation, equitable allocation, sovereignty, cooperation, operational culture, initiatives, Shared understanding, telescoping, intelligence, cutting edge, amalgamation, functional obsolescence, flexibility, interoperability, method inertia.

FOREWORD

Mr. Masahiro AKIYAMA
Chairman, Ocean policy Research Foundation
(Ship & Ocean Foundation)

I knew Dr. Prabhakaran Paleri as a dedicated officer of the Indian Coast Guard, now leading a well deserved retired life after being its director general. I had occasions to listen to his talks on maritime subjects and read his writings on the Indian Coast Guard. He had also addressed the Ocean Policy Research Foundation during the Indo-Japan maritime security dialogue held during 2004 and 2007. His initiative and contributions towards the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) had been substantial from the very beginning from the Indian side.

The Ocean Policy Research Foundation was privileged to have him as a visiting fellow for a short period. Considering, he is more or less an institution by himself in the affairs of the coast guards and international cooperation, he was entrusted with the task of researching on the subject in the light of his academic and professional qualifications and experience. He has been able to write a book instead of a paper on a subject that, according to him is as vast as the ocean itself, for the benefit of scholars, researchers and practitioners. He feels the coast guards of the world are not getting the desired attention to utilize them to their fullest capacity as internationally acceptable forces for cooperation in maritime affairs. He also feels that at least all the littoral nations should have a formal coast guard in the post UNCLOS world. The Ocean Policy Research Foundation is glad to bring out his view points in this publication entitled *Coast Guards of the World and Emerging Maritime Threats* as a viewpoint of an experienced researcher and practitioner for the benefit of all concerned for extending studies in this evolving subject matter.

I also feel that we need to connect the nations and the people of the world in maritime matters. The umbilical chord of trade and commerce passes through the ocean. The coast guard is one of the highly acceptable vehicles for establishing connectivity by cooperation considering, as Dr. Paleri says, '*It is a service with enforcement and service in its charter that it carries out with a human face in other-than-war situations.'* In that case all the concerned nations will have to first build them (CGs) and learn to operate them to their fullest extent. I have no doubt that the coast guards of the world will be capable of handling the emerging threats of the future in the maritime terrain as envisaged by Dr. Paleri in his research provided they get sufficient support from their governments and the international community.

With this I thank Dr. Paleri *for* his work and present this publication as part of the Ocean Policy Studies of the Ocean Policy Research Foundation.

PREFACE

'It is for the government to decide on policy and use its armed forces in the best interest of the nation and, thereby, its people based on the Constitution. To think otherwise will be a sign of impudence and, thereby, violation of the Constitution.'

This research was originally intended to prepare a paper or maximum a monograph, based on a comparative study of the coast guards of the world to understand their similarities and differences, and capabilities and constraints to handle the maritime threats that are present and emerging. But it went along and ended up in a much amplified form as a book that I expect to be useful to those interested in the subject. The study took me into a thoroughly enjoyable and informative intellectual journey through scores of materials. The gathered information was interesting. I linked the collected facts to my career and academic experiences of the past to explore as well as intuit the future the ocean holds to the maritime community—the entire population of the world wherever they are. I found that no one was insulated from the ocean. The study gathered mass along my exploratory journey by research through the expanse of the ocean and time. The prestigious Ocean Policy Research Foundation on the busy Toranomon Crossing in Central Tokyo, where I spent six months from June to November 2008, as a visiting research fellow, proved to be the ideal place to undertake this exploratory study on the coast guards of the world and the emerging threats at and from the sea. Probably the coast guard has influenced my life so much that I feel enamored and fascinated like a child on the beach every time I think of it. Central to this feeling is perhaps the encouragement I received form several people, especially in the Indian Coast Guard with which I was associated from the very beginning, and subsequently in other coast guards and associated agencies with whom I had excellent opportunities to interact very closely on various occasions. These associations brought to light the uniqueness of the coast guards as emerging regional forces that are ultimately destined to become the global maritime forces with a human face. The coast guards of the world have tremendous potential to handle the emerging threats at and from the sea and provide relief to the world maritime community, anchored within the constitutional charter of their territorial entities. But the world and its governments are yet to recognise the hidden potential of the coast guards as the acceptable forces of the future in the maritime domain to maintain law, order, and service. The reasons are far too many. Some of them are quite complex. But I steered clear of them in my research as it was to examine the state of the coast guards of the world and their characteristics drawn against the changing faces of the maritime threats. The reasons lap dissolved in this effort leaving the task to the individual territorial entities to interpret, decide and conclude. I have used the term territorial entities because the coast guards are held not only by the recognised nations under the United Nations Charter, but also by entities that are non-members, including the protectorates serving under their holding States in a dispute ridden world. An interesting part is that even some of the landlocked States have coast guards to maintain rule of law and provide humanitarian services within their sensitive rivers, lakes and other water bodies. Some of the lakes are

called the seas because of their size and perception of expanse, though they have no connection or relevance with the ocean currently. It shows the universality of the coast guard as a maritime force suitable for other-than-war situations in a domain controlled by accessibility to water. To this extent the term other-than-war is used to describe the situation when the terrain is not under a formally declared war or military conflict.

This book is intended to offer exclusively my researched views on the subject. It does not speak on behalf of any government or organisation. There are many variables in the data that are subject to change in the process of time. Many details given may find at variance with other published materials and expressed opinions because of their nature. The subject cannot be precision measured. But can be studied well with respect to the future. To that extent I have used the available information to arrive at own conclusions with sufficient back up data. For example a maritime force mentioned as a navy in a publication, after careful examination, has been taken for a coast guard, if deployed primarily for coast guard functions and if considered not a competent combat force useful in a serious war situation. The length of the coastline is another example. Coastlines being fractals in mathematical language can never be explained with precision accuracy. Besides, the coastline may also have political connotations. Therefore, the coastlines and other parameters similar in expression about accuracy are mentioned and used to estimate the comparative tendencies of the entities, and their coast guards and other maritime forces. The term coast guard itself is used in a generic form and has been mentioned to explain forces with also other names but similar in their duties and functions, like the Police Coast Guard of Singapore or Royal Omani Police of the Sultanate of Oman.

The book is written with the primary objective of providing the reader the necessary information related to coast guards, their duties and functions, their differences from that of a navy which is a warfighting force, and how they can be used in the best interest of not only their holding entities, but also the world maritime community as a whole under international obligation within the emerging scenario. It is also expected to serve as a source publication to governments, research scholars, media, policy makers, government officials and personnel from various forces including the coast guards, to understand the coast guards and their importance in the maritime scenario in clear perspective. Considering that the scenario will change continuously in future, the data given in the publication will need periodic review and amendments. The book could serve as a source publication even to correct it by itself if the information given is found lacking in accuracy, or to modify the opinions of the governments as suitable and factual to them. The book thereby becomes a yardstick to measure even its own shortcomings. In every which way the aim is to improve knowledge and spread it across the domain where it is required. The intention behind the publication is noble—to protect human life from all kinds of threats at and from the sea in other-than-war situation. That is almost daily. And even in war the coast guards may come to the service of humanity in their regular role to save lives and environment, besides engaging in humanitarian missions.

The book is written in five chapters. The chapters are designed in staccato fashion to avoid unnecessary interpretations to link them. It is left to the reader. Considerable care is taken to include available data with clarity in tables, figures and appendices and also provide a list of abbreviations and bibliography for reference. The research made use of open source information. A few numbered blank pages included at the end are meant for those who intend to add additional information and observations as part of their

studies and research. This book may require periodic amendments and revisions that I expect the able research team of the Ocean Policy Research Foundation could undertake when appropriate. The changes are expected to be more on data than in the appreciation of threats.

The coast guards could perform also as force multipliers in other-than-war situations along with other forces, not only with other coast guards. There could even be coast guards attached to the United Nations for ocean assistance in international affairs. A world consortium of coast guards could prove an excellent domain for exchange of information on maritime affairs for relayed operations in the maritime domain. Nations could have coast effective coast guards jointly for regional or sectoral approach to maritime issues. They could be excellent agencies in supporting and extending help to track 2 initiatives. The opportunities are many and are left to political imagination at the highest level.

But before that there is a need to understand the importance of the coast guards, and consolidating them worldwide by making them symmetrical in approach though they may retain their asymmetrical constitutional characteristics. There are many countries, especially littorals that do not have formal coast guards. This study considers it is better for them to think early and positively.

I mentioned in the beginning that there were many coast guards that influenced me while in service of the Indian Coast Guard. Within that statement I would like to give credit to the Bangladesh Coast Guard, the Japan Coast Guard, the Malaysian Maritime Enforcement Agency, the Maldivian Coast Guard, The Pakistan Maritime Security Agency, the Philippine Coast Guard, the Republic of Korea Coast Guard, The Royal Omani Police, the Singapore Police Coast Guard, The United Kingdom Maritime and Coast Guard Agency, and the United States Coast Guard for familiarity and fond memories. They also symbolise the rest of the world coast guards in my feelings.

Dr. Prabhakaran Paleri
Visiting Research Fellow
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First and foremost I deeply acknowledge the support and encouragement I received from Mr. Masahiro AKIYAMA, the Chairman of the Ocean Policy Research Foundation (OPRF), without whose support this book would not have been a reality. Ever since I researched and wrote a book on the Indian Coast Guard, it was in my thoughts to study and write about the coast guards of the world. It became a possibility at the Ocean Policy Research Foundation.

For that I also thank Mr. Yoshio KON, the ever conscientious President of the Foundation who encouraged me almost every other day and saw to my needs as a researcher. My gratitude is also to the executive directors of the Foundation. The ebullient Mr. Esuke KUDO took personal care of all my visiting needs to support my research. Mr. Hiroshi TERASHIMA with his pleasant manners won my heart whenever he encouraged me as a presenter or participant in the Ocean Forum, or a faculty guide and counsel to the young researchers.

In addition, I like to express my gratitude to Mr. Takehisha IMAIZUMI, adviser, who took personal care in my orientation at the foundation, and Mr. Tsutomo INUZUKA, who guided me in all matters related to the administrative aspects of visiting fellowship.

There are many, in the Foundation, who deserve more than a mention for extending their supports to me. I would like to express my sincere gratitude to Ms. Catherine Vivar Oda, Mr. Eiji SAKAI, and Mr. Hideshi UENO for assisting me under special circumstances associated with my research work.

During my stay I was greeted by all members of the OPRF family and also by those who were associated with it externally whenever I came into contact with them. They all influenced my thoughts towards a positive approach in my busy schedule at the Foundation.

I must also mention the people of the cafeteria and coffee room on the tenth floor who greeted me with smile during lunch. They made me savour the Japanese cuisine and left me with a pleasant and lasting aftertaste.

Finally, I convey my sincere appreciation to the Commandant and other members of the Japan Coast Guard for helping me during my visits and treating me with dignity and respect all the time I interacted with them.

Dr. Prabhakaran Paleri
Visiting Research Fellow
Ocean Policy Research Foundation
Tokyo

ABBREVIATIONS

ABCG	Antigua and Barbuda Coast Guard
ABDF	Antigua and Barbuda Defence Force
ABSR	Antigua and Barbuda Search and Rescue
ACS	Australian Customs Service
AEM	*Action de l'Etat en Mar*
APMM	*Agensi Penguatkuasaan Maritim Malaysia*
ASG	Abu Sayyaf Group
ASR	Armed Sea Rangers
BCGS	Belize Coast Guard Service
CBA	Cost-Benefit Analysis
CBM	Confidence Building Measures
CBP	Customs and Border Protection
CCG	Canadian Coast Guard
CCG	Chilean Coast Guard
CCG	Chinese Coast Guard
CFR	Code of Federal Regulations
CIA	Central Intelligence Agency
CIWS	Close in Weapon Systems
CMP	Common Minimum Programmes
CSBM	Confidence and Security Building Measures
CSI	Caspian Sea Initiative; Container Security Initiative
DCE	Direct-Covert-External (threat)
DCI	Direct-Covert-Internal (threat)
DFO	Department of Fisheries and Oceans
DHS	Department of Homeland Security
DOE	Direct-Overt-External (threat)
DOI	Direct-Overt-Internal (threat)
DoT	Department of Transport
DOM	*Department d'outre-mer*
EC	European Commission
ECG	Egyptian Coast Guard
EEZ	Exclusive economic zone
EU	European Union
EUCOM	European Command
FADA	Federally Administered Tribal Areas
FAO	Food and Agricultural Organisation
FSO	Future Safety and Security Environment
GCC	*Garde Côtière Candienne* (Canadian Coast Guard)
GCG	Georgian Coast Guard
GAM	*Grekan Aceh Merdeka*
HIV	Human Immuno Deficiency Virus
HKSAR	Hong Kong Special Administrative Region

HM	Her/His Majesty's
HMBS	Her/His Majesty's Barbados Ship
ICC	International Chamber of Commerce
ICCL	International Council of Cruise Lines
ICE	Indirect-Covert-External (threat)
ICJ	International Court of Justice
ICI	Indirect-Covert-Internal (threat)
ICR	Institute of Cetacean Research
IED	Improvised Explosive Devices
IHO	International Hydorgraphic Organisation
IMB	International Maritime Bureau
IMO	International Maritime Organisation
IMSCB	Indonesian Maritime Security Coordinating Board
INCSEA	Incidents at Sea
INS	Irish Naval Service
IOE	Indirect-Overt-External (IOE)
IOI	Indirect-Overt-Internal
IRCG	Irish Coast Guard
ISA	International Seabed Authority
ISC	Information Sharing Centre
ISPS	International Ship and Port facility Security
IUCN	International Union for Conservation of Nature and Natural Resources
IUU	Illegal, Unregulated, Unreported
JCG	Japan Coast Guard
JDF	Jamaica Defence Force
JDFCG	Jamaica Defence Force Coast Guard
KGB	*Komityet Gosudarstvennoy Bezopasnosty*
LASH	Lighter Aboard Ship
LCS	Legal Continental Shelf
LoS	Law of the Sea
LTTE	Liberation Tigers of Tamil Eelam
MCA	Maritime and Coastguard Agency
MCSR	Monitoring, Control, Surveillance and Response
MDA	Maritime Domain Awareness
MMEA	Malaysian Marine Enforcement Agency
MoU	Memorandum of Understanding
MOWCA	Maritime Organization of West and Central Africa
MPF	Mauritius Police Force
MRCC	Maritime Rescue Coordination Centre
MSA	Maritime Security Agency
MTA	maritime terrain awareness
NATO	North Atlantic Treaty Organisation
NoCG	Norwegian Coast Guard
NORAD	North American Aerospace Command
NSRI	National Sea Rescue Institution

OPRF	Ocean Policy Research Foundation
PCG	Philippine Coast Guard
PLA	People's Liberation Army
PLF	Palestinian Liberation Front
PNA	*Prefectura Naval Argentina*
POP	Persistent Organic Pollutants
PQS	Personal Quality Standards
PSI	Proliferation Security Initiative
PRC	Peoples Republic of China
RCMP	Royal Canadian Mounted Police
ReCAAP	Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia
RLBA	Royal Lifeboats Association
RMAS	Royal Maritime Auxiliary Services
ROC	Republic of China
ROCGA	Republic of China Coast Guard Administration
RSRM	Rajah Soliman Revolutionary Movement
SAR	Search and Rescue
SARS	Severe Acute Respiratory Syndrome
SDF	Self Defence Force
SIDS	Small Island Developing States
SLOC	Sea Line of Communication
SOLAS	Safety of Life at Sea
SWOT	Strengths, Weaknesses, Opportunities and Threats
TAAF	*Terres Australes et Antarctiques Françaises*
TMC	Threat Matrix Cube
TNCC	Transnational Crime and Corruption
UAV	Unmanned Aerial Vehicles
UK	United Kingdom
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
US	United States
U.S.A.	United States of America
USCG	United States Coast Guard
UUWV	Unmanned Underwater Vehicles
VPA	Vietnam People's Army
WMD	Weapons of Mass Destruction

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1

GEOSTRATEGIC ENTITIES OF THE MARITIME WORLD—A PROLOGUE

1

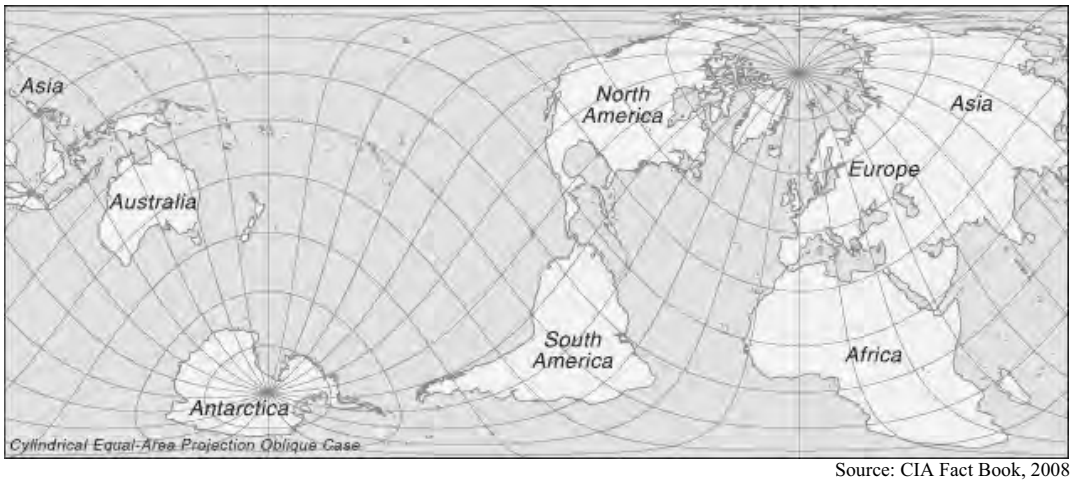
GEOSTRATEGIC ENTITIES OF THE MARITIME WORLD—A PROLOGUE

The Ocean in Geostrategic Perspective

Demographic inflation and the corresponding decline in living space, resources and standards are intermittent topics of debate and discussion in forums around the world. Many variations of the subject attract serious research interests. It is factual that the habitable land space of the world is limited. Even the inhospitable land terrains are occupied in parts. The space is packed with people. Demand for life's resources is progressively increasing along with other issues. It is often felt that the available land space is too small. In reality, the space is further decreasing by sea level rise. But in the reverse angle, it is also a geophysical truth that a world full of countries without an ocean would not have been a possible idea for life on Earth. Often this fact is overlooked by people in their haste to surmount the existential and indeterminate problems of life. There is also another angle to this perception. Human beings are land-based. The accepted view of the ocean is generally in relation to the land, standing over it. As a result, the importance of the ocean does not register in its clear perspective in policy decisions. It would have been otherwise—ocean based land view, viewing the land from the ocean. Mostly in the world the policies are primarily land centred. Ocean management thereby becomes incident related—often post incident. But, there are, and there have been exceptions to such thinking. The entities that considered and treated the ocean vital to their existence were able to maximise their benefits of the ocean. Those who exploited the ocean wisely from the early days by exploration, military approach and the economics of it, are highly benefited today as can be seen from their geoproperty[1] rights scattered around the ocean far from the shores of their main land territories. But they are a few. The scenario about the general lack of awareness of the ocean in political thinking has not changed. The concept is yet to sink in as is evident from the capability limitations of majority countries in tackling maritime issues. The study points out to this fact to identify the issues the maritime world may face by indifference to ocean, or rather inappropriate attention to ocean governance and ocean related problems. For this it is important to identify and understand the entities geostrategically linked with the ocean.

The planet brims with life of all forms thanks to the ocean that controls the climate and conditions in favour of life-sustaining forces within and outside it every moment. Without the ocean there would not have been life on Earth. As it seems, the life systems are balanced with nearly three quarter of the Earth filled with ocean, and the land masses—most of them above the equator in a north upped cartographic perspective—

lying scattered around under the dynamic control of the continental drift and other forces. The profiles of the ocean relative to the Earth as a whole, and those of the land masses relative to the ocean are important in the study of the geostrategic context of the maritime world. In this approach the word 'maritime' is not restricted to the usage of those related to shipping or the land adjacent to the ocean. The term is not rigidly bound within the meanings of 'nautical' or 'littoral.' It is a wider terminology that indicates all matters related to the ocean. This connotation is important in the study of everything about *le affairs de maritime*—the maritime affairs, or while discussing about it. One of the interesting cartographic presentations of this fact comes from the World Fact Book[2] published by the Central Intelligence Agency (CIA) of the United States of America (U.S.A.). The cartographic representation of the world in a cylindrical equal area oblique case projection (Figure 1.1) in polar coordinates shows how (in)significant the human habitations of the world are in relation to the ocean that surrounds it. On one hand the area is too insignificant when compared against the expanse of the ocean; on the other it is home for the humans. Its subsistence totally depends on the ocean. It also probably pronounces the fact that no nation or other land entities can afford to neglect the ocean while deciding its survival policies and priorities.



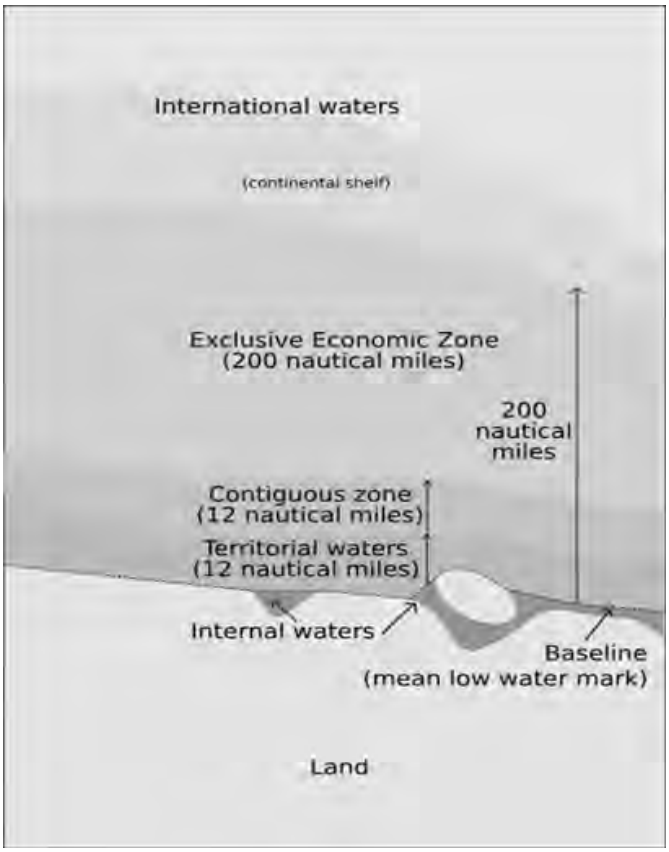
Source: CIA Fact Book, 2008

Figure 1.1　Cylindrical Equal Area Oblique Case Projection of the World

While nautical terminologies are firm and precise for use at sea without sifting meanings, expressions in strategic maritime thinking could have their own specific phrasal incantations differing with respect to individual or organisational perception. Often definitions are based on individual perception of a concept or idea. Some of them are scholarly suppositions tested by research. The definitions and affirmations turn around the perceived ideas and apparent policy decisions, and are habitually restricted to desired judgments. Any variation in the adjudging parameters will alter the definition of the concept. Like various other concepts in strategic thinking, the concept of maritime affairs also has gone through a stream of metamorphosis based on national objectives and demands arising out of them. Such variations will be constant accompaniments to strategic thinking. Maritime strategy is not an exception. The idea of the ocean today is not strictly that of the periods that belonged to great explorers like Vasco Da Gama,

strategists like Alfred Thayer Mahan, or their breed. It has changed. It also indicates that the idea will continuously transmute into the future changing the scenario altogether. But the core principle that the '*state of the ocean is the subsistence yardstick for life*' will remain.

The great change in ocean governance towards maritime unification of the world came in 1982 when nations, responsible they were, capped their consensus and faith in the United Nations Convention on the Law of the Sea (UNCLOS**)**. The most significant among the provisions of the law of the sea (LoS), it could be said, was the limiting waters and zones for jurisdiction and special rights. The Conventions set the limits of various areas, measured from a carefully and precisely defined baseline calculated under varying situations and coastal profiles. The areas are pictorially depicted at Figure 1.2.



Source:www,wikipedia.org/wiki/Image:Zonmar-en.svg

Figure 1.2 Maritime Zones under the Law of the Sea

The Convention was not aimed at the littoral States alone. It was meant for all the nations of the world that gathered under the United Nations (UN). With no exception, UNCLOS treated every State a 'maritime nation.' UNCLOS refers to geographically disadvantaged and landlocked States with the specific purpose to extend the benefits of the ocean also to them as a global common. From this perspective it will be in customary

order to consider every nation as an entity that has an ocean element incorporated in it by international law. That makes every entity a geostrategically maritime entity. The rider about the land-locked and geographically disadvantaged nations is that they are also beneficiaries of the oceans within their own rights specified in the UNCLOS. Beyond UNCLOS, even under the customary international law, a nation being an entity of the world is part of the world and its commons. The ocean is one such global common. It influences even the nation that lie far in the hinterland by trade, commerce, economics, climate, environmental changes, etc. Even otherwise, irrespective of being non-littoral, a territorial entity could be a target for a sea-launched missile in a war or extreme terror scenario; be a victim of transnational ocean crimes; have its people in ocean based employment; depend on it for laying a vital pipeline or communication line; or operate shipping lines as part of its trade practices. Any such entity will have to have its eyes set to the sea far away and beyond its land horizon. From this point of view, a maritime entity has interests in the ocean in relation to its national security, whether landlocked or geographically disadvantaged. For these reasons the maritime geostrategic affirmations should logically apply to every nation and other entities of the world. The UNCLOS defines the rights and jurisdiction of nations within their maritime zones. But all is not well in a corrugated system that could put loopholes or exert pressure under the very law. There are arguments that UNCLOS and its appreciation of maritime zones makes international maritime disputes heavily anchored in permanency. Because in any compromise over the ocean, nations stand to lose heavily in terms of ocean resources alone. This fact will seal every attempt to resolve conflicts over geoproperty rights[3] over the ocean territories. There are also notable and politically matured exceptions like the *Katchativu* settlement between India and Sri Lanka where India agreed to the rights of Sri Lanka over *Katchativu*.[4] In India there are resonant voices still against the deal that have been already executed years back. Examples of countries like China and Japan consenting for joint operations in gas exploration in East China Sea temporarily burying the cudgel of conflict over maritime issues in the area are notable variations of the changing geopolitical scenario. In the globalised and more sensible world economic gains and improving living standards by mutual support are best understood. In the early days disputes were attempted to be resolved by costly military measures. Though wars were considered as instruments of national policy, most of the victories (if not all) in war often outweighed the accrued benefits. To that extent every victory has been costly to the victor in a war—Pyrrhic, and unleashing a chain of never ending disputes into future, stifling generations. It is based on such contemplations the ocean and its entities are to be examined in strategic affairs.

The ocean is an interconnecting unbroken system of salt water body that covers around 71 per cent of the Earth's surface.[5] Closer to the land, the ocean is known as ocean divisions,[6] seas, bays, gulfs, archipelagos[7], straits and other names including navigable rivers that may even pass between nations. The continuity at the mean level of the ocean is important. Other waters are not included. But while studying the ocean and ocean based geostrategy a question that can arise is about the status of substantially large but landlocked seas and lakes that carry saline water as in the ocean and have more than one State at its rim. An example is the Aral Sea. It is salty, was very large at one time and has been shrinking[8] badly since long with indications that it would vanish one day. The Aral Sea influences the ecosystems of the area shared by Kazakhstan and Uzbekistan. It

had 1,500 islands at one time.[9] The area has become an environmental disaster and a health and human tragedy as well. The entire system has gradually collapsed—shipping, fishing industry, and all related activities. The drying up, for whatever reasons it may be, has increased salt concentration in the area. Increase in salinity choked its vital flora and fauna, and destroyed cultivation and crop yields, and quality in areas where they are still grown. Cotton fields have become salt flats.[10] The disaster has its impact on the corresponding social and community behaviour changes also. Unemployment has forced many healthy young Uzbeks to seek employment even as mercenaries in terrorist groups. Al Qaeda and Taliban based in Pakistan sanctuaries reportedly have a number of them (2008). Women and children become easy targets for human sex traffickers when poverty strikes. Of course, Aral Sea is not the sole cause for unlawful activities in the world, but a passing example of how environmental changes by a disaster or otherwise impact human behaviour many times leading to criminal activities. Another important aspect of the Aral Sea conundrum from the point of interest of maritime studies is that the erstwhile Soviet Union had reportedly established a bioweapon facility in Vozrozhdeniya Island in the centre of it. It was said to be abandoned after the disintegration of the Soviet Union in 1991. The island is now a disputed territory between Uzbekistan and Kazakhstan. The exact reports of the facility and its current status are not published or disclosed. It is believed that serious dumping of pathogenic weapons, especially anthrax bacillus,[11] has taken place from the facility in the Aral Sea.[12] There is a caution here. Any of the uninhabited or protected islands dotting the ocean could be utilised for carrying out similar activities away from the observant world.[13] Another finding of this biomodel is probable disaster situations that could impact the coastal population where such experiments are conducted.[14]

It is the normal contention that a landlocked body of water, even if it carries salt water and called a sea is not part of any ocean. It is generally a lake, the area doesn't matter. Such territories may even breed smugglers and pirates *a la* ocean. Still it is not a maritime entity, at least for now. The countries that share the remnants of the Aral Sea today—Uzbekistan and Tajikistan—were once the parts of the erstwhile Soviet Union, thereby part of a littoral State with long coastline. Today Kazakhstan is the largest landlocked country in the world without direct access to the ocean. It brings another issue to the point. There are countries, once flourished as part of coastal States that became landlocked after power devolution by disintegration, separation, partition or under changed political situations. Mongolia was an empire in the 13th century. Its attempts to invade Japan in 1274 and again in 1281 by sea met with disastrous results when its overwhelming fleets of ships and personnel found their graves under the sea by the fury of nature. The repeated incidents even brought credibility to the myth that Japan was a divine country under the protection of God. With the change of time many such countries get separated from the ocean. They just dry up like the Aral Sea caught within the history of geostrategic transformations. Benefits of the ocean cannot be denied to them by such unavoidable subterfuge in their geopolitical existence. The people who have been conditioned for certain behaviour cannot easily modify that behaviour with respect to changing national or international policy decisions. The post UNCLOS world has seen many disputes in fisheries sector where the fishers who had traditional affinity to the sea and fisheries resources across their coastline for generations fail to regard the legal boundaries as limiting lines to their exploitation. It comes from the same principle of

geographically conditioned behaviour pattern carried forward by generations. These are the human elements involved in such studies. 'Once part of a coastal region' is another point in the argument that every State or other geophysical entity in the world has to be seen as a maritime entity in relation to the ocean. The principle carries the humans to the beginnings of their history.

An attempt to examine the geostrategic context of the maritime world calls for a detailed investigation of many contributory parameters like those already mentioned, besides the correct appreciation of the term. It is important to establish the identity of the entity in a world heavily influenced by the ocean. The world is dynamic and relentlessly on the move. The relatively recent turning points are the UNCLOS finalised in 1982 after 25 years of debate, and the end of the Cold War in 1991[15] that had a beginning in 1948 with the 'containment policy' authored by George Kennan.[16] The 20th century closed the bourses calling for a new world order. The changes are clear and prominent. The end of Cold War [17]changed the perception of the world towards its future. The world recognised the importance of the oceans through the UNCLOS regime that, in a nutshell, prevented further ocean colonisation by the powerful and drew up the reference line for negotiations. The line-up of States and other entities had undergone major shift in various parts of the world. But the remnants of the World War II holdings and disputes still continue unchanged as the criticality of the ocean to the world.

The ocean will continue to remain decisive to the world of the future. It provides global access to interiors, extended territories, and for forward movement under the geostrategic context. Though the world is far more secure today than during the established Cold War, new regional problems are emerging geostrategically for which the ocean will be another terrain-specific playing field. Besides, the ocean itself is flagging by damages caused to it; some of them are irreversible.

The ocean is a unitary entity, a continuum of sorts. It is an unbroken world of water, laced by the coastal interface in a fractal form. It is named the World Ocean or Global Ocean. But oceanographers and geographers have divided the ocean in parts based on geolocations. Accordingly the single entity of the world ocean is divided into five different oceans based on their geolocations and notified by the International Hydorgraphic Organisation (IHO). They are the:

- Arctic Ocean,
- Atlantic Ocean,
- Indian Ocean,
- Pacific Ocean, and
- Southern Ocean.[18]

There are geographers who consider the Arctic Ocean as a sea of the Atlantic and the Southern Ocean as the southern portion of the Atlantic, the Pacific and the Indian Oceans.[19] The understanding, that the ocean system is subject to change at every moment, is important in the study of the ocean, especially for policy design and decision-making. The characteristics of each of these oceans have to be understood in detail and continuously monitored for changes in the geostrategic study and appreciation. The five oceans form part of other geostrategic entities of the world for this study.

The Arctic Ocean is the smallest and shallowest of the world's five ocean entities. It is located in the northern hemisphere mostly north of the Arctic Circle. The North Pole is located in the middle of the Arctic Ocean. The rim of the ocean is covered by Eurasia

and North America in parts and is largely covered by sea ice throughout the year. Arctic ice is reportedly shrinking under global warming.[20] Russia reportedly had to move its research station North Pole 35 as ice melted underneath.[21] Efforts are underway to enlarge the northern sea route for ships that will cut down distance considerably to Europe and Far East or the west coast of North America. There is also an opportunity here. The Ocean Policy Research Foundation (OPRF) of Japan based in Tokyo had carried out studies along with technical experts from Japan, Norway and the Russian Federation on the Northern Sea Route.[22] The study proposed a transportation system to connect energy resources in Far East Russia to international market and the protection of environment and safety of transportation in the Sea of Okhotsk. The Arctic Ocean is the vital terrain in this study by the OPRF. The Northwest Passage (US and Canada) and Northern Sea Route (Norway and Russia) are two important seasonal waterways. It is also reported to be a huge reservoir of oil and gas.[23] A sparse network of air, ocean, river, and land routes circumscribes the Arctic Ocean. The Arctic Ocean includes Baffin Bay, Barents Sea, Beaufort Sea, Chukchi Sea, East Siberian Sea, Greenland Sea, Hudson Bay, Hudson Strait, Kara Sea, Laptev Sea, Northwest Passage, and other tributary water bodies. This is where most of the maritime activities of the future are expected.

U.S. Navy photo by a lookout on watch

Figure 1. 3 Arctic Ocean—Three Polar Bears Approach the USS Honolulu while Surfaced 280 miles from the North Pole

The Atlantic Ocean is the second largest of the world oceans. It covers about 20 per cent of Earth's surface. The Kiel Canal (Germany), Oresund (Denmark-Sweden), Bosporus (Turkey), Strait of Gibraltar (Morocco-Spain), and the Saint Lawrence Seaway (Canada-US) are important strategic access waterways. It is a body of water between Africa, Europe, the Southern Ocean, and the Western Hemisphere. It includes Baltic Sea, Black Sea, Caribbean Sea, Davis Strait, Denmark Strait, part of the Drake Passage, Gulf of Mexico, Labrador Sea, Mediterranean Sea, North Sea, Norwegian Sea, almost all of

the Scotia Sea, and other tributary water bodies. The Mid-Atlantic Range (MAR) that runs north-south along the floor of the Atlantic Ocean separates the Eurasian and North American tectonic plates in the North Atlantic and the African and the South American tectonic plates in the South Atlantic. This is an important ridge from the view point of underwater earthquakes.

Photograph by Mangwanani. www.en.wikipedia.org/wiki/Image:Mid_ Atlantic_Ridge.jpg.

Figure 1.4 Atlantic Ridge Passing through Iceland

The Indian Ocean is the third largest of the world's five oceans. Four critically important access waterways in the Indian Ocean are the Suez Canal (Egypt), Bab el Mandeb (Djibouti-Yemen), Strait of Hormuz (Iran-Oman), and Strait of Malacca (Indonesia-Malaysia). It includes Andaman Sea, Arabian Sea, Bay of Bengal, Flores Sea, Great Australian Bight, Gulf of Aden, Gulf of Oman, Java Sea, Mozambique Channel, Persian Gulf, Red Sea, Savu Sea, Strait of Malacca, Timor Sea, and other tributary water bodies. It lies between Africa, the Southern Ocean, Asia, and Australia.

www.en.wikipedia.org/wiki/Image:LakshadweepIsland.jpg

Figure 1.5 An Uninhabited Island in Lakshadweep, India, in the Indian Ocean

The Pacific Ocean is the world's largest division of oceans. It contains around 25,000 islands. That is more than the total oceanic islands of the rest of the world combined. Strategically important access waterways include the La Perouse, Tsugaru, Tsushima, Taiwan, Singapore, and Torres Straits. It lies between the Southern Ocean, Asia, Australia, and the Western Hemisphere and includes Bali Sea, Bering Sea, Bering Strait, Coral Sea, East China Sea, Gulf of Alaska, Gulf of Tonkin, Philippine Sea, Sea of Japan, Sea of Okhotsk, South China Sea, Tasman Sea, and other tributary water bodies.

www.en.wikipedia.org/wiki/Image:Marine_debris_on_Hawaiian_coast.jpg

Figure 1.6 Marine Debris on the Coast of Hawaii

The Southern Ocean is the body of water between 60 degrees south latitude and Antarctica It is also known as the Great Southern Ocean, the Antarctic Ocean and the South Polar Ocean. It lies south encircling the continent of Antarctica. The South Pole is

over the land. The Southern Ocean zone fluctuates seasonally. It is the fourth-largest of the five principal oceanic divisions. This ocean zone forms from the convergence of two circumpolar currents, one easterly flowing and one westerly flowing and includes Amundsen Sea, Bellingshausen Sea, part of the Drake Passage, Ross Sea, a small part of the Scotia Sea, Weddell Sea, and other tributary water bodies.

All the oceans have problems. Generally the concerns are marine environmental damage by pollution and over exploitation of living resources, conflicts, prolonging international disputes and probability of conflicts, and evolving new threats. All these problems lead towards an uncertain future. Available information on the dimensions of the oceans is limited and can vary with respect to sources and their adopted methods of measurements. The area of the oceans and the length of the coastline are fractals. They are variables not only within the dynamics of change with respect to time, but even by the methods of measurement. A fractal in its mathematical sense is a geometric pattern that is repeated at ever smaller scales to produce irregular shapes that cannot be presented by classical geometry. Coastline is a fractal of nature. The area and the coastline given in this study for each identified entity are for its comparative estimation and appreciation in relation to other entities relevant to this study. They need not be precisely accurate.

Sans the oceans the remaining part of the world is much smaller. It is occupied by land territories in a fragmented manner. But they are exclusive as nation States and other entities with geoproperty rights; quite a few are yet to be settled. Many such entities are still struggling for absolute identity. Within these issues the land entities fall under many categories. Identifying and listing out these entities are important for this study. It is not an easy task, because a seemingly innocent and innocuous question, '*How many nations are there in the world or rather who owns 'this' part of the world—a particular geoproperty?*' may bring different answers from different sources. In addition to nations there are also other entities. There are many areas in the world under varying forms of administration and governance within the nations themselves with governments struggling to find solutions without success.[24] The study becomes more complicated from the perspectives of maritime strategy when some such entities are with easy access to the ocean and have developed stronger maritime capacity than the nations they breed and bleed from within, either as insurgents or sheltered militants.

The Land Entities

Identifying the land entities (November 30, 2008 for this study) is a straight task under serious research and cautious examination. There are 192 members in the United Nations (UN) as of May 1, 2008. According to the UN Charter[25] membership is open to all peace-loving States which accept the obligations contained in the present Charter and, in the judgement of the Organisation, are able and willing to carry out these obligations. The admission of any such State for membership in the United Nations will be effected by a decision of the General Assembly upon the recommendation of the Security Council. There are successive preconditions—the entity has to be a State, it has to be peace-loving as appreciated by the international body, and thereafter it has to be processed through the bureaucratically political procedures of the UN in which the Security Council with its veto-powered members and the General Assembly on majority voting have to agree. The UN's primary objective was to provide an alternative mechanism for collective security

to those who are party to it—the members, under specific conditions. It was not exactly a substitute for the declining League of Nations when introduced immediately after the Second World War.[26] It was a league with a different charter, though the core principle remained collective security. It was not meant to be the centre of global governance with authority for it. Geostrategically the tendency of the nations is more to break up into smaller nations than amalgamate or integrate into single unified nations.[27] The geopolitical gravity naturally pulls the nations down by disintegration. Holding against it has to be under tremendous pressure. That is why weak nations yield faster to geopolitical gravity. The process is expected to undergo many changes in future. The disintegration adds to the membership of the United Nations if the fragmented portions are accepted by the process under the Charter. There are other entities that are not members of the UN.

The Vatican City or the State of Vatican City is an independent and recognised State but not a member of the United Nations. It is a walled enclave in the city of Rome. It came into existence in 1929 under the Lateran Treaty. Though it has been mentioned as Holy See, the central authority of the Holy Roman Catholic Church in certain records and listings, the latter may be seen as an authority within the Vatican City. It is a recognised national territory under international law. But often Vatican City is referred to as Holy See by authorities. The State controls a billion Roman Catholics worldwide living under various entities of the world with a recorded population of 828 (2008). If that is to be taken as an entity with sublime control over the Catholics it will become perhaps the world's third populated entity if not larger and with uncovered interests in the maritime world since its majority populace are distributed in coastal territories.

Taiwan, otherwise called the Republic of China (ROC**)** is another entity. The Peoples Republic of China (PRC) claims Taiwan as one of its provinces. The world follows one china policy. The Republic of China, concentrated on the island of Taiwan since 1949 is yet to undergo its full transformation as a nation State or part of one. It claims it was a founder member of the United Nations in 1945 as the sole representative of the whole of China. It has to withdraw in 1971 after a resolution.[28] Its subsequent applications were rejected. Taiwan still asserts for its rights over certain islands in South China Sea and the East China Sea along with the Peoples Republic of China and other littorals. It has participated in Olympics including the 2008 Beijing Olympics as an independent entity.[29] It has a coast guard and other forces. There were international maritime incidents at sea (INCSEA) between Taiwanese coast guard and the Japan Coast Guard (JCG) on maritime claims.[30] Notwithstanding such conflicts and lack of identity in international affairs as a recognised nation, Taiwan thrives with hope and even has objectives of improving ties with China in economic relations. Taiwan believes international space and peace accord will be a possibility once economic relations with China are established.[31] While China is often contemplating the use of force for reunification, Taiwan is busy assuming situation will transform by change of name like Chinese Taipei or other hopefully acceptable names to join international organisation. While there are many solutions, it is a long way to Taiwan's resurrection or mortification as an independent entity. Till then Taiwan has to be considered as a separate geostrategic entity for strategic studies, especially on maritime affairs.

Another territorial entity is Kosovo. Certain countries including the United States recognise it under stiff opposition from many others. Kosovo comes out of the still unsettled Yugoslavian imbroglio which had its beginning, as one could extend, as early as

the seventh century if viewed from the Kosovo-centric meridian. It was followed by the Ottoman rule of four centuries—from late 14th century to the full 19th century. The stage was perfectly set for brewing the ethnic stew with the end of the Ottoman Empire (1299-1923) followed by World War II. The Ottomans were formidable in the maritime scenario also. They were the first to use cannons and fire torpedoes from submarines in naval warfare. In the sliding avalanche of political uncertainty of the periods Kosovo now stands broken away from Serbia but unrecognised by the UN. Kosovo assembly declared independence from Serbia on February 17, 2008.

Western Sahara is another territorial entity that has to be seen separately. It has a long coastline covering the entire north-south length on the Atlantic. The major portion of the entity that was formerly Spanish Sahara was annexed by Morocco in 1976. Subsequently guerrilla war erupted with the Polisario Front (Popular front for the Liberation of the Saguia el Hamra and Rio de Oro) that ended in a UN-brokered ceasefire. While negotiations are on, the legal status of the territory and issue of sovereignty remain unresolved.

Among other entities are the West Bank, the Gaza Strip and the Golan Heights. West Bank and Gaza Strip were designated for the transitional period of Palestinian self rule. Golan Heights is not included. East Jerusalem is disputed. Israel does not count it as part of West Bank. While West Bank is landlocked between Israel and Jordan, Gaza Strip has 40 km long coastline. But the access is controlled by Israel under continuing volatility of situation. Both these entities have to be seen together under maritime studies if they are heading towards a common objective of an independent recognised entity. But before that it is necessary to examine the riddle of the bygone years. Does Palestine exist as a geostrategic entity? It is a serious question. Palestine is more a general area based on ancient history. With political connotation the area has to be seen based on the Israel—Palestine conflict. The entity is highly disputed. Here is a territorial entity or an area without defined borders whose existence is recognised by a vast number of countries. It is more a virtual country, not yet a visible State or land entity. Roughly the Gaza Strip, the Golan Heights and the West Bank come within its purview. It is a proposed ‘site’ for a country. Gaza Strip and West Bank are currently taken for this study as a separate unitary entity. Golan Heights is excluded from this study. In spite of its virtual status, Palestine is one of the key players in maritime studies. Palestinian struggle and associated violence has a take off in maritime terrorism. One of the early events that embarked the trend for modern day maritime terrorism aimed at terrorising ships and people at sea for political objectives came from those supporting the Palestinian cause with the *Achille Lauro* incident.[32] Though not as publicised there were many other incidents in which maritime routes were popular for militant attacks associated with Palestine cause. A recent incident that brings out this fact is in the swap of a convict for the bodies of two Israeli soldiers held in Lebanon.[33] The continuing and widespread violence in the West Bank and Gaza Strip, Israel's military response, and instability within the Palestinian Authority continue to undermine progress toward a permanent agreement. Palestine if formed permanently with absolute consensus of the United Nations will be a nation with access to the sea under the current scenario. Because of these reasons the West Bank and Gaza Strip are included as an entity for this study.

Antarctica is a unique region. It is a land still anchored at the South Pole in the churning of global land masses under the continental drift. Why was it not inhabited by

the humans? Perhaps the answer lies in the fact of accessibility rather than adverse weather conditions. Considering the world interest in Antarctica and the activities in and around it in Southern Ocean, it is considered as a territorial entity for this study.

Beyond this analysis an important aspect that comes in a stable entity status is the European Union (EU) which was an amazingly new concept in nation building of the advancing world. Amazing, because its creation added a new dimension to international law. International law in its basic structure binds the nation States together. Amazing the way the independent nations agreed to cede their national jurisdiction to an overarching entity in the form of a Union when nation States are naturally disintegrating. The Union frowns nationalism within the pool of security by economics and strength. Public international law amplifies the relations between the subjects of international law under various situations. Private international law deals with civil law jurisdictions of private parties in the global scenario. The concept of European Union could not be brought under these two divisions of international law. It is supranational. Its creation has caused a new division in the international law itself. Under this system the laws of individual nations become inapplicable when conflicting with a supranational legal system. This is a new turn. Hence the European Union itself has to be seen as a separate entity along with its 27 member States. (November 30, 2008). Chances are that there will be more members.[34] European Union has the characteristics of a national entity with its own anthem, flag, currency and founding date. It has special policy in its joint dealings in international affairs. The European Commission (EC), the executive branch of the European Union is a powerful body in supranational affairs. There is also the possibility of expansion of nation State characteristics within the Union. After all the nation States originated from the European model.[35] The international union of suprastate could also come out of Europe as a model. For these factors and attributes the European Union is considered as an entity for this study that could influence strategic maritime decisions.

In addition to nations and other areas mentioned so far there are many territories, most of them islands that are protectorates of various countries and are recognised as such by the international community. 73 such entities are identified in this study. They are distributed in the five oceans and their rims thereby giving credibility to the protecting countries as the rim countries of the ocean that holds them. The identified entities are:

1. Adélie Land

Portion on the Antarctic coast considered as Territory of the French Southern and Antarctic Lands part (*Terres Australes et Antarctiques Françaises* (TAAF)). But certain nations including the United States have not accepted it as a French dependency. Under the Antarctic Treaty, the French claim to Adélie Land, like other claims to Antarctic territory, is neither recognised nor disputed by other signatories to the Treaty.

2. Akrotiri

Small coastal area in Cyprus in the Greek Cypriot area. Sovereign Base area of the United Kingdom. Also known as the Western Sovereign Base Area.

3. American Samoa

Group of islands in the Pacific Ocean between Hawaii and New Zealand. Territory of the United States.

4. Anguilla

Group of islands in the Caribbean Sea in the Atlantic Ocean. Overseas territory of the United Kingdom.

5. Aruba

Separate, autonomous island in the Caribbean Sea in the Atlantic Ocean. Dependency of the Kingdom of the Netherlands.

6. Ashmore and Cartier Islands

Uninhabited islands in the Timor Sea in the Indian Ocean. Territories of Australia.

7. Baker Island

Island between Hawaii, US and Australia in the Pacific Ocean. Territory of the United States and part of the Pacific Remote Islands National Wildlife Refuges.

8. Bassas da India

Atoll of volcanic rock submerged during high tide in the Mozambique Channel in the Indian Ocean. Possession of France. Part of the French Southern and Antarctic Lands.

9. Bermuda

Relatively large group of developed islands in the Atlantic Ocean on the east coast of the United States. Overseas territory of the United Kingdom.

www.en.wikipedia.org/wiki/Image:Bassas_da_india.jpg

Figure 1.7 Bassas da India

10. Bouvet Island

Glacier covered volcanic island in the Atlantic Ocean southwest of Cape of Good Hope towards Antarctica. Territory of Norway.

11. British Indian Ocean Territory

The island groups comprising the Chagos Archipelago of 55 islands south of India in the Indian Ocean. Overseas territory of the United Kingdom.

12. British Virgin Islands

Islands in the Caribbean in the Atlantic Ocean. Overseas territory of the United Kingdom.

13. Cayman Islands

Islands in the Caribbean Sea in the Atlantic. Overseas territory of the United Kingdom.

14. Christmas Island

An island South of Indonesia in the Indian Ocean. Territory of Australia.

15. Clipperton Island

Atoll southwest of Mexico in the Pacific Ocean. Possession of France.

16. Cocos (Keeling) Island

A group of 27 coral islands southwest of Indonesia in the Indian Ocean. Territory of Australia.

17. Cook Islands

Group of islands between Hawaii and New Zealand in the Pacific Ocean. Self governing in free association with New Zealand.

18. Coral Sea Islands

Island group scattered over a vast area across the Great Barrier Reef in the Coral Sea in the Pacific Ocean. Territory of Australia.

19. Dhekelia

Small coastal area in the island of Cyprus in the Turkish Cypriot area. Sovereign Base Area of the United Kingdom along with Akrotiri. Also known as the Eastern Sovereign Base Area.

20. Europa Island

An island in the Mozambique Channel in Indian Ocean. Overseas territory of France. Part of the French Southern and Antarctic Lands.

21. Falkland Islands

An island east of Argentina in the Atlantic Ocean. Overseas territory of the United Kingdom. Also called *Islas Malvinas* and claimed by Argentina.

22. Faroe Islands

Islands in the Norwegian Sea in the Atlantic Ocean. Part of the Kingdom of Denmark.

23. French Guiana

Coastal area located on the north-eastern coast of South America. Territory of France as an overseas department (*department d'outre-mer, or DOM*)

24. French Polynesia

Archipelagos between South America and Australia in the Pacific Ocean. Overseas lands of France.

25. Glorioso Islands

Island group of two lushly vegetated coral islands (Ile Glorieuse and Ile du Lys) and three rock islets in the Mozambique Channel in the Indian Ocean. Overseas territory of France. Part of the French Southern and Antarctic Lands.

26. Gibraltar

Small coastal area at the highly strategic point on the Strait of Gibraltar. Overseas territory of the United Kingdom.

27. Greenland

World's largest island extending from the Atlantic Ocean to the Arctic Ocean. Part of the Kingdom of Denmark.

28. Guadeloupe

Archipelago in the Carrebians in the Atlantic Ocean. Overseas territory of France.

29. Guam

Island close to the Philippines in the Pacific Ocean. Territory of the United States.

30. Guantánamo Bay

At the south-eastern side of Cuba in the Guantánamo Province. An enclave under the territorial control of the United States under lease from Cuba.

31. Guernsey

Island in the English Channel in the Atlantic Ocean. A British crown dependency.

32. Heard Island and McDonald Islands

Islands between Madagascar and Antarctica in the Indian Ocean. Territory of Australia.

33. Hong Kong

A coastal island on the mainland China overlooking the South China Sea in the Pacific Ocean. A special administrative region of China.

34. Howland Island

Island northeast of Kiribati in the Pacific Ocean. Territory of the United States and part of the Pacific Remote Islands National Wildlife Refuges.

35. Ile Amsterdam et Saint Paul

Volcanic islands southeast of Madagascar in the Indian Ocean. Overseas territory of France. Part of the French Southern and Antarctic Lands.

36. Iles Crozet

Large archipelago south of Madagascar in the Indian Ocean. Overseas territory of France. Part of the French Southern and Antarctic Lands.

37. Iles Kerguelan

Large archipelago south of Madagascar in the Indian Ocean. Overseas territory of France. Part of the French Southern and Antarctic Lands.

38. Isle of Man

Island in the Irish Sea in the Atlantic Ocean. British crown dependency.

39. Jan Mayen

Island northeast of Iceland in the Arctic Ocean. Territory of Norway.

40. Jarvis Island

Island between Hawaii and Cook Islands in the Pacific Ocean. Territory of the United States and part of the Pacific Remote Islands National Wildlife Refuges.

41. Jersey

An island in the English Channel. A British crown dependency.

42. Johnston Atoll

Island between Hawaii and Marshall Islands in the Pacific Ocean. Territory of the United States and part of the Pacific Remote Islands National Wildlife Refuges.

43. Juan de Nova Island

Island in the Mozambique Channel of the Indian Ocean. Territory of France.

44. Kingman Reef

Island between Hawaii and American Samoa in the Pacific Ocean. Territory of the United States and part of the Pacific Remote Islands National Wildlife Refuges.

45. Macau

Coastal Island on the mainland China overlooking the South China Sea in the Pacific Ocean. A special administrative region of China.

46. Martinique

Island in the Carrebians in the Atlantic Ocean. Overseas territory of France.

47. Mayotte

Island in the Mozambique Channel of the Indian Ocean. Overseas French collectivity.

48. Midway Islands

Island on the northwest of Hawaiian Archipelago. Territory of the United States and part of the Pacific Remote Islands National Wildlife Refuges.

49. Montserrat

Island in the Carrebians in the Atlantic. Overseas territory of the United Kingdom.

50. Navassa Island

Island in the Caribbean in the Atlantic. Territory of the United States.

51. Netherlands Antilles

Island groups in the Caribbean Sea in the Atlantic Ocean. Part of the Kingdom of the Netherlands.

52. New Caledonia

Island in the Coral Sea in the Pacific Ocean. Self governing territory of France.

53. Niue

Island east of Tonga in the Pacific Ocean. Self governing in free association with New Zealand.

54. Norfolk Island

Island east of Australia in the Pacific Ocean. Self governing territory of Australia.

55. Northern Mariana Islands

Group of 15 islands in the Marianas archipelago in the Pacific Ocean. Commonwealth in political union with the United States.

56. Palmyra Atoll

Atoll between Hawaii and American Samoa in the Pacific Ocean. Territory of the United States and part of the Pacific Remote Islands National Wildlife Refuges.

57. Paracel Islands

A group of about 130 small coral islands in the South China Sea in the Pacific Ocean. Occupied by China since 1974 and also claimed by Taiwan and Vietnam.

58. Pitcairn Islands

Islands between Peru and New Zealand in the Pacific Ocean. Overseas territory of the United Kingdom.

59. Puerto Rico

Island in the Caribbean in the Atlantic Ocean. Territory of the United States with Commonwealth status.

60. Reunion

Island east of Madagascar in the Indian Ocean. One of the overseas departments of France.

61. Saint Barthelemy

Island in the Caribbean in the Atlantic Ocean. Overseas territory of France.

62. Saint Helena

Islands comprising Saint Helena, Ascension and the island group of Tristan da Cunha between South America and Africa in the Atlantic Ocean. Overseas territory of the United Kingdom.

63. Saint Martin

Island in the Caribbean Sea in the Atlantic Ocean. A French overseas collectivity.

64. Saint Pierre and Miquelon

Islands close to Newfoundland, Canada in the Pacific Ocean. Territorial overseas collectivity of France.

65. South Georgia and the South Sandwich Islands

Group of islands south of the tip of South America in the Atlantic Ocean. Overseas territory of the United Kingdom.

66. Spratly Islands

Group of islands in the South China Sea in the Pacific Ocean. Claimed in their entirety by China, Taiwan, and Vietnam, and portions by Malaysia and the Philippines. Brunei established a fishing zone overlapping a southern reef, but has not made any formal claim.

67. Svalbard

Group of islands in the Arctic Ocean. Territory of Norway.

68. Tokelau

Group of atolls in the Pacific Ocean. Territory of New Zealand.

69. Tromelin Island

Island east of Madagascar in the Indian Ocean. Overseas territory of France. Part of the French Southern and Antarctic Lands.

70. Turks and Caicos Islands

Group of islands in the Caribbean in the Atlantic Ocean. Overseas territory of the United Kingdom.

71. Virgin Islands

Archipelago in the Carrebians in the Atlantic Ocean. Territory of the United States.

72. Wake Island

Atoll between Hawaii and Northern Mariana Islands in the Pacific Ocean. Territory of the United States.

73. Wallis and Futuna

Group of islands between Hawaii and New Zealand in the Pacific. Overseas collectivity of France.

These entities deserve a special appreciation to understand their importance to maritime strategy and as partners for combating maritime threats worldwide. All are not stable. Some of them are claimed by other nations. Intermittent protests and unrest are common within these territories. They are warning signs of sorts that their holders will understand. Among them 63 are islands. The remaining 10 entities are coastal widely open to the corresponding ocean. Some of them are contiguous to their custodians as part of the State but under alternate governance by choice and consensus for long periods limited by time. Most of the islands were once unknown entities lost in the middle of the waves. Some of them were located by pirates or smugglers of the past and were used as hideouts or coves. With the advent of exploration for resources many of these entities came to be known to the world and became possessions of those who explored them and subsequently colonised. They exploited them for their resources—guanos (bird drops that are excellent fertilisers), phosphates, salt, etc., and other purposes that ranged from strategic military staging, observation, weapon testing, target practice to possessions of esteem for the kingdoms, royalties and the super rich. Many of the islands were also used for housing convicts away from the mainland, interrogating hardcore criminal suspects, and other extremes. Many islands were volcanic. Some of the islands were inhabited by indigenous peoples. Most of them have become extinct now or merged with the settlers losing their indigenous identity in many parts of the world.[36] Examples are the Manx of the Isle of Man and their Celtic language, and the indigenous people of Puerto Rico. Most of these territorial entities were carried forward from the past, some of them centuries before and some as remnants of World War II occupancies subsequently regularised. Some changed hands much later. Still there are war occupancies that are not regularised. They are not specifically listed out in this study. All these entities are geostrategically as well as military strategically vital and are situated at vantage points. Most of the island protectorates and territories are officially converted into wildlife refuges including sea

turtle parks, national parks, environmental habitats, strategic bases, etc. There are also territories that are financial havens with rules of convenience for trade and economics, and thereby thriving in tourism and financial holdings. France has used the island of Mururoa in the early days for underwater nuclear tests that faced opposition and protests in 1995. These protectorates and territories vary in size and area from submerged tidal flats to tiny foothold islands to those larger than some of the independent States of the world. Some of them are inaccessible at times or are generally difficult to get into from the sea. Their roles changed with changing times and situations, and are now poised for great advantage to their holders in terms of ocean area, resources, and strategic advantage. The holders stand highly benefited to enhance their ocean property[37] advantage provided they have the capability to effectively utilise their possessions which are extremely pricy in the modern world. The advantage of these entities to their holders and the problems they can create to the maritime world in case of their capacity deficit is a theme for separate study. There are huge areas around tiny islands and even the submerged ones! For example the Coral Sea islands give about a million square kilometres to Australia whose marine territory is huge like that of the New Zealand. The countries who own these geoproperties should be powerful maritime States—that is of having or able to develop capacity to oversee them as strategic vantage points for countering maritime threats to international community. Otherwise there is a risk of these areas becoming neglected and used by insurgents, militants and transnational criminal syndicates with or without the connivance of authorities. Today military garrisons weather stations, airstrips, harbours, etc. dot these entities showing the strategic proximity and advantage to the holder. Some of them have seen military expeditions at the closing of the last century. The Falkland Islands (*Islas Malvinas* for Argentina) had witnessed a serious conflict between Britain and Argentina in 1982. Though the British evicted the occupying Argentineans after the bloody war the claim over the island by the latter still holds. The island was first sighted by a British navigator in 1592. The colony had changed hands since then. Every one of these territories like the independent nation States are draped in history, some of them quite bloodied.

These protectorates and territorial entities are extended to all the five ocean divisions. Their ocean representation is given in table 1.1.

	Location	Number of Territorial Entities
1	Arctic Ocean	3 (including part of Greenland)
2	Atlantic	30 (including part of Greenland)
3	Indian ocean	14
4	Pacific Ocean	26
5	Southern Ocean	1 (Adélie Land, French claim)

Table 1.1 Territorial Entities of Nation States

All the oceans have presence of the controlling nation States in the extra territorial context derived as gains of the past, though Southern Ocean could be an exception. These extra territories are owned or claimed by just nine nations of the world (Table 1.2).

	Countries	Number of Territorial Entities	Ocean Link through Entities
1	Australia	6	Indian Ocean (3) Pacific Ocean (3)
2	China	4 (including claim on Spratly islands along with Vietnam	Pacific Ocean
3	Denmark	2	Arctic (1) Atlantic (2)
4	France	21	Atlantic Ocean (4) Indian Ocean (11) Pacific Ocean (5) Southern Ocean (1)
5	Netherlands	2	Atlantic
6	New Zealand	3	Pacific (3)
7	Norway	3	Arctic ocean (2) Atlantic (1)
8	United Kingdom	16	Atlantic Ocean (14) Indian Ocean (1) Pacific Ocean (1)
9	United States of America	16	Atlantic Ocean (5) Pacific Ocean (11)

Table 1.2 Distribution of Territorial Entities with Nation States Linked to Oceans

Among them Denmark, France, and the United Kingdom have extraoceanic identity by owning territories and possessions beyond their mainland ocean links (Table 1.3). France and United Kingdom have already claimed their status as the rim countries of the Indian Ocean, though the 'natural' rim countries object to the proposal.

	Nations	Ocean Link	Extra-ocean Link
1	Denmark	Atlantic Ocean	Arctic Ocean
2	France	Atlantic Ocean	Indian ocean Pacific Ocean Southern Ocean
3	United Kingdom	Atlantic Ocean	Indian Ocean Pacific Ocean

Table 1.3 Countries with Extraocean Link

In addition to these widely recognised entities there are also other locations in the world that need to be seen in relation to maritime studies. There are many territories that are under disputes carried forward since historical times, most of them ending with the World War II. There are also examples of amicable geostrategic solutions. India's agreement with Sri Lanka on *Katchativu* that lie north of *Ram Setu* (Adam's Bridge as referred by British cartographers), and with Burma (Myanmar) on *Coco Islands* of the Andaman group of islands, Sino-Russian demarcation of islands at the Amur and Ussuri

confluence and in the Argun River, etc. are examples of pragmatic diplomacy in a world of fanatic nationalism or economic nationalism.[38] But in the post-UNCLOS world a country stand to lose considerably in terms of legal continental shelf, exclusive economic zone, territorial waters and associated loss of resources and strategic advantage if it has to give away even an island that is microscopically tiny or submerged during the high tides. Many islands are of great strategic importance to a State in controlling the waterways around them. No country will be willing to walk that line unless the compensations in terms of geostrategic advantage are sufficiently high. Negotiations on such issues have to be on a win-win game strategy with the involvement of people through their political establishments. Often it is not possible. This is evident when some of the establishments in India complain on the past decisions of the government in relation to *Coco Islands* or *Katchativu*.

www.en.wikipedia.org/wiki/Image:Rama%27s_bridge.jpg

Figure 1. 8 *Ram Setu* (Adam's Bridge) that links India with Sri Lanka through the Congregation of Gulf of Mannar (south) and Palk Bay (north)

Solving territorial disputes permanently will require extraordinary understanding and intuitive capability for governments. In the absence of such understanding the disputes will remain and hinder global progress and collective understanding that will be taken advantage of by the adversaries of all kinds. Though India had shown considerable pragmatism in resolving issues with Sri Lanka and Myanmar in the early days it will not be easy to handle the ongoing issues with Pakistan and Bangladesh on maritime boundary disputes. The disputes between India and Pakistan and India and Bangladesh on maritime boundaries are expected to continue further under the current context. It could be similar to the fate of the sovereignty disputes over the islands of Etorofu, Kunashiri, Shikotan, and the Habomai group between Japan and the Russian Federation.[39] The fate of these islands could decide the way maritime threats in the Sea of Okhotsk across the Hokkaido Prefecture in transnational crimes and other activities might evolve. These islands were occupied by the Soviet Union in 1945 and are administered by the Russian Federation subsequent to the disintegration of the Soviet Union. They are claimed by Japan. Japan

calls them the ‘Northern Territories.’ They are ‘Southern Kurils’ for Russia. This dispute remains the primary sticking point to signing a peace treaty formally ending World War II hostilities.

Photo by Shohei Yamamoto,www.en.wikipedia.org/wiki/Image

Figure 1.9　Etorofu Residents on a Picnic in the Island in 1933

The Liancourt Rocks in the South is another issue for Japan that can affect its relations with South Korea.[40] The islets known as *Takeshima* in Japan and *Dokdo* (*Tokto)* in South Korea are under the control of the latter since 1945. Even the reference to the sea is different relative to the countries. It is known in Japan as ‘Sea of Japan’ and where as it is the ‘East Sea’ for South Korea. The two barren islands with rocky cliffs are small in area but the seabed below is believed to contain huge deposits of methane hydrates. The ownership also has implications over fishing rights, etc.[41] These are not isolated examples. Most of the nations have such disputes and resistance from the changing social order to yield or block the moves for claiming ownership even by self determination where populated. Besides they remain as persistent sticking points in bilateral diplomacy as well as in the political lives of the leaders. It is a dynamic situation ever vibrant in the geostrategic order of the world with minute to minute changes in strategic and political thinking. But disputes remain as counts of inheritance from colonial rules, attributed war cruelty, associations with criminal indulgence and nationalistic patriotism. Within this scenario, settled boundaries alone could give a free hand in strategic decision-making for any nation State. Rest are all bogged down in uncertainties. The problems related to land boundaries are different from those with the sea as the primary terrain. There are many boundary agreements pending ratification by various governments.

Within this analysis the strategic maritime world accounts for 277 identified entities that cover the entire world with differing geostrategic perception. The divisions of the entities identified for this study are given in Table 1.4. Every one of these entities has direct or indirect interest in the ocean.

	Entity Division	Numbers
1	Ocean divisions	5
2	Members of the United Nations	192
3	Protectorates and Territories	73
4	Others	7

Table 1.4 Identified Entities of the (Maritime) World

These entities are exclusive to this study to examine the world from the maritime threat perspective. All these entities are interactive in this matter. Each one of them has geostrategic identities of its own. Overarching these identities are those that separate them politically in geostrategy that brings out the difference in the structure of their authorities to participate collectively towards a common objective. Majority of these entities are ocean related or linked towards it with definite geoproperty rights under the ocean property regime. It is clear that majority entities fall within the category of direct maritime entity since among the 277 identified entities only 44 are landlocked. Even then most among them had maritime history or direct maritime links in the past in their history. The remaining 233 entities are either oceans, coastal or island territories. Jointly they fall within 15 identified and variable categories that may change with respect to time. The categories are:

1. Ocean divisions.
2. Independent nations and members of the United Nations.
3. Independent nation, recognised, but not a member of the United Nations.
4. Member of the United Nations but without proper governance.
5. Group of nations under supranational framework
6. Independent and governed, but not recognised by the United Nations.
7. Independent and recognised entity but not a nation.
8. Recognised by select group of nations but not the United Nations.
9. Acceptable entity as a State but unsettled by prolonged disputes and conflicts.
10. Territory external and contiguous but under dispute.
11. Territories external and not contiguous to nations but internationally recognised as protectorates or territories under various types of governance.
12. Territories external and not contiguous to nations but recognised as protectorates or territories but still not free of disputes.
13. Territory claimed by a nation as a protectorate in an international entity.
14. Territory submerged during high tide and external to a nation but recognised as a territory of a State
15. Territories under disputes and not considered exclusively for this study.

Entities under category 15 are of very special nature and are not seen exclusively for this study because they are partially referred to as examples in this chapter besides

being inclusive of identified entities based on the holders' regime. Category 15 entities at the same time are very important to strategic affirmation since they have the potential to be the breeding grounds for many a threat in the maritime scenario in future. The holders or the claimants of these territories have independent or joint responsibility towards international community to see that these terrains are safe and sound and not detrimental to international peace and well-being. The categorisation of identified entities according to this study is further tabulated at Table 1.5 with an appropriate example except for Category 15.

	Category	Example
1	Ocean divisions	Arctic Ocean
2	Recognised by the United Nations as a State and is a member	Afghanistan
3	Recognised by the United Nations as a State but not a member	Vatican City
4	Member of the United Nations but without proper governance (2008)	Somalia
5	Recognised by the United Nations as a supranational entity.	European Union
6	Independent and governed but not recognised by the United Nations	Taiwan
7	Recognised by the United Nations as an international entity	Antarctica
8	Recognised by select nations as an independent entity but not by the United Nations	Kosovo
9	Acceptable entity but unsettled by disputes and conflicts	West Bank and Gaza Strip
10	Territory external and contiguous but under dispute	Western Sahara
11	Territories external and not contiguous to nations but recognised as protectorates or territories under various types of governance.	British Indian Ocean Territory
12	Territories external and not contiguous to nations but recognised as protectorates or territories but still not free of disputes.	Spratly Islands
13	Territory claimed by a nation as a protectorate in an international entity.	Adélie Land
14	Territory submerged during high tide and external to a nation but recognised as a territory of a State	Basses da India
15	Territories under disputes and not considered exclusively for this study.	(Intentionally left blank)

Table 1.5 Categorisation of Land Entities

The views on some of these identities may differ; but the caveat is that this demarcation is only from the point of driving home the requirement of identifying such entities exclusively for the study related to combating maritime threats.

It is amazing how these land entities originated as nation States and other territories of ownership and remained interfaced with the oceans. It also explains the high density of coastal population and the importance of island territories in the world. The 73 entities identified as protectorates or territories of nine other States are all ocean linked

with 10 of them contiguous to mainland and the rest as oceanic islands. Every entity has its own geostrategic fingerprint with respect to its proximity to the ocean, land borders, border mapping and geoproperty rights and disputes. No entity is identical. Within this system profile the entities have to manage their geostrategy and face the threats related to their rights and aspirations. In fact every entity has its own geometrics—the geo-metric identity. The asymmetry of this identity is reflected in their interactive dynamics in international relations. There are also hidden symmetries in relation to aspirations, sustainable well-being of people, apprehensions related to common threats, etc. that could be used to resolve common issues—disputes, transnational threats, other unlawful activities, disasters, environmental damages, etc.

The distribution of the identified geostrategic entities with respect to their ocean links is given Table 1.6.

	Entities Identified for the Study	Numbers
1	Total	277
2	Ocean divisions	5
3	Member States of the United Nations	192
4	External protectorates/territories of nine member States of the UN	73
5	Collective union of recognised nations	1
6	Others	6
7	Landlocked	44
8	Costal including close to mainland islands	127
9	Island nations and territories	101
10	Entities with direct ocean link (including ocean divisions)	234
11	Entities with single ocean link	209
12	Entities with multiocean link	25
13	Entities with Arctic Ocean link	11
14	Entities with Atlantic Ocean link	128
15	Entities with Indian ocean link	52
16	Entitles with Pacific Ocean Link	68
17	Entitles with Southern Ocean link	4

Table 1.6 Entity Distribution in Relation to Land-Ocean Links

From the table 1.6 it can be seen there are 44 landlocked entities. Out of these 42 are members of UN. Others are Vatican City, a recognised State, and Kosovo a yet to be recognised independent State. Another way to look at the status of entities is through the membership in the International Maritime Organisation (IMO) the primary body of the United Nations that governs the ocean with a focus on maritime transportation. There are 168 members and three associate members. A detailed list of the Membership in the IMO is given at Appendix A. The divisions are given in Table 1. 7.

www.upload.wikimedia.org/wikipedia/commons

Figure 1. 10 IMO Headquarters, London. View across the Thames.

	Type	Numbers
	IMO members	168
	IMO associate members	3
	UN members in IMO	167
	Protectorates and Territories as members in IMO	1
	Landlocked UN members in IMO	20
	Landlocked UN members not yet in IMO	22
	Coastal/island UN members in IMO	147
	Coastal/island UN members not yet in IMO	3

Table 1.7 Distribution of IMO Members

The distribution shows that all the UN members except for 22 among the landlocked and three island countries, and Cook Islands[42] in the category of protectorate and territories under this study are members of IMO. The details of non-members of IMO are given at Appendix B (November 30, 2008). It will be in the better interest of the maritime world for the non-members to become members of IMO. It is for IMO and the UN to encourage them. Many landlocked countries may have interests in the ocean that may lead them towards bilateral or multilateral agreements with the littorals. Laos,[43] a landlocked country, for example is not a member of IMO. But is a signatory to the Regional Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP). The country also operates limited coastal ships with access to the sea through the Mekong River.

www.en.wikipedia.org/wiki/Image:United_Nations_Members.svg

Figure 1.11 Map Showing Members of United Nations and Their Recognised Dependencies

Another interesting find of this study is that Atlantic Ocean towers over all the other ocean divisions as far as the linkage is concerned, though it is second in area to Pacific Ocean that has maximum number of islands. Besides, it is the only ocean having linkage with the r other four oceans. However this specific status need not place it as the most vulnerable or conflict ridden among the oceans of the world. But the nations that have linkage to Atlantic Ocean and multiple oceans will have to cater for higher capacity maritime forces for larger domain surveillance and response. If not that will reflect in the international impact of transnational maritime threats.

The analysis is based on many factors and has done exclusively to identify the threats in the maritime domain and the capability of the maritime agencies in handling them. This is not a political assessment. The landlocked States are those that have no border with the ocean. Some of them have shorelines along large lakes, Like Kazakhstan and Uzbekistan with the Aral Sea or the countries that borders Caspian Sea, the largest enclosed water body on earth. Iran, Azerbaijan, Russia, Kazakhstan, and Turkmenistan borders the Caspian Sea. Among them barring Iran and Russia, other three are considered to be landlocked States. But they strictly have business in the expansive salt waters. But the fact remains that the lakes even if they are vast and saline are not considered to be part of an ocean.

In this study an archipelagic nation like Indonesia that comprises around 33,000 islands has been taken as a coastal and not an island nation since it has a short land border with the neighbouring Borneo. Cuba lost the status of an island nation besides considerable loss of free territory in the ocean as well as freedom of maritime strategy with the sheer presence of the United States in Guantánamo Bay, though the area is on lease for records. Such strategic cropping limits ocean advantage in the ocean property regime.The United Kingdom is a coastal State and not an island since its Northern Ireland borders Ireland, the State. Similarly Ireland is considered as a coastal State. The links with the oceans are also taken considering the exclusive economic zones and future legal continental shelf's extension as well as the extent of the sea line of communication

(SLOC) from the point of navigational proximity. Singapore is considered to be an island nation with linkage to Indian Ocean and Pacific Ocean since it lies at the southeastern choke point of the Malacca Strait. Exclusive rights of many countries around the Arctic will come into prominence and international arguments in future. The European Union comprises 27 countries (November 30, 2008) but is still considered an entity for this study because of its influence in the maritime domain. All, except four members—Austria, Czech Republic, Hungary and Slovakia—are costal States. But within the identity of the European Union, the four becomes coastal States. The European Union is not a virtual entity. International law has acquired a new hue under the principle of suprastate formation that is likely to lead for more in future. By such an assessment the number of landlocked countries reduces to 40 in a 277 entity fixture. Even among the 40, many were coastal either in the historic periods like Mongolia, or closer in time, parts of other coastal States like Kazakhstan or Uzbekistan for the erstwhile Soviet Union. This is a serious pointer towards the benefits a landlocked nation can acquire by being part of a modern union under international law. There are ambitious plans to make the East African Community, comprising Burundi, Kenya, Rwanda, Tanzania, and Uganda by 2010. If formed it will be a political federation with its own form of binding supranational law.[44] The landlocked Burundi, Rwanda and Uganda can ride the waves over Kenya and Tanzania as embedded coastal entities within the Community. That will be of great advantage for these otherwise landlocked States to get an opening into the ocean. In this context the landlocked States are endowed with two opportunities for an opening into the ocean under the international law: 1) within the UNCLOS regime, and 2) by supranational authority as part of a Union.

The finding shows the dependency of world population on the ocean and its travesties. The entities that have links with the ocean either as land based nations or island nations have many smaller nearshore and offshore islands. For example India has about 598 nearshore and 599 offshore islands within its sovereignty.[45] None of the landlocked States have island territories in the ocean. An island territory enhances ocean property rights of a nation besides providing strategic advantage in geostrategically adverse situations. The landlocked States stand to lose this advantage.

While every identified entity is a strategic player in maritime aspects, the Arctic may have a bigger role in future for reasons that it is a full ocean close to the land on its perimeter unlike in the south and is not that deep. The Arctic has witnessed many game plans during the half a century long Cold War with nuclear submarines moving threateningly under camouflaged second nuclear strike mode. The Arctic or close to it is said to be a location where many nuclear submarines have met their graves in casualties, and also a dumping ground for nuclear and other wastes of the Cold War experiments. Its new appearance will be as a victim of climate change; a provider for increased maritime transportation; and a conflict zone with contradicting claims for legal continental shelf basin with the nations around it claiming the territory under the UNCLOS. On June 27, 2007 Russia signalled its intention to annex 460,000 sq mile chunk of frozen Arctic based on the claim that its northern Arctic region is directly linked to the North Pole via an underwater shelf. It is a direct claim.[46] Under international law no State owns the North Pole. Instead the five surrounding States—Canada, Denmark (via Greenland), Norway, Russia, and the United States limited to a 200 mile exclusive economic zone around their coasts. This study has identified 11 entities with links to the Arctic Ocean. Russian

scientists visited the Lomonsov Ridge which is an underwater shelf in the Arctic Ocean. It is reportedly linked with the Russian federation. The area is a huge reservoir of oil and gas. To extend a zone the State has to show that the structure of the continental shelf is similar to the geological structure within its territory. Under the UNCLOS no country's shelves extend to North Pole. The International Seabed Authority (ISA) administers the area as an international area. According to Russian scientists, Canada could also make a claim. They could say the ridge is part of their shelves. Others like Denmark too could make a claim via the Greenland route and so the other countries with the Arctic Ocean linkage. It is a matter of reframing the claims.

The study shows the world is vibrant and continuously evolving with its dependency over the ocean becoming more and more pronounced with the passage of time. No nation, including those that are landlocked is free from ocean dependency. Besides recognised nation States there are many other territorial entities that will be influenced by the ocean. The purpose of this chapter is to highlight this fact. The world is a dynamic entity as a whole with a small land space available for habitation for people with a supporting oceanic environment which by itself is an expansive and multidimensional terrain. It has been regulated by UNCLOS regime to avoid trespassers. But maintaining the ocean from the existing and emerging threats has to be done with the support of everybody who is benefited by it as a global common. These entities are also constantly changing in the dynamism of demographic and political shifts. This study has identified 277 entities barring a few disputed spots that are otherwise associated with their claimants. These entities and their parameters relevant to this study are listed out in Table 1.8.[47]

	Entity	Nature	Land Border (km)	Coastline (km)	Ocean link
UN Members (since...)					
1	Afghanistan (1946)	Landlocked	5,529	--	--
2	Albania (1955)	Coastal	717	362	Atlantic Ocean
3	Algeria (1962)	Coastal	6,343	998	Atlantic Ocean
4	Andorra (1993)	Landlocked	120	--	--
5	Angola (1976)	Coastal	5,198	1,600	Atlantic Ocean
6	Antigua and Barbuda (1981)	Island	--	153	Atlantic Ocean
7	Argentina (1945)	Coastal	9,861	4,989	Atlantic Ocean
8	Armenia (1992)	Landlocked	1,254	--	--
9	Australia (1945)	Island	--	25,760	Indian Ocean Pacific Ocean
10	Austria (1955)	Landlocked	2,562	--	--
11	Azerbaijan (1992)	Landlocked	2.013	--	--
12	Bahamas (1973)	Island	--	3,542	Atlantic Ocean
13	Bahrain (1971)	Island	--	161	Indian Ocean
14	Bangladesh (1974)	Coastal	4,246	580	Indian Ocean
15	Barbados (1966)	Island	--	97	Atlantic Ocean

16	Belarus (1945)	Landlocked	3,098	--	--
17	Belgium (1945)	Coastal	1,385	67	Atlantic Ocean
18	Belize (1981)	Coastal	516	386	Atlantic Ocean
19	Benin (1960)	Coastal	1,989	121	Atlantic Ocean
20	Bhutan (1971)	Landlocked	1,075	--	--
21	Bolivia (1945)	Landlocked	6,940	--	--
22	Bosnia and Herzegovina (1992)	Coastal	1,538	20	Atlantic Ocean
23	Botswana (1966)	Landlocked	4,013	--	--
24	Brazil (1945)	Coastal	1,6885	7,491	Atlantic Ocean
25	Brunei Darussalam (1984)	Coastal	381	161	Atlantic Ocean
26	Bulgaria ((1955)	Coastal	1,808	354	Atlantic Ocean
27	Burkina Faso (1960)	Landlocked	3,193	--	--
28	Burundi (1962)	Landlocked	974	--	--
29	Cambodia (1955)	Coastal	2,572	443	Pacific Ocean
30	Cameroon (1960)	Coastal	4,591	402	Atlantic Ocean
31	Canada (1945)	Coastal	8,893	202,080	Arctic Ocean Atlantic Ocean Pacific Ocean
32	Cape Verde (1975)	Island	--	965	Atlantic Ocean
33	Central African Republic (1960)	Landlocked	5,203	--	--
34	Chad (1960)	Landlocked	5,968	--	--
35	Chile (1945)	Coastal	6,339	6,435	Pacific Ocean
36	China (1945)	Coastal	22,117	14,500	Pacific Ocean
37	Colombia (1945)	Coastal	6,309	3,208	Pacific Ocean
38	Comoros (1975)	Island	--	340	Indian Ocean
39	Congo, Republic of the… (1960)	Coastal	5,504	169	Atlantic Ocean
40	Costa Rica (1945)	Coastal	639	1,290	Atlantic Ocean Pacific Ocean
41	Côte d'Ivoire (1960)	Coastal	3,110	515	Atlantic Ocean
42	Croatia (1992)	Coastal	2,197	5,835	Atlantic Ocean
43	Cuba (1945)	Coastal	29	3,735	Atlantic Ocean
44	Cyprus (1960)	Coastal	150	648	Atlantic Ocean
45	Czech Republic (1993)	Landlocked	2,290	--	
46	Democratic People's Republic of Korea (1991)	Coastal	1,673	2,495	Pacific Ocean
47	Democratic Republic of the Congo (1960)	Coastal	10,730	37	Atlantic Ocean
48	Denmark (1945)	Coastal	68	7,314	Atlantic Ocean
49	Djibouti (1977)	Coastal	516	314	Indian Ocean

50	Dominica (1978)	Island	--	148	Atlantic Ocean
51	Dominican Republic (1945)	Coastal	360	1,288	Atlantic Ocean
52	Ecuador (1945)	Coastal	2,010	2,237	Pacific Ocean
53	Egypt (1945)	Coastal	2,665	2,450	Atlantic Ocean Indian Ocean
54	El Salvador (1945)	Coastal	545	307	Pacific ocean
55	Equatorial Guinea (1968)	Coastal	539	296	Atlantic Ocean
56	Eritrea (1993)	Coastal	1,626	2,234	Indian Ocean
57	Estonia (1991)	Coastal	633	3,794	Atlantic Ocean
58	Ethiopia (1945)	Landlocked	5,328	--	--
59	Fiji (1970)	Island	--	1,129	Pacific
60	Finland (1995)	Coastal	2,681	1,250	Atlantic Ocean
61	France (1945)	Coastal	2,889	4,668	Atlantic Ocean
62	Gabon (1960)	Coastal	2,551	885	Atlantic Ocean
63	Gambia (1965)	Coastal	740	80	Atlantic Ocean
64	Georgia (1992)	Coastal	1,461	310	Atlantic Ocean
65	Germany (1973)	Coastal	3,621	2,389	Atlantic Ocean
66	Ghana (1957)	Coastal	2,094	539	Atlantic Ocean
67	Greece (1945)	Coastal	1,228	13,676	Atlantic Ocean
68	Grenada (1974)	Island	--	121	Atlantic Ocean
69	Guatemala (1945)	Coastal	1,687	400	Atlantic Ocean Pacific ocean
70	Guinea (1958)	Coastal	3,3399	320	Atlantic ocean
71	Guinea-Bissau (1974)	Coastal	724	350	Atlantic Ocean
72	Guyana ((1966)	Coastal	743	459	Atlantic Ocean
73	Haiti (1945)	Coastal	360	1,771	Atlantic Ocean
74	Honduras (1945)	Coastal	1,520	820	Atlantic Ocean Pacific Ocean
75	Hungary (1955)	Landlocked	2,171	--	--
76	Iceland (1946)	Island	--	4,970	Arctic Ocean Atlantic Ocean
77	India (1945)	Coastal	14,103	7517	Indian Ocean
78	Indonesia (1950)	Coastal	2,830	54,716	Indian Ocean Pacific Ocean
79	Iran, Islamic Republic of… (1945)	Coastal	5,440	2,440	Indian Ocean
80	Iraq (1945)	Coastal	3,650	58	Indian Ocean
81	Ireland (1955)	Coastal	360	1,448	Atlantic Ocean
82	Israel (1949)	Coastal	1,017	273	Atlantic Ocean
83	Italy (1955)	Coastal	1,932	7,600	Atlantic Ocean
84	Jamaica (1962)	Island	--	1,022	Atlantic Ocean
85	Japan (1956)	Island	--	35,000	Pacific Ocean
86	Jordan (1955)	Coastal	1,635	26	Indian Ocean

87	Kazakhstan (1992)	Landlocked	12,012	--	--
88	Kenya (1963)	Coastal	3,477	536	Indian Ocean
89	Kiribati (1999)	Island	11	1,143	Pacific Ocean
90	Kuwait (1963)	Coastal	462	499	Indian Ocean
91	Kyrgyzstan (1992)	Landlocked	3,878	--	--
92	Lao Peoples Democratic Republic (1955)	Landlocked	5,083	--	--
93	Latvia (1991)	Coastal	1,348	498	Atlantic Ocean
94	Lebanon (1945)	Coastal	454	225	Atlantic Ocean
95	Lesotho (1966)	Landlocked	909	--	--
96	Liberia (1945)	Coastal	1,585	579	Atlantic Ocean
97	Libyan Arab Jamahiriya (1955)	Coastal	4,348	1,770	Atlantic Ocean
98	Liechtenstein (1990)	Landlocked	76	--	--
99	Lithuania (1991)	Coastal	1,644	90	Atlantic Ocean
100	Luxembourg (1945)	Landlocked	359	--	--
101	Madagascar (1960)	Island	--	4,828	Indian Ocean
102	Malawi (1964)	Landlocked	2,881	--	--
103	Malaysia (1957)	Coastal	2,669	4,675	Atlantic Ocean Indian Ocean
104	Maldives (1965)	Island	--	644	Indian Ocean
105	Mali (1960)	Landlocked	7,243	--	--
106	Malta (1964)	Island	--	197	Atlantic Ocean
107	Marshall Islands (1991)	Island	--	370	Pacific Ocean
108	Mauritania (1961)	Coastal	5,074	754	Atlantic Ocean
109	Mauritius (1968)	Island	--	177	Indian ocean
110	Mexico (1945)	Coastal	4,353	9,330	Atlantic Ocean Pacific Ocean
111	Micronesia, Federated States of… (1991)	Island	--	6,112	Pacific Ocean
112	Moldova (1992)	Landlocked	1,389	--	--
113	Monaco (1993)	Coastal	4	4	Atlantic Ocean
114	Mongolia (1961)	Landlocked	8,220	--	--
115	Montenegro (2006)	Coastal	625	294	Atlantic Ocean
116	Morocco (1956)	Coastal	2,018	1,835	Atlantic Ocean
117	Mozambique (1975)	Coastal	4,571	2,470	Indian Ocean
118	Myanmar (1948)	Coastal	5,876	1,930	Indian Ocean
119	Namibia (1990)	Coastal	3,936	1,572	Atlantic Ocean
120	Nauru (1999)	Island	--	30	Pacific Ocean
121	Nepal (1955)	Landlocked	2,926	--	--
122	Netherlands (1945)	Coastal	1,027	451	Atlantic Ocean
123	New Zealand (1945)	Island	--	15,134	Pacific Ocean
124	Nicaragua (1945)	Coastal	1,231	910	Atlantic Ocean

					Pacific Ocean
125	Niger (1960)	Landlocked	5,697	--	--
126	Nigeria (1960)	Coastal	4,047	853	Atlantic Ocean
127	Norway (1945)	Coastal	2,542	25,148	Arctic Ocean Atlantic Ocean
128	Oman (1971)	Coastal	1,374	2,092	Indian Ocean
129	Pakistan (1947)	Coastal	6,774	1,046	Indian Ocean
130	Palau (1994)	Island	--	1,519	Pacific Ocean
131	Panama (1945)	Coastal	555	2,490	Atlantic Ocean Pacific Ocean
132	Papua New Guinea (1975)	Coastal	820	5,152	Pacific Ocean
133	Paraguay (1945)	Landlocked	3,995	--	--
134	Peru (1945)	Coastal	7,461	2,414	Pacific Ocean
135	Philippines (1945)	Island	--	36,289	Pacific Ocean
136	Poland (1945)	Coastal	3,071	440	Atlantic Ocean
137	Portugal (1955)	Coastal	1,214	1,793	Atlantic Ocean
138	Qatar (1971)	Coastal	60	563	Indian Ocean
139	Republic of Korea (1991)	Coastal	238	2,413	Pacific Ocean
140	Romania (1955)	Coastal	2,508	225	Atlantic Ocean
141	Russian Federation (1945)	Coastal	20,097	37,653	Arctic Ocean Pacific Ocean
142	Rwanda (1962)	Landlocked	893	--	--
143	Saint Kitts and Nevis (1983)	Island	--	135	Atlantic Ocean
144	Saint Lucia (1979)	Island	--	158	Atlantic Ocean
145	Saint Vincent and the Grenadines (1980)	Island	--	84	Atlantic Ocean
146	Samoa (1976)	Island	--	403	Atlantic Ocean
147	San Marino (1992)	Landlocked	39	--	--
148	Sao Tome and Principe (1975)	Coastal	--	209	Atlantic Ocean
149	Saudi Arabia (1945)	Coastal	4,431	2,640	Indian Ocean
150	Senegal (1960)	Coastal	2,640	531	Atlantic Ocean
151	Serbia (2000)	Landlocked	2,026	--	--
152	Seychelles (1976)	Island	--	491	Indian Ocean
153	Sierra Leone (1961)	Coastal	958	402	Atlantic Ocean
154	Singapore (1965)	Island	--	193	Indian Ocean Pacific Ocean
155	Slovakia (1993)	Landlocked	1,524	--	--
156	Slovenia (1992)	Coastal	1,370	47	Atlantic Ocean
157	Solomon Islands (1978)	Island	--	5,313	Pacific Ocean
158	Somalia (1960)	Coastal	2,340	3,025	Indian Ocean

159	South Africa (1945)	Coastal	4,862	2,798	Atlantic Ocean Indian Ocean
160	Spain (1955)	Coastal	1,918	4,964	Atlantic Ocean
161	Sri Lanka (1955)	Island	--	1,340	Indian Ocean
162	Sudan (1956)	Coastal	7,687	853	Indian Ocean
163	Suriname (1975)	Coastal	1,703	386	Atlantic Ocean
164	Swaziland (1968)	Landlocked	535	--	--
165	Sweden (1946)	Coastal	2,233	3,218	Atlantic Ocean
166	Switzerland (2002)	Landlocked	1,852	--	--
167	Syrian Arab Republic (1945)	Coastal	2,253	193	Atlantic Ocean
168	Tajikistan (1992)	Landlocked	3,651	--	--
169	Thailand	Coastal	4,863	3,219	Indian Ocean Pacific Ocean
170	The Former Yugoslav Republic of Macedonia (1993)	Landlocked	766	--	--
171	Timor-Leste (2002)	Coastal	228	706	Pacific Ocean
172	Togo (1960)	Coastal	1,647	56	Atlantic Ocean
173	Tonga (1999)	Island	--	419	Pacific Ocean
174	Trinidad and Tobago (1962)	Island	--	362	Atlantic Ocean
175	Tunisia (1956)	Coastal	1,424	1,148	Atlantic Ocean
176	Turkey (1945)	Coastal	2.648	7,200	Atlantic Ocean
177	Turkmenistan (1992)	Landlocked	3,736	--	--
178	Tuvalu (2000)	Island	--	24	Pacific Ocean
179	Uganda (1962)	Landlocked	2,698	--	--
180	Ukraine (1945)	Coastal	4,663	2,782	Atlantic Ocean
181	United Arab Emirates (1975)	Coastal	867	1,318	Indian Ocean
182	United Kingdom of Great Britain and Northern Ireland (1945)	Coastal	360	12,429	Atlantic Ocean
183	United Republic of Tanzania (1961)	Coastal	3,861	1,424	Indian Ocean
184	United States of America (1945)	Coastal	12,034	19,924	Arctic ocean Atlantic Ocean Pacific Ocean
185	Uruguay (1945)	Coastal	1,648	660	Atlantic Ocean
186	Uzbekistan (1992)	Landlocked	6,221	--	--
187	Vanuatu (1981)	Island	--	2,528	Pacific Ocean
188	Venezuela, Bolivarian Republic of… (1945)	Coastal	743	2,800	Atlantic Ocean
189	Viet Nam (1977)	Coastal	4,639	3,444	Pacific Ocean

190	Yemen (1947)	Coastal	1,746	1,906	Indian Ocean
191	Zambia (1964)	Landlocked	5,664	--	--
192	Zimbabwe (1980)	Landlocked	3,066	--	--
	Protectorates and Territories				
193	Adélie Land (France)	Coastal	5,210	350	Southern Ocean
194	Akrotiri (UK)	Coastal	47	56	Atlantic Ocean
195	American Samoa (U.S.A.)	Island	--	116	Pacific Ocean
196	Anguilla (UK)	Island	--	61	Atlantic Ocean
197	Aruba (Netherlands)	Island	--	69	Atlantic Ocean
198	Ashmore and Cartier Islands (Australia)	Island	--	74	Indian Ocean
199	Baker Islands (U.S.A.)	Island	--	5	Pacific Ocean
200	Basses da India (Iles Eparses) (France)	Island	--	35	Indian Ocean
201	Bermuda (UK)	Island	--	103	Atlantic Ocean
202	Bouvet Island (Norway)	Island	--	30	Atlantic Ocean
203	British Indian Ocean Territory (UK)	Island	--	698	Indian Ocean
204	British Virgin Islands (UK)	Island	--	80	Atlantic Ocean
205	Cayman Islands (UK)	Island	--	160	Atlantic Ocean
206	Christmas Island (Australia)	Island	--	139	Indian Ocean
207	Clipperton Island (France)	Island	--	11	Pacific Ocean
208	Cocos (Keeling) Islands (Australia)	Island	--	26	Indian Ocean
209	Cook Islands (New Zealand)	Island	--	120	Pacific Ocean
210	Coral Sea Islands (Australia)	Island	--	3,095	Pacific Ocean
211	Dhekelia (UK)	Coastal	103	28	Atlantic Ocean
212	Europa Island (France)	Island	--	22	Indian Ocean
213	Falkland Island (UK)	Island	--	1,288	Atlantic Ocean
214	Faroe Islands (Denmark)	Island	--	1,117	Atlantic Ocean
215	French Guiana (France)	Coastal	1,183	378	Atlantic Ocean
216	French Polynesia (France)	Island	--	2,525	Pacific Ocean

217	Glorioso Islands (France)	Island	--	35	Indian Ocean
218	Gibraltar (UK)	Coastal	1	12	Atlantic Ocean
219	Greenland (Denmark)	Island	--	44,087	Arctic Ocean Atlantic Ocean
220	Guadeloupe (France)	Island	--	306	Atlantic Ocean
221	Guam (U.S.A.)	Island	--	126	Pacific Ocean
222	Guantánamo Bay (U.S.A)	Coastal	29	18	Atlantic Ocean
223	Guernsey (UK)	Island	--	50	Atlantic Ocean
224	Heard Island and McDonald Islands (Australia)	Island	--	102	Indian Ocean
225	Hong Kong (China)	Coastal	30	733	Pacific Ocean
226	Howland Island (U.S.A.)	Island	--	6	Pacific Ocean
227	Ile Amsterdam et Ile Saint Paul (France)	Island	--	28	Indian Ocean
228	Ile Crozet (France)	Island	--		Indian Ocean
229	Iles Kerguelan (France)	Island	--	2,800	Indian Ocean
230	Isle of Man (UK)	Island	--	160	Atlantic Ocean
231	Jan Mayen (Norway)	Island	--	124	Arctic Ocean
232	Jarvis Island (U.S.A.)	Island	--	8	Pacific Ocean
233	Jersey (UK)	Island	--	70	Atlantic Ocean
234	Johnston Atoll (U.S.A.)	Island		34	Pacific Ocean
235	Juan de Nova Island (France)	Island	--	24	Indian Ocean
236	Kingman Reef (U.S.A.)	Island	--	3	Pacific Ocean
237	Macau (China)	Coastal	0.34	41	Pacific Ocean
238	Martinique (France)	Island	--	350	Atlantic Ocean
239	Mayotte (France)	Island	--	185	Indian Ocean
240	Midway Islands (U.S.A.)	Island		15	Pacific Ocean
241	Montserrat (UK)	Island	--	40	Atlantic Ocean
242	Navassa Island (U.S.A.)	Island	--	8	Atlantic Ocean
243	Netherlands Antilles (Netherlands)	Coastal	15	364	Atlantic Ocean
244	New Caledonia (France)	Island	--	2,254	Pacific Ocean
245	Niue (New Zealand)	Island	--	64	Pacific Ocean
246	Norfolk Island	Island	--	32	Pacific Ocean

	(Australia)				
247	Northern Mariana Islands (U.S.A.)	Island	--	1,482	Pacific Ocean
248	Palmyra Atoll (U.S.A.)	Island	--	15	Pacific Ocean
249	Paracel Islands (China)	Island	--	518	Pacific Ocean
250	Pitcairn Islands (UK)	Island	--	51	Pacific Ocean
251	Puerto Rico (U.S.A.)	Island	--	501	Atlantic Ocean
252	Reunion (France)	Island	--	207	Indian Ocean
253	Saint Barthelemy (France)	Island	--	30 (?)	Atlantic Ocean
254	Saint Helena (UK)	Island	--	100	Atlantic Ocean
255	Saint Martin (France)	Coastal	15	59	Atlantic Ocean
256	Saint Pierre and Miquelon (France)	Island	--	120	Pacific Ocean
257	South Georgia and South Sandwich Islands (UK)	Island	--	398	Atlantic Ocean
258	Spratly Islands (China, Taiwan, Vietnam)	Island	--	926	Pacific Ocean
259	Svalbard (Norway)	Island	--	3,587	Arctic Ocean
260	Tokelau (New Zealand)	Island	--	101	Pacific Ocean
261	Tromelin Island (France)	Island	--	4	Indian Ocean
262	Turks and Caicos Islands (UK)	Island	--	389	Atlantic Ocean
263	Virgin Islands (U.S.A.)	Island	--	188	Atlantic Ocean
264	Wake Island (U.S.A.)	Island	--	19.3	Pacific Ocean
265	Wallis and Futuna	Island	--	129	Pacific Ocean
Other Entities					
266	Antarctica	Island	--	17,968	Southern Ocean
267	European Union	Coastal	12,441	65,993	Atlantic Ocean Arctic ocean
268	Kosovo	Landlocked	352	--	--
269	Taiwan	Island	--	1,566	Pacific ocean
270	West Bank and Gaza Strip	Coastal	466	40	Atlantic Ocean
271	Western Sahara	Coastal	2.046	1,110	Atlantic Ocean
272	Vatican City	Landlocked	3	--	--

Oceans					
273	Arctic Ocean	Ocean	45,390 km	NA	Atlantic Ocean Pacific Ocean
274	Atlantic Ocean	Ocean	111,866 km	NA	Arctic Ocean Pacific Ocean Indian Ocean Southern Ocean
275	Indian Ocean	Ocean	66,526 km	NA	Atlantic Ocean Pacific Ocean Southern Ocean
276	Pacific Ocean	Ocean	135,663 km	NA	Arctic Ocean Atlantic Ocean Indian Ocean
277	Southern Ocean	Ocean	17,968 km	NA	Atlantic Ocean Indian Ocean Pacific Ocean

Table 1.8 Geostrategic Entities of the Maritime World

The territorial dimensions of all these entities shown in the table are taken after comparison with the available resources or interpolated where necessary and are not precisely accurate. The dimensions will vary because they are fractals and countries and associated entities will have their own view points. Their use in this study is for comparative analysis and in understanding the dimension of the geoproperty and ocean property advantages. The maritime finger prints or the geometrics of these entities other than the ocean entities depend on their status as a coastal area relative to the land border. For a territorial entity, maximum maritime exposure is when the ratio of its coastline to landline is zero. That is when it is an island nation, as a bench mark. The maritime vulnerability and maritime advantage varies accordingly. But it is not proportionate because no entity is identical. The asymmetries between each entity add additional variables to the strategic games.

NOTES

[1] The term geoproperty was used by author Geoff Demarest in his book *Geoproperty: Foreign Affairs National Security and Property Rights* (London: Frank Cass, 1998) to explain the ownership and associated rights over a particular property. It could be anything that an individual or entity owns. The shape and character of properties may change as the world advances. It is not just territory. But in this study, the term is used to refer to territorial area. Property, in whichever form it may be, is the common denominator in human conflict. The term is associated with geoproperty rights. Hence refers to the properties people hold as a nation or a territorial entity.

[2] The Polar Map of the World, World Fact Book, 2008, www.cia.gov/library/publications/the-world-factbook, 12 June 2008.
[3] Used in place of property rights as well as jurisdictional rights under the term geoproperty.
[4] *Katchativu* is a tiny island in Palk Bay. Indian fishers were traditionally visiting the island to fish around as well as worship. When India ceded the island to Sri Lanka Article 5 of the agreement sated that Indian fishermen and pilgrims will enjoy access to the island and will not need travel documents or visas. But subsequently confusion raged as it has been interpreted that the fishermen of India will continue fishing there.
[5] It is the general and accepted perception. But ocean is not all salt water. There is also fresh water in the ocean—in the form of ice as well as fresh water deep under. That makes the ocean even a source of fresh water.
[6] As one of the five principal divisions of the ocean, explained later.
[7] Used in the meaning as a sea containing large group o f islands. It is a chain or cluster of islands.
[8] www.wikpedia.org, accessed June 17, 2008. The surface area was 68,000 sq km in 1960. It was reduced to 28,687 sq km in 1998. In 2004 the area became 17,000 sq km. By 2007 it has become one tenth of its original area and split into three separate water bodies with high salt content.
[9] Ibid.
[10] S. Tavernise, A Legacy of Salt Corrodes Uzbek Landscape, *The International Herald Tribune,* Tokyo, June 17, 2008, p. 2
[11]Anthrax is an acute disease caused by *Bacillus anthracis* in animals and humans. It was one of the biological agents used in the later years by terrorists and similar activists in various showdowns across the world.
[12] Wikipedia, n. 8.
[13] Aral Sea here is a biomodel. Biomodel is a term used by the author in his book *National Security: Imperatives and Challenges,* (New Delhi: Tata McGraw-Hill Publishing Company Limited, 2007). Biomodel is one of the models that could be made use of for studying a process for decision-making by carefully observing a much smaller but identical process that is unfolding or created elsewhere under live situations and normal circumstances.
[14] In this particular paragraph the reference to the Aral Sea is as a biomodel. As explained, biomodeling is the process of identifying a small living system and comparing the observed changes by amplifying the process to a larger system. Here the Aral Sea replicates some part of the study about the ocean entities.
[15] The year 1991 was believed to be the official end of the US containment policy, though its bases abroad continued.
[16] American diplomat and historian, considered the architect of the containment policy of the United States during Cold War.
[17] There are also opinions that the Soviet Union may be history but the Cold War may refuse to withdraw since the world cannot be strictly unipolar in a dynamic system. Fore more, see P. Paleri, *National Security: Imperatives and Challenges* (New Delhi: Tata McGraw-Hill Publishing Company Limited, 2007)
[18] The International Hydrographic Organisation (IHO) delimited Southern Ocean in 2000. It surrounds Antarctica and extends to 60 degree south.
[19] Wikipedia, n.8
[20] http://news.bbc.co.uk/cbbcnews/hi/newsid_7460000/newsid_7462800/7462806.stm, Arctic Ice 'Melting even Faster,' accessed July 12, 2008.
[21] Research Station Moves as Ice beneath It Melts, *International Herald Tribune,* Tokyo, July 15, 2008, p. 4. Russia's research station the North Pole 35 near the Zevrnaya Zemlya archipelago was being moved because ice is melting underneath the station as a result of global warming according to the report.
[22] Ocean Policy Research Foundation, *New Era in Far East Russia & Asia* (Tokyo: Ocean Policy Research Foundation, 2006).
[23] J. Mouawad, Arctic may Hold as much as a Fifth of Undiscovered Oil and Gases, *International Herald and Tribune,* Tokyo, July 25, 2008, p. 10.
[24] There are examples where national governments are fighting continuous wars within their own countries against unlawful combatants who establish regimes within and collect taxes and enforce local laws over the people. An example is that of Taliban who has become a strong force in Pakistan and Afghanistan. They settle feuds between the tribes in Pakistan's tribal areas faster and better than the governments for a price. They become self sustaining by their self rule. Virtually they are ruling the federally administered tribal

areas (FADA) of Pakistan. They net where authorities fail. (Pir Subair Shah and Jane Perlez, Taliban Fill a Political Void in Pakistan, *International Herald and Tribune,*, Tokyo, July 15, 2008, p. 1-4)
[25] Article 4, Chapter 2.
[26] The League of Nations was still in existence when the United Nations was formed.
[27] This is further amplified by using the term 'micronisation' by the author in his book at n. 16.
[28] General Assembly Resolution 2758 replaced ROC with PRC.
[29] 76 athletes from Taiwan participated in the Beijing Olympics, 2008.
[30]Taiwan Vessels Intrude, Japan Says, *International Herald Tribune*, Tokyo, June 17, 2008, p. 3.
[31] K. Bradsher and E. Wong, Taiwan is Pressing to Improve China Links, *International Herald Tribune*, Tokyo, June 19, 2008, p.1, 8.
[32] The *Achille Lauro* incident took place on October 7, 1985. Four men belonging to the Palestinian Liberation Front (PLF) took forceful control of the vessel off Alexandria on its way to Port Said.
[33] Hezbollah Delivers Bodies of Israeli Soldiers, *International Herald Tribune,* Tokyo, July 17, 2008, p. 4.
[34] There is hope for Serbia with the arrest of the wartime Bosnian Serb leader Radovan Karadzic charged with the worst massacre since World War II, after 13 years, who was walking freely on the streets of Belgrade under disguised identity. May be the plot had the lure of joining the European Union. And nationalism at times can give way to opportunism when people perceive the benefit is more. Serbia may come out of its self inflicted isolation.
[35] The Treaty of Westphalia and French Revolution where considered the catalysts for the formation of nation States.
[36] Not all. There are parts in the world where indigenous people are still thriving either in primitive identity or modern. The indigenous islanders of Andaman and Nicobar in India are looked after by the government in their primitive habitats, and agencies protect them. The Government of Japan recognized the indigenous identity of the Ainu population of Hokkaido Prefecture.
[37] Ocean Property is a term identified by the author in its research for modeling as well as expressing maritime security aspects unitarily. The ocean property is the compilation of four identified elements: 1) ocean resources, 2) ocean advantage, 3) ocean environment and 4) oceanic islands. Maximising the benefits from ocean property means maximising maritime security. Here maritime security is considered as a constituent part of national security.
[38] But these issues do not advocate nations should settle disputes by means following these examples. There are many contentious views that have been raised subsequently in the respective nations.
[39] *The Japan book*, (Tokyo: Kodensha International Limited, 2002), p.12.
[40] C. Sang-Hun, South Korea and Japan Renew Dispute over Islets, *International Herald and Tribune*, Tokyo, July 15, 2008, p. 3. Although there is no record of the exact date of Takeshima's discovery, the islands have been known to the Japanese people since the beginning of the Edo Period (1603-1868) at the latest as reported. Countries likely to negotiate disputes may have to see that the result is sans special geostrategic advantage to any one party.
[41] Ibid.
[42] Self governing parliamentary democracy in free association with New Zealand.
[43] Lao Peoples Democratic Republic.
[44] www.wikipedia.com, July 8, 2008.
[45] P. Paleri, *Role of the Coast Guard in India's Maritime Security*, 2nd edition, (New Delhi: Knowledge World, 2007), p. 122.
[46]http://www.guardian.co.uk/world/2007/jun/28/russia.oil, Kremlin Lys Claim to Huge Chunk of Oil-rich North Pole. Russia had taken its case in 2002 to the UN with geological data backing the claim that was rejected. Since then it is accumulating evidence to press its claim gain.
[47] Collated from various sources including the CIA Fact Book, 2008, Wikipedia, Indian Coast Guard Sources and others. The information is likely to have variations with respect to available sources as well as in the records of individual States and other entity authorities. The details collated in the table are for comparative assessment to highlight as well as to assert the importance of each entity with respect to the World Ocean.

2

COAST GUARDS OF THE WORLD

2

COAST GUARDS OF THE WORLD

Anatomy of the Coast Guard

Beginning a topic in the reverse order, with an '*ab initio'* summary and conclusion, is not the normal practice. But could be, if the topic needs a positive shot for the reader to sit up and notice. Introducing the coast guards to the readers, strategy analysts and policy makers among them, is a difficult task because of various presumptions and associated premature evaluations that go into the study of coast guards as the government maritime forces or agencies. The coast guards come in various shapes, sizes and colours, like human beings and their characteristics. But at the core there are certain symmetry in their purpose, duties and functions and the fundamental characteristics. Still opinions and judgments wrap the term 'coast guard' like the *nori* sheet over the *maki-sushi*. This perception is more by attitude than by nature. Remove the wrap, the coast guard could be seen clear and present. '*What is a coast guard*?', '*When did it come to usage*?*'* and *'What does it do?'* are three important questions to explore. Barring any hypothesis, the questions could be examined easily with a bit of maritime inclination. There are many misgivings and serious knowledge deficit associated with the appreciation of the coast guard as a maritime force, service, or agency that is evident in the semblances—character, structure and application of the national coast guards of the world. Problems faced by the coast guards are often taken as generated by bureaucratic conflicts and political ignorance. Nothing could be far from truth in the study of the coast guards of the world. The problems are embedded in the inability to appreciate the coast guards in their correct perspective by all concerned starting with policy makers and ending with those who run and manage it, with the public in between in whose service the force exists. There are belief systems and mistaken conceptual notions. An example is the almost common feeling that the United States Coast Guard is the mother of all coast guards of the world. It is often talked about that the United States Coast Guard (perhaps the most efficient in the world compared to other coast guards and has undergone changes since September 9, 2001[1]) set the pace for other coast guards in the world. A deeper look will reveal that neither it set the pace, posed as a model, nor it is the oldest in the world. Yes, some of the coast guards or rather most of them attempted to copy for convenience the exteriors of the U.S. Coast Guard (USCG) in stripes, colours and affiliations. The similarity should end there. The coast guards are 'entity-specific,' whether the entity is a nation, protectorate, union, international, supranational or in any other form. They are tailor-made for the purpose on perceived necessity. If that is true then there are more to come; the shapes, sizes and colours could be different.

It is easier to define '*what a coast guard is not*' than what it is in the current context. A coast guard is not a combat navy but everything else as a maritime organisation meant for law enforcement and services with entity specific functions under constitutionally chartered duties in the maritime terrain including the coastal interface and inland navigable waters. Many nations that are landlocked and having huge lakes that have been habitually treated as seas or lakes, besides border running rivers with disputes and cross border unlawful activities also have coast guards or similar forces carrying out the functions that an ocean going coast guard would do. But the landlocked countries do not have any maritime claim except the rights under the international law.[2] The coast guard is also not a force that hangs out on the coast. The term is a misnomer, or more an oxymoron. A navy on the other hand is a nation's entire and exclusive warfighting organisation for the ocean terrain in defense of its sovereign integrity against alien invasion at a heightened dimension. The coast guard is not a substitute for a combat navy even if declared under the constitution as a military[3] service. Similarly the combat navy cannot and should not attempt to be a coast guard. There is absolute danger hidden in such a role-shift. By doing so, the navy can blunt the cutting edge of its human element in warfighting. The war the combatant armed forces engage in could be declared or undeclared against combatants who may be lawful or unlawful. Because, war is fought by humans and humans are susceptible to role and personality changes. This is an important aspect when considering the management of human element for special operations—warfighting, law enforcement, humanitarian aspects, etc. War is an extreme behaviour. Such behaviour is not expected in other role execution however serious the confrontation may be. It will need a different kind of training which is also aimed at maximisation of human output in performing it. The expectations from the human element in a coast guard is also serious under extreme conditions, but different from that of a combat naval force. Both are forces that work under stretched out conditions and varying situational demands, but the required mental and personality make up are vastly different. Accordingly there will be variations in the command and control and leadership patterns. In addition there are also constitutional demands within the political system. A military does not enforce law in the normal case under modern constitutions except under select and specified situations. Points related to such asymmetry are important considerations while thinking of bringing the navy into coast guard assignments. It is often said that the coast guard is a cost effective navy. That again is a dissimilar comparison. The coast guard is a navy only in maritime expression of the language that too more in English. Otherwise the coast guard is a dissimilar service in comparison with the navy. It could be used in war like any other armed force of the government within its capabilities. But the real and competent combat element of the nation at sea has to be the navy. The navy should be left in that exclusive terrain. The art and principles of war are applicable to the navy. The coast guard in general is outside their purview. More than the governments the navies of the world have to understand and accept this statement of truth assimilated from facts. The United States has understood this statement in a limited way. The result is clearly visible. Maximisation of overall maritime operational effectiveness of the forces is possible only with such an understanding.

The coast guard is not a new concept. It is not a new force that suddenly appeared on the horizon of the modern world. It is evolving concept. The coast guard has transmutated as an authorised national or maritime territorial agency from the historical

periods. Its evolution could even be traced back to the privateers and buccaneers when kingdoms or similar authoritative entities employed counter piracy_operations, though such privateers and buccaneers were called pirates by the victim nations.[4] Compared to them the old navies of the fragmented coastal States fought colonial invaders. They were also called pirates; in this case by the latter.[5] The advent of the coast guard could be dated earlier than the navy in many independent States (including the United States) and its original character can be traced back even earlier to the beginnings of the United States Coast Guard as widely believed as the worlds earliest. If the United States Coast Guard is the benchmark for the first officially approved and socially accepted wholesome coast guard of the world, the question is whether it has to be with respect to the date of official use of the term coast guard (January 28, 1915), or that of the agency that has been transformed by name, the Revenue Cutter Service (August 4, 1790). Dates earlier than that may invite many contestants including the privateers and buccaneers besides the defunct forces that were similar to the current coast guards of the world. If peeping that far in history is avoided, the flings of a coast guard could be seen in the formation of the Swedish or Italian coast guards. The dates precede even those of the defunct coast guards. These are evaluated later in the chapter.

Perhaps the biggest misnomer of a coast guard is in the name and its usage in different parts of the world. The name indicates that a coast guard, guards the coast. In its original sense guarding the coast meant preventing threats_crossing the coastline into the mainland. Basically that means the coast guard could do anything to stop them seawards to the coast. That makes the coast guard an agency designed for law enforcement, service or both that operates at sea in the maritime domain combating the threats of various kinds, and not patrolling over the coast or watching out from sentry or picket posts. This has to be understood in relation to the '*What is in a name?'* approach to the coast guard.

The coast guard, thereby, becomes a maritime agency of a nation or a geostrategic entity, which is involved in tasks of law enforcement, service or both in its waters and identified areas of interest empowered under legislation that is also acceptable under international law. The coast guard, therefore, becomes authority specific with respect to the entity that established it. The coast guard could be called as it is by assigning the identity or in some other name as a maritime organisation similar in performance of assigned duties and functions as per the charter.[6] There could be multiple agencies under the same entity or around, all performing more or less identical functions. Each then becomes a coast guard, and collectively the coast guard agencies of the entities that established them. Hence for this study there are requirements to segregate the navy from the coast guard by its functions and include agencies other than notified coast guards, but executing similar duties and functions of coast guards. It is all the more important when the study deals with combating the maritime threats of the future other than alien military invasion. This state of affairs makes the coast guard being fashioned in many different ways by those in authority and academics.

The coast guards are country or entity specific with duties and functions defined as appropriate embedded in their charters. The role of the coast guard varies with respect to their location and character. But often the coast guards being an armed force could also be entrusted with military functions to protect the sovereignty of a State in the absence of a navy or along with a navy. Performing such activities, being administered by the defence or related ministries, or being declared as military force do not make the coast

guard a warfighting outfit unless established within the constitution accordingly to protect primarily the sovereignty of the State against alien invasion. In that case the coast guard becomes a combat navy with the functions of a coast guard. It is not an ideal scenario, but for reasons of cost and convenience, and perhaps lack of understanding. On the other hand the coast guards could be part of the warfighting force too in its naval domain and under the navy with respect to a war situation. Still the coast guard does not become a warfighting or combat navy.[7]

In this study, the coastguard means *the maritime agency including the regular and formally named coast guards carrying out functions of law enforcement and service in the waters of an entity in its interest as its agency under a definite charter that may or may not include national naval defense, but not an exclusive combat naval force whose purpose is documented under military indulgence of warfighting.*

Photo: Courtesy, Indian Coast Guard

Figure 2.1 An Indian Coast Guard Helicopter on a Safety Mission during a High Pitched Festival in Mumbai

The Geostrategic Entities and the Coast Guards

277 world entities, including the five oceans, have been identified in this study as geostrategic entities of vital importance (Table 1. 4). Among them many of the entities identified as globally recognised States including the landlocked States from the maritime perspective have navies for combat purpose in the name of defending the national integrity and sovereignty. According to Jane's Fighting Ships, 2007-2008 there are 164 navies in the world (Appendix C). One of them, as recorded, is the navy of NATO, which has not been considered as an entity in this study.[8] The recorded naval force of the NATO Navy comprises research vessels.[9] These vessels could be used for many purposes within its purview like a coalition mission for the collective security of its members (Appendix D). The duties and functions could even be similar to those of a coast guard. Still it is

kept outside the purview of this study. Another important open source publication is the World Fact Book published annually by the Central Intelligence Agency of the United States of America. 281 entities have been taken as references from the 2007-2008 edition of the World Fact Book for this study (listed at Appendix E) According to the World Fact Book 2007-2008 edition, there are 163 navies among these entities as recorded under the military branches listing. NATO does not fall under the entity category in the CIA World Fact Book 2007-2008. A vital source for maritime forces and agencies is International Maritime Organisation (IMO). But IMO does not have a source reference for the navies or the coast guards of the world but has functional details of country contact points that in many cases need not be an armed force.

However identifying the world coast guards among those that have been recorded in these two publications and other open information sources has to be seen for the purpose for which such information has been recorded. Detailed research and analysis are required prior to concluding the data on the coast guards of the world that could be seen by taking the aspect of coast guard in various ways. They are:

- A coast guard is not a primary combat (warfighting) armed force of a State in the maritime or other terrains.[10] But it may be involved in warfighting or war supporting along with a navy, or independently if there is no combat naval warfighting force.
- A coast guard may also be deployed in war in its specialised roles for search and rescue, inspection, pollution response, humanitarian service, security and protection, etc.
- The coast guard is a constitutional maritime force of a government that has been created officially by the government for specific duties and functions under relevant legislation.
- The chartered duties and functions of a coast guard will be entity specific. Therefore, there are likely to be external asymmetry among the world coast guards with respect to their duties and functions since national interests and priority listings may differ according to the perceived geostrategic context.
- The duties and functions of a coast guard in general terms will be related to law enforcement and service as specified in the charter in the identified maritime terrain of the entity that may include areas adjacent to the ocean, or in any waters of the entity which may not be connected with the ocean.
- The coast guard as a government maritime force may be known in the names as appropriate to the decision of the government including as a coast guard.
- There could be more than one agency performing the duties and functions of a coast guard in a country or a governed territorial entity in the overall assessment of combating maritime threats within their charter as coast guards or collectively as a coast guard.
- Any identified geostrategic entity that has direct maritime interests could have a coast guard organisation either independently or collectively.
- The coast guard organisation will have constitutional and legislative backing.

- Similar forces of self claiming entities that are not recognised by the collective organisation of the international community are not recognised for this study as coast guards.

The coast guards of the world are assessed according to these principles and are elaborated in the succeeding paragraphs based on the entities identified for this study. It is seen that there are many geostrategic entities with maritime forces that perform the duties and functions of a coast guard. Some of them are notified coast guards while others perform similar functions under different names including that of a navy. Some of the countries have more than one coast guard or similar agencies under different functions while some have the navies performing the functions of a coast guard. In the latter case the navies have been considered as coast guards for this study. It is also interesting to note that many landlocked entities have navies and coast guards explaining the country or entity specific requirements where there are large areas of water other than oceans to protect. These are also taken as coast guards for this study since the threats they perceive are identical to what a coast guard in the maritime terrain is designed for.

Within this assessment the following 166 entities are identified of having formal coast guards or similar maritime forces among the 192 members of the United Nations:[11]

1. Albania.

Albania has 362-km coastline extending on the Adriatic Sea to the west, and Ionian Sea to the southwest. It claims 12 nm territorial sea and 200-m depth or up to the depth of exploitation of the continental shelf. Albania, according to Stanley B. Weeks, who was a senior advisor to the Albanian Navy during its restructuring period, has a confusing structure for its maritime legal and institutional framework. He quoted the Coast Guard Law, 2002 with the coast guard as part of the navy structure as an example.[12] According to him it was a historical legacy. There were recommendations of one navy concept for navy-coast guard integration. The confusion was the intermixture of the Coast Guard Law, April 2002, and the Albanian Military Strategy Law, July 2002. The military law came subsequent to the Coast Guard Law when probably the government decided to have one navy with two missions. The latter law established the coast guard as part of the navy's structure equipped with the vessels that were assigned to the navy. The result was confusing and overlapping maritime missions for the two services besides contradictions within the legislative ambit with conflicting laws unless the pervious one is revoked.

Albanian maritime strategy articulates the need for Albanian awareness of its maritime heritage, interest, and responsibilities. It establishes seven clear missions, and then provides a concept of operations providing basic guidance on how the navy will operate to carry out these missions. The seven missions are:

1. Defense readiness,
2. Trafficking interdiction (including fisheries law enforcement tasks),
3. Search and rescue,
4. Maritime and coastal surveillance,

5. Marine environmental protection (including oil pollution response),
6. Marine navigation safety, and
7. Peacetime security cooperation operations (joint, bilateral, multilateral, and NATO).

The concept of operations established the 'one navy' policy to have the coast guard missions organizationally and operationally embedded in the navy as a combat force (with law enforcement authority when carrying out the five of their seven missions that are coast guard in nature[13]). The concept of operations then emphasized establishing 'maritime space awareness' through a modernized system of coastal radars and the command and control communications links to display this data. The concept of operations centred on establishing a baseline level and pattern of operations at sea through regular rotational forward deployments of vessels from Albania's two home ports.

There is a confusing overlap of functions in the navy—coast guard integration. In 'one force two mission strategies' the navy also undertakes the role of a coast guard ultimately. The Albanian Coast Guard (*Roja Bregdetare*) was the Coastal Frontier Guard till 1982. In addition to the *Roja Bregdetare* the Customs (*Anticontrabanda*) also operates at sea.

Under the Coast Guard Law passed by the Republic of Albania Assembly on April 4, 2002 the duties of the coast guard will be to:[14]

- Enforce over the Albanian sea area the Albanian sea legislation and the international sea law and regulations to which Republic of Albania accedes;
- Provide search and rescue (SAR) services in accordance with the national legislation and the international laws and regulations which Republic of Albania is a party to, accedes to, or has ratified;
- Prevent and interdict illegal passage of ships, goods and people in the Albanian sea area;
- Anchor, board, inspect, interdict, seize and block vessels and individuals infringing sea law and to escort them to the nearest port as it may be necessary;
- Engage in hot pursuit of vessels as prescribed by international law;
- Use force in self defense when dictated by extreme circumstances;
- Compile preliminary documentation allowing institution of proceedings against violators of the sea law;
- Effectuate marine pollution education, prevention, response and enforcement;
- Enforce legislation with regard to marine fishing;
- Ensure recreational boating safety;
- Enforce legislation with regard to living marine and submarine resource protection, including in the sea bed;
- Enforce legislation of the archeological and cultural values in the Albanian sea area.

The coast guard carries out these duties in the territorial sea, the contiguous zone and the exclusive economic zone. In the territorial sea, the coast guard interacts and coordinates with other agencies like the border police, the port authority and other relevant governmental institutions given in the charter. The modalities of carrying out these duties are as described in the coast guard policy manual. In order to enable the coast guard to carry on its tasks, the coast guard officers are granted the status of judiciary police in accordance with the laws and by laws in force in the Republic of Albania. The organisation was placed under the defense ministry and part of the marine districts under the command of the marine forces. Till 1992 they were ccoastal frontier guards. Before 1990 frontier guards manned most of the naval patrol force.[15] Albanian coast guard is unique in its asymmetry within its constitution.

2. Algeria

Algeria has 998 km coastline on the Mediterranean. It claims 12 miles territorial sea and 32-52 miles exclusive fishing zone. It has a navy and a coast guard that has been transferred from the navy with naval crews. It has to deal with:

- Illegal immigration,
- Smuggling and trafficking
- Supporting other agencies in counterterrorism especially involving Islamic fundamentalists.

3. Angola

Angola has 1,600-km coastline on the South Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone as per the UNCLOS. It does not have a specific coast guard but the duties and functions of its small navy (*Marinha de Guerra*) under voluntary service are as per the coast guard charter.

4. Antigua and Barbuda

Antigua and Barbuda are Caribbean islands with 153-km coastline. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf of 200 nm or to the edge of continental margin. The Antigua and Barbuda Coast Guard (ABCG) is the maritime element of the Antigua and Barbuda Defence Force (ABDF) which was established originally in 1981 and in its current form in 1995. The coast guard is divided into four units:

- Commanding Officer's office
- Engineer Unit
- Administration Unit
- Flotilla – the operational part of the Coast Guard.

In addition there is a voluntary search and rescue organisation called the Antigua and Barbuda Search and rescue (ABSR). It works in close cooperation with the ABCG.

5. Argentina

Argentina has 4,989-km coastline on the South Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and continental shelf of 200 nm or to the outer edge of the continental margin. It has a navy and a coast guard (*Prefectura Naval Argentina*). The *Prefectura Naval Argentina* (PNA) grew out of the port captaincies established by the Spanish beginning in 1756. It was established as PNA in 1896 but the actual origin is dated back to 1810 (the May 1810 revolution). It was given a legal framework on October 29, 1896, by the Argentine Congress through an Act (No. 3,445). The Act clearly defined the role of the PNA, establishing its organization all along the maritime and river coasts, as well as in all ports within the national jurisdiction. The current legal instrument is the Act of 1969 that defines the mission and jurisdiction entrusted by the State upon *Prefectura*. It was operating in the territorial sea till 1992. Its operational area was extended to 200 nm since 1994. In addition to the coast guard, Argentina has similar functional organisations in the border guard and federal police. All the three agencies were initially under the community protection secretariat. The coast guard and the border police were shifted to the interior ministry in 1996. It had a minor role in the 1982 Falkland War between Argentina and the United Kingdom. It also has an air wing. Its duties and functions are:

- Enforcement of maritime law,
- Safety of life and property at sea,
- Marine pollution prevention and control,
- Handling ocean related technical and legal matters,
- Flag and port state control,
- Licencing and certifying or pilots,
- Inspection of vessels,
- Legal proceedings in case of maritime incidents, offences or law violations,
- Clearance of vessels,
- Passenger and crew control,
- Prohibition to dump wastes and debris into the sea,
- Monitoring of the sanitary aspects on board ships.

www.upload.wikimedia.org/wikipedia/commons/4/4b/Gc26-prefectura.JPG. Photo by Leandor Kibisz

Figure 2.2 An Argentinean *Prefectura* Vessel in the Port of Mar del Plata

6. Australia

Australia is an island nation with 25,760-km coastline in the Indian Ocean and the Pacific Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and continental shelf of 200 nm or to the edge of the continental margin. It has a navy but not a coast guard by exclusive legislation. Instead, it has major maritime services that carry out the duties and functions of the coast guards. Among them two largest volunteer coast guards are the Royal Volunteer Coastal Patrol, Australia (established in 1936) and the Australian Volunteer Coast Guard (established in September 1961). The Australian Customs Service (ACS) through its coast watch division and marine police departments of the states carry out major surveillance operations. In addition there are several private volunteer coast guard organisations. The volunteer coast guard organisations are not empowered for law enforcement. Essentially they function as maritime search and rescue agencies.[16]

The duties and functions of the volunteer coast guard, therefore, are restricted to service only. Towards that objective the functions of the voluntary coast guards are:

- Managing maritime education for the public.
- Maritime rescue training.
- Safety patrols at sea.
- Monitoring distress frequencies.
- Monitoring movements of recreational boaters for their safety.
- Maritime search and rescue.
- Crowd control in maritime functions.

www.en.wikipedia.org/wiki/Coast_Guards_of_Australia

Figure 2. 3 An Australian Volunteer Coast Guard Vessel

In addition there are government agencies like the water police with whom the voluntary coast guards work in close cooperation. There was a plan to create an exclusive coast guard for Australia for coastal surveillance and meeting Australia's maritime protection needs, including in relation to illegal immigration, drug trafficking, fisheries, and quarantine related issues. The plan was criticised by the government that the force would be inadequate to meet the need and would be prohibitively expensive. It later became a plan for extending the capabilities of the federal police.

7. Azerbaijan

Azerbaijan is a landlocked country but borders the expansive Caspian Sea along 713 km. It has a navy, and a coast guard formed in July 1992. The Azerbaijan Coast Guard is under the Azerbaijani Ministry of Emergency. It was established by joint collaboration of Azerbaijan, U.S., Kazakhstan, United States, and the Caspian Sea Initiative (CSI). The duties and functions of the coast guard are:

- Protect the territorial integrity of the sate water borders, the public, the environment and economic and security interests in the Caspian Sea,
- Surveillance of public waters
- Law enforcement,
- Mariner assistance,
- Search and rescue,

- National defence.

8. Bahamas

The Bahamas are a chain of islands in the Caribbean Sea with 3,542-km coastline. It claims 12 nm territorial sea and 200 nm exclusive economic zone. It has a small navy that carries out the functions of a coast guard under the Royal Bahamas Defence Force. Main issues are illegal immigrations and human trafficking. It works in close liaison with the U.S. Coast Guard. The U.S. Coast Guard also assists the Bahamas on other coast guard functions.

9. Bahrain

Bahrain is an island nation with 161-km of coastline in the Persian Gulf. It claims 12 nm of territorial sea and 24 nm of contiguous zone. The continental shelf is to be determined. It has a navy, and a coast guard under the Ministry of Interior

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10. Bangladesh

Bangladesh has 580-km coastline on the Bay of Bengal in the Indian Ocean. It claims 12 nm territorial sea, 18 nm contiguous zone and 200 nm exclusive economic zone. The claim on continental shelf is up to the outer limits of the continental margin. It has a navy and a coast guard. The coast guard was formed on February 14, 1995 in accordance with the Coast Guard Act, 1994. It is under the Ministry of Interior. The coast guard's duties and functions according to the Act are:

- Protection of the national interests in the maritime zones of Bangladesh;
- Prevention of illegal fishing in the maritime area of Bangladesh;
- Prevention of the illegal entering or leaving of Bangladesh through the maritime zones of Bangladesh;
- Enforcement of any warrant or any other order of any court or other authority in respect of any ship which has entered the territorial waters of Bangladesh or of any person on board such ship;
- Detection of activities causing the pollution of the environment in the maritime zones of Bangladesh and taking measures for their stoppage;
- Ensurance of the security of persons working in the maritime zones of Bangladesh;
- Prevention of the handing over and smuggling of drugs;
- Participation in rescue and salvage operations in times of natural catastrophes and salvage of vessels, human beings and goods met with an accident;
- Dissemination of information including warnings by radio or any other means in times of natural catastrophes;
- Rendering assistance to the Navy in times of war;
- Patrolling in the maritime zones of Bangladesh;

- Rendering assistance to the appropriate authorities for the ensurance of the security of the sea ports;
- Suppression of destructive and terroristic activities occurring in the maritime zones of Bangladesh, and rendering assistance in this matter to other authorities;
- Performance of other functions directed by the Government.

11. Barbados

Barbados is an island in the Caribbean Sea, north east of Venezuela. It has a 90-km perimeter. It claims 12 nm territorial sea and 200 nm exclusive economic zone. It has a navy and a coast guard. The coast guard was formed in 1973. The coast guard became the naval arm of Barbados in 1979 and took over naval functions too. The Barbados coast guard is a part of the Royal Barbados defence force. It does not have a navy. The usual styling for Barbados Coast Guard is HMBS, which stands for Her/His Majesty's Barbados Ship. Its functions are:

- Surveillance of territorial waters,
- Drug interdiction,
- Maritime search and rescue,
- Humanitarian assistance,
- Training Barbados sea cadets.

12. Belarus

Belarus is a landlocked country in Eastern Europe. It has a small maritime wing in the border guards that operates like a coast guard mainly in the Dnieper River.

13. Belgium

Belgium has 67-km coastline on the North Sea. It claims 12 nm territorial sea and 24 nm contiguous zone. The exclusive economic zone limits are defined by geographical coordinates. The median lines with the neighbour decide the continental shelf. Belgium maintains a naval force within voluntary service under the maritime command and also a coast guard (*Küstwacht)* that was formed on July 8, 2005

14. Belize

Belize has 516-km coastline on the Caribbean Sea. While it claims 12 nm territorial sea in the south, it has restricted it to 3 nm in the south to provide a framework for negotiating a definitive agreement on territorial differences with the bordering Guatemala. It claims 200 nm exclusive economic zone. The jurisdiction is governed by the Belize Maritime Areas Act, 1992. Maritime wing comprises volunteers from the army and functions like a coast guard. A formal coast guard called the Belize Coast Guard Service (BCGS) was established on

November 28, 2005. It is under the Ministry of Home and Investment. The BCGS personnel comprised volunteers from the Belize Defence Force, the Belize Police Department, the Customs and Excise Department, the National Fire Service, the Department of Immigration and Nationality Services, the Port Authority and the Fisheries Department. Its duties and functions are:

- Internal security,
- Maritime search and rescue,
- Hurricane preparation,
- Disaster relief,
- Cruise ship protection,
- Coordinating the activities of Belize defence force and police department

15. Benin

Benin has a coastline of 121-km on the Atlantic Ocean. It claims 200 nm territorial sea. It has a naval force since 1978 that functions like a coast guard.

16. Bolivia

Bolivia is a landlocked country in central South America. It maintains a navy and marines basically for riverine patrol and transportation on the low land plains of the Amazon basin with the functions of a coast guard. The Bolivian navy operates riverine cargo transportation as a shipping company

17. Brazil

Brazil has 7491-km coastline on the Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf of 200 nm or to the edge of the continental margin. Brazil has a navy but not a coast guard.

18. Brunei Darussalam

Brunei has 161-km coastline on the South China Sea. It claims 12 nm territorial sea, and 200 mile exclusive economic zone. It has a navy and a marine police that functions as a coast guard.

19. Bulgaria

Bulgaria has 354-km coastline on the Black Sea. It claims 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. It has a navy and a border police subordinate to the Ministry of Interior that has a marine wing, which functions like a coast guard.

20. Burundi

Burundi is a landlocked country in Central Africa but has a long coastline on Lake Tanganyika. Burundi maintains a naval section of the army that functions like a coast guard in the lake that often involves in clashes with looters of villages across the rivers and inland waters.

21. Cambodia

Cambodia has a 443-km coastline on the Gulf of Thailand. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and 200 nm continental shelf. It has a navy but not a coast guard.

22. Cameroon

Cameroon has 402-km coastline on the Bight of Biatra in Atlantic Ocean. It claims 12 nm territorial sea and 24 nm contiguous zone. It maintains a navy but not a coast guard.

23. Canada

Canada has 202,080-km long coastline on the Arctic, Atlantic and Pacific Oceans. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf up to 200 nm or to the edge of the continental margin. It has a navy, coast guard and other government maritime agencies. The Canadian Coast Guard (CCG) also known as the *Garde Côtière Candienne* (GCC) is under the Canadian Department of Fisheries. Initially the coast guard functions were carried out by the Canadian Navy and various other agencies. Following Confederation in 1867, the federal government placed many of the responsibilities for maintaining aids to navigation (primarily lighthouses at that time), marine safety, and search and rescue under the Marine Service of the Department of Marine and Fisheries with some responsibility for waterways resting with the Canal Branch of the Department of Railways and Canals. After the Department of Marine and Fisheries was split into separate departments, the Department of Marine continued to take responsibility for the federal government's coastal protection services. During the inter-war period, the Royal Canadian Navy also performed similar duties. Subsequent to the reorganization of the government in 1936, the departments of marine and other agencies were merged with the newly created department of transport. Years later Canada, a country with the longest coastline in the world, realised the need for an exclusive coast guard to protect its homeland maritime intersts in the seas and lakes. The government accordingly consolidated the duties of the Marine Service of the Department of Transport and formed the coast guard as a subsidiary to Department of Transport (DoT) on January 28, 1962. The CCG gradually expanded till 1995 when as a measure of cost saving it was amalgamated with the Department of Fisheries and Oceans (DFO). On April 4, 2005, the coast guard

was redesignated as a special operating agency with more autonomy still remaining under the Department of Fisheries and Oceans that was formed in January 1962. The functions of the Canadian Coast Guard are:

- Services for safe transport in Canadian waters—aids to navigation, marine communication, traffic management, channel maintenance, and marine navigation services,
- Ice breaking, escort in the Arctic Ocean and in winter in the Gulf and River St Lawrence and Great Lakes,
- Search and rescue as a maritime component,
- Environmental response,
- Pleasure craft safety,
- Combating organised crime and terrorism jointly with the Royal Canadian Mounted Police (CMP),
- Fisheries patrol and enforcement,
- Operate hydrographic survey vessels, and fisheries and oceanographic research vessels,
- Offshore, midshore and coastal enforcement,
- Support other departments, boards and agencies.

www.en.wikipedia.org/wiki/Image:Canada_Search_and_Rescue.jpg

Figure 2. 4 A Canadian Coast Guard Ship in Training

24. Cape Verde

Cape Verde comprises a group of islands in the Atlantic west of Senegal. It has 964-km coastline. Its maritime claims are 12 nm territorial sea, 24 nm

contiguous zone and 200 nm exclusive economic zone. It has a coast guard with an air wing, but not a navy.

25. Central African Republic

Central African Republic is a landlocked State almost in the centre of Africa. It has naval forces that function like a coast guard in the rivers especially the Ubangi River (Oubangi River) that defines the boundary between the Central African Republic and the Democratic Republic of Congo.

26. Chile

Chile has 6,435-km coastline bordering the Pacific Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and 200-350 nm continental shelf. It has a navy, and a coast guard manned by naval personnel. The Chilean Coast Guard (CCG) was founded in 1848, and is now responsible for regulating the Chilean merchant marine, water sports, coastal and port patrol and maintenance of navigational aids. The coast guard also intends to organise the merchant marine as a potential naval reserve. The coast guard operates several navy manned helicopters since 1991. The Chilean army also operates marine combat boats but not for coast guard purposes. The coast guard operates under the Directorate of Maritime Territory and Merchant Marine.

27. China

China has 14,500-km coastline on the Pacific front. It claims 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. Continental shelf is 200 nm or to the outer edge of the continental margin. China has a navy as part of the People's Liberation Army (PLA) as a central outfit, and a coast guard (*Bian Jian*) operated by the China Maritime Safety Administration which is a part of the Ministry of Communications. There are other agencies that operate armed vessels like the Customs Service (*Hai Guan),* Maritime Command of the Border Security Force (*Gong Bian),* the Maritime Section of the Public Security Bureau (*Hai Gong*), fisheries inspection, and various police forces. The duties and functions of the Chinese Coast Guard (CCG) are:

- Safety at sea,
- Security and pollution control in Chinese offshore waters, ports and rivers.

28. Colombia

Colombia has 1760-km coastline on the Caribbean Sea and another 1,448 km coastline on the North Pacific Ocean. It claims 12 nm territorial sea and 200 nm exclusive economic zone. The continental shelf is 20-m in depth or to the depth of exploitation. It has a navy and a coast guard (*Guardacostas*). Colombian Customs also operate armed vessels. The coast guard was established in 1979 but

then gave away to the customs service. But it was reestablished in January 1992 under the control of the navy.

www.en.wikipedia.org/wiki/Image:Yangzhou-Modern-Grand-Canal-barge-3360.JPG

Figure 2.5 A China MSA Vessel

29. Comoros

Comoros is a group of islands at the northern mouth of the Mozambique Channel. It has 340-km coastline. It claims 12 nm territorial sea and 200 nm exclusive economic zone. Comoros has a small fisheries protection force and a marine police.

30. Congo, Republic of the…

Republic of the Congo has 169-km coastline bordering the Atlantic Ocean. It has a claim of 200 nm territorial sea. It has a navy that functions like a coast guard and divided into coastal navy and river navy.

31. Costa Rica

Costa Rica has 1,290-km coastline bordering the Caribbean Sea and the Pacific Ocean. Its maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone and 200 nm continental shelf. Costa Rica does not have a navy but has a coast guard (*Servicio Nacional Guardacostas*) with a small aviation wing under the civil section of the air guard.

32. Côte d'Ivoire

Côte d'Ivoire has 515-km coastline on the Gulf of Guinea. Its maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone and 200 nm continental shelf. It has a navy but not a coast guard.

33. Croatia

Croatia has 5,835-km coastline on the Adriatic Sea. It claims 12 nm territorial sea and a continental shelf up to the depth of 200 m or to the depth of exploitation. It had established a navy in 1991 that functions like a coast guard. There was a plan for a coast guard that has been revived in 2005. On September 13, 2007 a separate bill was introduced in the Croatian Parliament for the formation of a regular coast guard (*Lučke kapetanije*) as part of the navy. Some naval forces were transferred to the coast guard. The country also has a triservice presidential guard, and marine police that operate small marine craft. The identified functions of the coast guard are:

- Protect sovereign rights and carry out Croatia's jurisdiction in the Ecology and Fisheries Protection Zone, the continental shelf and the high seas,
- Environmental protection,
- Drug interdiction,
- Antismuggling,
- Monitoring and surveillance of territorial waters.

34. Cuba

Cuba has a coastline of 3,735-km along the Caribbean Sea and the North Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. It has a navy and a coast guard as the border guard under the Ministry of Interior. Reportedly the coast guard is generally at higher degree of readiness than the navy.

35. Cyprus

Cyprus is an island in the Mediterranean Sea with 648-km coastline. The country is divided in to two parts—Greek Cypriot Area and Turkish Cypriot Area with their own security and police forces. The country has been seen collectively for this study. Cyprus as a country is a member of the United Nations. It claims 12 nm territorial sea, 24 nm contiguous zone and continental shelf to the depth of 200m or of exploitation. It has a navy and marine police with the functions of a coast guard.

36. Democratic Republic of Korea

Democratic Republic of Korea has 2,495-km coastline on the Pacific Ocean. It claims 12 nm territorial sea and 200 nm exclusive economic zone. It has a navy. The inshore coastal and port security police force serves as a coast guard.

37. Democratic Republic of the Congo

Democratic Republic of the Congo has 37-km long coast on the Atlantic Ocean. It claims 12 nm territorial sea. Exclusive economic zone is bound by the neighbouring countries—Republic of the Congo and Angola. It has a navy but no coast guard.

38. Denmark

Denmark has 7,314-km coastline in the North Sea and the Baltic Sea. It claims 12 nm of territorial sea, 24 nm of contiguous zone, 200 nm of exclusive economic zone and a continental shelf of up to 200-m depth or to the depth of exploitation. The navy has home guard service under it since 1952 that functions like a coast guard. Its duties and functions are:

- Surveillance,
- Harbour patrol,
- Guarding naval installations ashore,
- Survey,
- Pollution control,
- Support to customs and police forces.

39. Djibouti

Djibouti has 314-km coastline on the Red Sea. It claims 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. It has a navy with French permanent naval contingent. It does not have a coast guard.

40. Dominica

Dominica is an island nation with 148-km coastline on the Caribbean and the North Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. It has a coast guard that also undertakes the role of the navy.

41. Dominican Republic

Dominican Republic has a coastline of 1,288-km on the Caribbean and the North Atlantic Ocean. Its maritime claims are 6 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf of 200 nm or to the end of the continental margin. It has a navy but not a coast guard.

42. Ecuador

Ecuador has 2,237-km coastline on the Pacific Ocean. It claims 200 nm territorial sea and a continental shelf 100 nm from the 2500-m isobath. It has a navy and a coast guard (*Guardia Costas*).

43. Egypt

Egypt has 2,450-km coastline on the Mediterranean Sea and the Red Sea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf up to 200 m depth or to the depth of exploitation. It has a navy and a coast guard with very obsolete vessels under the control of the navy. The Egyptian Coast Guard (ECG) is responsible for the onshore protection of public installations near the coast and the patrol of coastal waters to prevent smuggling.

44. El Salvador

El Salvador has 305-km coastline on the North Pacific Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. It has navy that functions like a coast guard. The search and rescue operations are carried out by air patrol boats in inland water. In addition it has a police force.

45. Equatorial Guinea

Equatorial Guinea has 396-km coastline on the Bight of Biatra in the Atlantic Ocean. Its maritime claims are 12 nm territorial sea and 200 nm exclusive economic zone. It has a navy that functions like a coast guard.

46. Eritrea

Eritrea has 2,234-km coastline on the Red Sea. It claims 12 nm territorial sea. It has a navy and a coast guard.

47. Estonia

Estonia has 3,794-km coastline on the Baltic Sea. Its maritime claims are 12 nm territorial waters and an exclusive economic zone within the limits fixed with the neighbouring countries. It has a navy, and a coast guard (*Eesti Piirivalve*) as maritime border guard. The coast guard was established under the Ministry of Internal Affairs on April 22, 1992. In wartime it will come under the defence forces.

48. Fiji

Fiji has 1,129-km long coastline on the South Pacific Ocean. Its maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone and a continental shelf up to 200-m depth or to the depth of exploitation. It has a naval division in its armed forces that functions like a coast guard.

49. Finland

Finland has 1,250-km coastline on the Baltic Sea. Its maritime claims are 12 nm territorial sea limited to 3 km in the Gulf of Finland, 24 nm contiguous zone, 12 nm exclusive fishing zone that extends to continental shelf boundary with Sweden, and a continental shelf up to 200-m depth or to the depth of exploitation. It has a navy, and a frontier guard with marine division as a coast guard under the Ministry of Interior. It was established in 1929 as a separate sea guard to prevent the rampant alcohol smuggling caused by the Finnish prohibition laws. The objectives of the coast guard enhanced subsequently. It carries out border surveillance towards internal safety services by patrolling the territorial waters. In addition it is also responsible for:

- Maritime search and rescue,
- Surveillance of boat traffic,
- Marine safety.

www.en.wikipedia.org/wiki/Image:Border_guard_ship_VL_Uisko_2007.jpg

Figure 2. 6 A Finnish Border Guard Vessel

50. France

France has 4,668-km coastline on the English Channel, the Bay of Biscay and the Mediterranean Sea. Its maritime claims are 12 nm territorial sea, 24 nm

contiguous zone, 200 nm exclusive economic zone and a continental shelf up to 200-m depth or to the depth of exploitation. It has a navy and a coast guard within the government maritime forces.

In France *Action de l'Etat en Mar* (AEM) encompasses all activities of maritime surveillance, sea traffic control, fisheries protection and policing, maritime search and rescue, safety of navigation, pollution control, etc. It involves *Marine Nationale* (navy), *Gendarmerie Maritime, Affairs Maritimes, Douanes Françaises* (Customs), Administration *des Phares et Blaises* (Lighthouses and Navigation Aids Management Organisation) and some local police forces. The organisation is for French mainland as well as for overseas territories. In homeland waters it is under the direct control of the navy. All ships and craft involved display AEM markings irrespective of which organisation they belong thus making it a collective coast guard for this study. This rule also applies to naval manned patrol ships (*Patrouilleurs de Service Public*), the naval Eurocopters used for search and rescue duties. Among the forces it is the maritime gendarmerie that fits more in the role of the coast guard. It has been an effective part since 1952. They are responsible for the:

- Security on naval bases,
- Maintaining surveillance of France's coastline.

www.en.wikipedia.org/wiki/Image:Gendarmerie_maritime_la_Rochelle.jpg

Figure 2. 7 A French Gendarmerie Vessel

51. Gabon

Gabon has 885-km coastline on the South Atlantic Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, and 200 nm exclusive economic zone. It has a navy that functions as a coast guard, and a marine police.

52. Gambia

Gambia has 80-km coastline on the North Atlantic Ocean. Its maritime claims are 12 nm territorial sea, 18 nm contiguous zone, and 200 nm exclusive economic zone. It has a navy that performs within the functions of a coast guard.

53. Georgia

Georgia has 310-km coastline on the Black Sea. It claims 12 nm territorial sea and 200 nm exclusive economic zone. It has a small navy and a coast guard which is part of the border guard under the Ministry of Interior. The Georgian Coast Guard (GCG) originated on July 16, 1998. The functions of the GCG are:

- Maritime search and rescue,
- Law enforcement,
- Port security,
- Environmental response.

54. Germany

Germany has 2,389-km coastline on the North Sea and the Baltic Sea. Its maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone and a continental shelf up to 200-m depth or to the depth of exploitation. It has a navy and a coast guard (*Küstenwahe*) within the Border Guard (*Bundespolizei*). The coast guard was formed on July 1, 1974 by the affiliation of several forces of the Border Guard—Fisheries Protection (*Fisherei Schutz*), Maritime Police (*Wasserschutz Polizei*), Water and Navigation Board (*Schifarts Polizei)*, and Customs (*Zoll*). All works together with vessels marked *Küstenwahe.* The coast guard is under the Ministry of Interior with a maritime aviation wing.

55. Ghana

Ghana has 539-km coastline on the Gulf of Guinea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and 200 nm continental shelf. It has a navy that performs within the functions of a coast guard.

56. Greece

Greece borders the Aegean Sea, Mediterranean Sea and the Ionian Sea. It has 13,676-km long coastline. It claims 12 nm territorial sea, 200 nm exclusive economic zone, and a continental shelf of 200-m depth or to the depth of exploitation. It has a navy and a coast guard (*Limenikon Soma*). The coast guard is under the Ministry of Merchant Marine. It was founded in 1919. During war it will come under the navy. Its duties and functions are:

- Policing harbour, coasts and territorial waters,
- Navigational safety,

- Maritime search and rescue,
- Marine environmental protection,
- Maritime surveillance and operations,
- Supervision of port authorities,
- Merchant navy training,
- Inspection of Greek merchant ships all over the world,
- Marine customs activities,
- Fishery patrolling,
- Prevention of the illegal immigration,
- Law enforcement at sea.

57. Grenada

Grenada comprises a group of islands in the Caribbean. It has 121-km coastline. The maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone and a continental shelf up to 200-m depth or to the depth of exploitation. It has a navy that performs within the functions of a coast guard. The craft are operated under the control of the commissioner of police.

58. Guatemala

Guatemala has 400-km coastline distributed on the Gulf of Honduras and the North Pacific Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and 200 nm continental shelf. It has a navy but not a coast guard.

59. Guinea

Guinea has 320-km coastline on the North Atlantic Ocean. Its maritime claims are 12 nm territorial sea, and 200 nm exclusive economic zone. It has a small navy that functions like a coast guard.

60. Guinea Bissau

Guinea Bissau has 350-km coastline on the North Atlantic Ocean. Its maritime claims are 12 nm territorial sea, and 200 nm exclusive economic zone. It has a small navy that functions like a coast guard.

61. Guyana

Guyana has 459-km coastline on the North Atlantic Ocean. Its maritime claims are 12 nm territorial sea, 200 nm excusive economic zone, and continental shelf of 200 nm or to the outer edge of the continental margin. It does not have a navy but has a coast guard.

62. Haiti

Haiti has 1,771-km coastline in the Caribbean Sea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf up to the depth of exploitation. Haiti's regular combat forces are demobilized but are still within the constitution. It has a navy as a maritime force. Until constitutionally abolished it is taken as existing, at least under the constitution for this study. Haiti does not have a coast guard.

63. Honduras

Honduras has 820-km coastline on the Caribbean Sea and on the Gulf of Fonsica in the Pacific Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm excusive economic zone, and a continental shelf of 200 nm or to the natural extension. It has a navy and a coast guard that jointly operates with the U.S. Coast Guard in serious missions especially in drug interdiction roles under drug fighting cooperation agreement.

64. Hungary

Hungary is a landlocked country. But it has a naval force for Danube River patrol.

65. Iceland

Iceland is an island nation with 4,970-km coastline on the North Atlantic Ocean and bordering the Arctic Circle on the Greenland Sea. It claims 12 nm territorial sea, 200 nm exclusive economic zone and a continental shelf extending 200 nm or to the edge of the continental margin. It does not have a navy but has a coast guard which is primarily a law enforcement organisation. The origin of the coast guard in Iceland goes back to 1859. It was formally founded on July 1, 1926. The coast guard comes under the Ministry of Justice. It also supports international coalition efforts in operations involved by the navies. The coast guard's duties and functions are:

- Fisheries protection,
- Salvage operations,
- Maritime search and rescue,
- Security,
- Pollution control,
- Hydrographic research,
- Light house maintenance and other navigational aids maintenance,
- Bomb disposal.

www.upload.wikimedia.org/wikipedia/commons/2/2e/Icelandic_coast_guard_ships_in_harbour.jpg

Figure 2. 8 Icelandic Coast Guard Vessels

66. India

India has 7,517-km coastline opening out to the Indian Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. Its claim on the continental shelf is 200 nm or to the outer edge of the continental margin. It has a navy and a coast guard. The coast guard was formed on August 19, 1978 under the Coast Guard Act 1978. The coast guard is under the Ministry of Defence and is an armed force of the Union other than the naval, military, and air forces, according to the constitution. It has very specific charter of duties. It is an independent non-military armed force that will function under the naval command and control during war. Its duties and functions, according to the Coast Guard Act, 1978 are to protect the maritime and other national interests of India within the maritime zones of India as it deems fit without duplication of efforts. It is further amplified as:

- Safety and protection of artificial islands, offshore terminals, and other structures and devices (under section 14.2.a.).
- Protection of Indian fishers (under section 14.2.b.).
- Assistance to fishers in distress at sea (under section14.2.b.).
- Preservation and protection of marine environment (under section14.2.c.).
- Prevention and control of marine pollution (under section14.2.c.)
- Assisting the customs and other authorities in anti-smuggling operations (under section14.2.d.)
- Enforcement of maritime laws in force (under section 14.2.e.).
- Safety of life and property at sea (under section14.2.f.).

- Collection of scientific data (under section 14.2.f.).
- Other duties as and when prescribed by the Government of India (under section14.2.f.).

In addition to the coast guard, India has a border security force with a water wing meant for creeks and rivers in the border areas, a customs marine organisation with jurisdiction over the contiguous waters under the Customs Act, 1962, and is expected to have a full fledged marine police under the coastal States and coastal union territories including the islands, to police the territorial waters under the State List of the Constitution. The coast guard is a central force that falls under the Union List of the Constitution.

Photo: Courtesy, Indian Coast Guard

Figure 2. 9 An Indian Coast Guard Vessel in Operation

67. Indonesia

Indonesia has 54,716-km coastline on the Pacific Ocean and the Indian Ocean. Its maritime claims are 12 nm territorial sea and 200 nm exclusive economic zone. It has a navy and government maritime forces that functions like a coast guard. Formal announcement for a coast guard is expected. The government established the Indonesian Maritime Security Coordinating Board (IMSCB) in 1972. The coast and seaward defence command established in 1978 as Maritime Security Agency under the Military Sea Communications Agency also looks after the navigational aids. The need for reorganising the IMSCB (*Bakorkamla*) was felt in 2003. It was completed and affirmed on December 29, 2005. This was done with an objective of revitalising Indonesian maritime security coordination in the field of security and law enforcement within the

agencies dealing with maritime security. The mission of the IMSCB is declared as:

- Formulate and determine general policy in the field of sea security,
- Coordinate the execution of activities and maritime security operations in Indonesian sea territory,
- Formulate and determine the realisation of technical and administrative support in the field of maritime security,
- Assist the enhancement of institutional capacity in the field of maritime security,
- Motivate the improvement of community participation in the field of maritime security.

It is expected that the *Bakorkamla* will turn out to be a full fledged coast guard in course of time.

68. Iran

Iran has 1,740-km coastline along the Persian Gulf and the Gulf of Oman. It also borders Caspian Sea for 740 km. Its maritime claims are 12 nm territorial sea, 24 nm contiguous waters and an exclusive economic zone under bilateral agreements or median lines. It claims the continental shelf up to its natural propagation. It has a navy but not a coast guard. It has a long navigational passage in the Shat el Arab River from the Persian Gulf bordering also Iraq.

69. Iraq

Iraq has 58-km coastline in the Persian Gulf. Its maritime claims are 12 nm territorial sea. The exclusive economic zone and other maritime claims are not specified. It has a navy, but not a coast guard. It has a long navigational passage in the Shat el Arab River from the Persian Gulf bordering also Iran.

70. Ireland

Ireland has 1,448-km coastline in the Atlantic Ocean. Its maritime claims are 12 nm territorial sea and 200 nm exclusive economic zone. It has a navy as the Irish Naval Service (INS) within the military and a coast guard besides a Royal Lifeboats Association (RLBA) for search and rescue. The Irish Coast Guard (IRCG) (*Garda Cósta nah Éireann*) is under the department of transport. Its functions are:

- Search and Rescue
- Pollution and Salvage response in the marine environment
- Marine communications network
- Marine safety awareness

71. Israel

Israel has 273-km coastline on the Mediterranean Sea. Its maritime claims are 12 nm territorial sea and a continental shelf to the depth of exploitation. Israel has a navy, but not a coast guard.

72. Italy

Italy has 7,600-km coastline extending into the Mediterranean Sea. Its maritime claims are 12 nm territorial sea and a continental shelf up to 200 m depth or to the depth of exploitation. It has a navy and a coast guard (*Guardia Costiera*) and other maritime government agencies for customs and policing. The Coastguard Corps (Harbourmaster's Corps) has its origins in Special Maritime Courts which in the early hsitory were responsible for navigational discipline, protection of seafarers, administration and management of ports. The modern Harbour Offices originated in the 11th century when the renaissance in maritme affairs beagn. But it took time. The Corps of the *Capitanerie di Porto* (Captain of the Ports) came into existence on July 20, 1865. It was established by a Royal decree. The *guardia costiera* was established on June 8, 1989 under the Sea Protection Law, 1988 an inter-ministerial decree. With this decree, the divisions of the Harbourmaster's Corps were re-classed as Coast Guard Service. The Port Reform Law of 1994 gave additional capacity to the coast guard and it developed further in course of time. Functionally, the organisation operates under the Ministry of Transportation and Navigation, and the Ministry of Defense. It is a corps of the Italian Navy with functional dependence of various ministries and agencies. The duties and functions of the guardia costiera are:

- Navigational safety,
- Safety of life and property at sea,
- Protection of marine environment and the coastline,
- Enrolment of military personnel,
- Control of illegal immigration,
- Protection of all submerged state archeological property,
- Fisheries surveillance,
- Inspection of fisheries vessels, markets, and fish limits and sizes,
- Licencing of fisheries operations,
- Monitoring of tourist vessel activities,
- Defense of sea ports and coastline,
- Logistical support to Italian naval vessels and visiting foreign naval vessels,
- Protection of national maritime property,
- Protection of fishers at sea,
- Licencing of commercial maritime crew,
- Underwater archaeological assistance,
- Creation and handling a nation wide maritime toll free number (*Numero blue)* for alerting on tourism and water related activities,

- Coastline surveillance
- Tracking of movements of ships transporting hazardous materials into European Union (EU) ports.

73. Jamaica

Jamaica is an island nation in the Caribbean Sea with 1,022-km coastline. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf up to 200 nm or to the extend of the continental margin. Jamaica has a coast guard but not a navy. The coast guard is known as Jamaica Defence Force Coast Guard (JDFCG). It became autonomous in 1977. It is one of the eight elements of the JDF. Its duties and functions are:

- Law enforcement,
- Maritime search and rescue,
- Marine environmental protection,
- Boating safety,
- Marine inspection,
- Defence readiness and naval duties,
- Maintaining essential services of the nation (nation building),
- Assisting in survey and scientific research.

74. Japan

Japan is an island nation in the Pacific Ocean with 35,000-km coastline. Its maritime claims are 12 nm territorial sea with allowances for the international straits (between 3 nm and 12 nm—La Peruse or Soya, Tsugaru, Osumi and Eastern and Western Channels of the Korea or Tsushima Strait), 24 nm contiguous zone and 200 nm exclusive economic zone. Japan has a maritime Self Defence Force (SDF) and a coast guard (*Kaijyou Hoan Chou*). Japan Coast Guard Law was in force on May 1, 1948. The coast guard has an air wing. The Japan Coast Guard (JCG) has various functions:

1. Ensuring safety and security
   - Countermeasures against domestic unauthorized fishing,
   - Countermeasures against smuggling and illegal immigration,
   - Countermeasures against terrorism,
   - Countermeasures against piracy,
   - Security against strife at sea,
   - Countermeasures against suspected and spy vessels,
   - Preservation of marine interests,
   - Preventing illegal operations by foreign fishing vessels.
2. Ensuring Safety of Life and Property at Sea
   - Quick response to maritime casualties,
   - Search and rescue at sea,
   - Safety of marine leisure activities,

- Intelligence gathering on maritime accidents.

3. Protecting the Marine Environment
   - Instruction and awareness activities to preserve the ocean environment,
   - Actions against marine environmental crimes.
4. Disaster Management
   - Accident and disaster countermeasures,
   - Response to natural disasters.
5. Ocean Exploration
   - Scientific ocean surveys,
   - Provision of marine information.
6. Support to Navigation
   - Establishment of maritime traffic information system,
   - Ensuring safety measures within ports,
   - Ensuring safety measures on coastal areas,
   - Regional activities to prevent maritime accidents,
   - Operating aids to navigation,
   - Developing and improving navigational aids.
7. International Cooperation
   - Cooperation with relevant foreign organisations bilaterally and multilaterally,
   - Support for capacity building of other coast guards,
   - Support to international organisations.

www.en.wikipedia.org/wiki/Image:Japan_Coast_Guard_PL51_Hida_2.jpg

Figure 2.10 A Japan Coast Guard Vessel on Patrol

75. Jordan

Jordan has 26-km coastline on the Gulf of Aqaba. It claims 3 nm territorial sea. It has a navy with the functions of a coast guard.

76. Kazakhstan

Kazakhstan is the world's largest landlocked country but has a navy that functions like a coast guard in the Caspian Sea. It also has a customs with a marine wing.

77. Kenya

Kenya has 536-km coastline on the Indian Ocean. Kenya claims 12 nm territorial sea, 200 nm exclusive economic zone and a continental shelf up to 200 m depth or to the depth of exploitation. It has a navy and government maritime agencies like the customs and police that functions like coast guard at sea.

78. Kiribati

Kiribati is an island nation with 1,143-km coastline on the North Pacific Ocean. It has maritime claims of 12 nm territorial sea, and 200 nm exclusive economic zone. It has a police maritime unit that functions like a coast guard.

79. Kuwait

Kuwait has 499-km coastline on the Persian Gulf. It claims 12 nm territorial sea. It has a navy and a coast guard.

80. Lao Peoples Democratic Republic

Lao is a landlocked country in Southeast Asia but has navigation interests in the Mekong River besides shipping interests for log transportation. It has small police marine wing in the river that acts like a coast guard. The country is also a member of the Regional Cooperation Agreement for Combating Piracy and Armed Robbery against ships in Asia (ReCAAP) and represents its Information Sharing Centre (ISC) at Singapore.

81. Latvia

Latvia has 449-km coastline on the Baltic Sea. It claims 12 nm territorial sea and a continental shelf up to 200 m depth or to the depth of exploitation. It has a navy and a coast guard. Its coast guard, known as the sea coast guard, was first formed in 1924. But in 1938 it was renamed as the navy. Latvia had a navy since 1919 but was dissolved in 1921. Today the coast guard is part of the navy.

82. Lebanon

Lebanon has 225-km coastline on the Mediterranean Sea. It claims 12 nm territorial sea and has a navy but not a coast guard.

83. Liberia

Liberia has 579-km coastline on the North Atlantic Ocean. It claims 200 nm territorial sea and has a navy.

84. Libyan Arab Jamahiriya

Libyan Arab Jamahiriya has 1,770 km coastline on the Mediterranean Sea. It claims 12 nm territorial sea and an exclusive fishing zone of 62 nm. It has a navy but not a coast guard.

85. Lithuania

Lithuania has 90-km coastline on the Baltic Sea. It claims 12 nm territorial sea. It has a navy. The coast guard was formed in 1992 but the name was changed to border police in 1996.

86. Madagascar

Madagascar is an island nation in the Indian Ocean. It has 4,828-km coastline. The maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf 200 nm or 100 nm from the 2,500-m isobath. It has a coast guard.

87. Malawi

Malawi is a landlocked country in Africa. But it has a navy for patrol along the long coastline on Lake Nyasa bordering Tanzania and Mozambique.

88. Malaysia

Malaysia has 4,675-km coastline on the Andaman Sea, Malacca Strait, Singapore Strait, South China Sea, and Sulu Sea. The maritime claims are 12 nm territorial sea and 200 nm exclusive economic zone, and a continental shelf 200 m depth or to the depth of exploitation, with specified boundary in the South China Sea. It has navy, coast guard, marine customs, marine police and fisheries agency. The Malaysian Coast Guard was consolidated from the Royal Malaysian Navy, Royal Malaysian Police, Customs, Fisheries, Marine and Immigration Department and came into force on February 15, 2005. It is known as the Malaysian Maritime Enforcement Agency (MMEA) or *Agensi Penguatkuaasan Maritim Malaysia (APMM)*. It was formed under the Malaysian Maritime Enforcement Agency Act, 2004. It is not associated with the Malaysian Defence Forces. It is part of

Malaysian Civil Service and is placed under the Prime Minster's Department. The MMEA is tasked with:

- Enforcement of national and international laws,
- Coordination of maritime search and rescue operations and other matters incidental to maritime enforcement in the maritime zones of Malaysia and on the high seas,
- Air and coastal surveillance,
- Control and prevention of marine pollution,
- National defence in times of war or emergency under the command of the Malaysian armed forces,
- Prevention and suppression of piracy,
- Prevention of human trafficking and illegal immigration,
- Drug interdiction.

Photo by the Author

Figure 2. 11 A Vessel of the Malaysian Maritime Enforcement Agency

89. Maldives

Maldives is an island nation in the Indian Ocean. It has 644-km coastline. It claims 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. Maldives does not have a navy but has a coast guard. It was established on January 1, 1980. It may not be known to many that the pennant numbers of Maldivian Coast Guard vessels adds to number 7.

www.mndf.gov.mv/about.asp

Figure 2. 12 A Maldivian Coast Guard Vessel

90. Malta

Malta is an island nation in the Mediterranean Sea. It has 253-km coastline including the 56 km coastline of the island of Gozo. It claims 12 nm territorial sea, 24 nm contiguous zone and 25 nm exclusive fishing zone. Malta claims a continental shelf up to 200 m depth or to the depth of exploitation. It has a maritime squadron that functions like a coast guard.

91. Marshall Islands

The Marshall Islands has a coastline of 370 km in the North Pacific Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, and 200 nm exclusive economic zone. It has a maritime force that functions similar to a coast guard.

92. Mauritania

Mauritania has 754-km coastline on the North Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. Its claim on continental shelf is 200 nm or to the outer edge of the continental margin. It has a navy but no coast guard.

93. Mauritius

Mauritius is an island nation in the Indian Ocean. It has 177-km coastline. Its maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone, and a continental shelf up to 200 nm or to the outer edge of the continental margin. It does not have a navy but has a coast guard which is under the Mauritius Police Force (MPF). Though the coast guard started functioning in 1974 with a single vessel it has functional approval on July 24, 1987 and the bill was enacted on December 22, 1988. The coast guard is known as the national coast guard. It also has an air wing. The duties and functions of the coast guard are:

- Maritime search and rescue,
- Monitoring and surveillance of maritime zones
- Controlling smuggling
- Enforcing fisheries laws
- Enforcement of laws relating to security and protection of maritime zones,
- Detection, prevention, suppression of any illegal activity within the maritime zones.

94. Mexico

Mexico has 9,330-km coastline on the Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf of 200 nm or to the edge of the continental margin. It has a navy but not a coast guard.

95. Micronesia Federated States of…

The Federated States of Micronesia is an island nation with 6,112-km coastline in the North Pacific Ocean. It claims 12 nm territorial sea and 200 nm exclusive economic zone. It has a navy and a coast guard. The U.S. Coast Guard uses Micronesia a recruiting pool and provides training in coast guard duties.

96. Monaco

Monaco is a coastal State with 4-km coastline on the Mediterranean Sea. It claims 12 nm territorial sea and 12 nm exclusive economic zone. It has neither a navy nor a coast guard.

97. Montenegro

Montenegro is a coastal State with 294-km coastline on the Adriatic Sea. It claims 12 nm territorial sea and continental shelf as defined by treaty. It has a navy but not a coast guard.

98. Morocco

Morocco has 1,835-km coastline on the Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf up to 200 m depth or to the depth of exploitation. It has a navy and a coast guard besides maritime agencies like customs and police. Coast guard was formed by a Royal decree on September 9, 1997 primarily for maritime search and rescue.

99. Mozambique

Morocco has 2,470-km coastline on the Indian Ocean. It claims 12 nm territorial sea and 200 nm exclusive economic zone. It has a navy with the functions of a coast guard.

100. Myanmar

Myanmar has 1,930-km coastline on the Bay of Bengal and the Andaman Sea in the Indian Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, and 200 nm exclusive economic zone. Its claim on the continental shelf is 200 nm or to the outer edge of the continental margin. It has a navy and a coast guard as part of the navy that carries out fisheries monitoring and surveillance, especially for the Food and Agricultural Organisation's (FAO) fisheries programmes.

101. Namibia

Namibia has 1,572-km coastline in the South Atlantic Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, and 200 nm exclusive economic zone. It has a navy and other maritime forces like the fisheries and police that functions like a coast guard.

102. Nauru

Nauru is the smallest island nation in the world with 30-km coastline in the South Pacific Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, and 200 nm exclusive economic zone. It has neither a navy, nor a coast guard.

103. Netherlands

Netherlands has 451-km coastline on the North Sea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, and 200 nm exclusive economic zone. It has a navy and a coast guard (*Küstwacht*). The Dutch Coast Guard was established on February 26, 1987. It primary role is maritime search and rescue.

104. New Zealand

New Zealand has 15,134-km coastline on the South Pacific Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200 nm or to the outer edge of the continental margin. It has a navy. The coast guard is a volunteer organisation with charitable status. The primary function of the Royal New Zealand Coast Guard is maritime search and rescue around the coastline and in major lakes. It was in 1861 New Zealand put to sea the first life boat. Since then the concept has grown and the permanent sea rescue service was introduced in

1898. Today it is a member of the Royal New Zealand Coast Guard Inc. And the coast guard organisations of New Zealand became a federation in 1976. In 2004, the 63 coast guard affiliated units joined together under regional planning and management and dropped the term federation. The units agreed to adopt one single logo and get recognised as an independent and autonomous voluntary unit.

www.en.wikipedia.org/wiki/Image:NL,ZH,G._Den_Haag,Scheveningsehaven, Kustwacht_entering_the_port.jpeg

Figure 2. 13 A Vessel of the *Nederlandse Kustwacht*

105. Nicaragua

Nicaragua has 910-km coastline on the North Pacific Ocean and the Caribbean Sea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, and a continental shelf along natural prolongation. It has a navy but no coast guard.

106. Nigeria

Nigeria has 853-km coastline on the Gulf of Guinea. Its maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone and a continental shelf up to 200 m depth or the depth of exploitation. It has a navy and a port security police that acts like a coast guard. The United States have transferred ships from the coast guard to Nigerian maritime forces and a formal coast guard is planned under US advice.

107. Norway

Norway has 83,281-km coastline inclusive of all islands, on the Norwegian Sea on the North Atlantic Ocean. Its maritime claims are 12 nm territorial sea, 10 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf of 200 nm. Norway has a navy and coast guard. The coast guard (*Kystvakten*) was formed on April 1, 1977 with its operational command under the Norwegian Defence Command. One of the primary tasks of the Norwegian Coast Guard (NoCG) is exercising maritime resource control. The Norwegian Coast Guard regulates fishing along with the Directorate of Fisheries and the sales associations.

108. Oman

Oman has 2,092-km coastline on the Gulf of Oman and the Arabian Sea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, and 200 nm exclusive economic zone. Oman has a navy and a coast guard as the Royal Omani Police that operates in the territorial sea.

109. Pakistan

Pakistan has 1,046-km coastline on the Arabian Sea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf 200 nm or to the outer edge of the continental margin. Pakistan has a navy and a coast guard known as the Maritime Security Agency (MSA). The MSA was formed under the Pakistan Maritime Security Agency Act, 1994 to provide for the regulation of maritime activities and to safeguard the maritime interests of Pakistan and for 'matters connected therewith or ancillary thereto' as explained in the preamble. The MSA personnel are seconded for the navy or army. It is under the Ministry of Communications. Its duties and functions according to the Act are:

1. Regulation and protection of the maritime interests of Pakistan and to assert and enforce national jurisdiction and sovereignty in the Maritime Zones.
2. Without prejudice to the generality of the provisions at (1), to:
    - prevent unauthorised exploitation of any economic resources by any person, agency, vessel or device within the maritime zones,
    - protect Pakistani fishing vessels and crew against any threat, intrusions or interference within the maritime zones,
    - enforce the national and international laws, agreements and conventions on and under the water in the maritime zones,
    - assist and coordinate search and rescue for the vessels, property and lives in distress and render such assistance

which may be necessary in any emergency in the maritime zones and on high seas,

- assist other departments and agencies of the government to maintain and preserve the quality of marine life and to prevent and control the effects of marine disasters including marine pollution in and around the ports, harbours, coastal areas, estuaries and other areas of maritime zones,
- assist and co-ordinate with national and international agencies in hydrographic and oceanographic research, navigation, weather reporting and other scientific activities in the maritime zones,
- assist other departments and agencies of the government in safe guarding and protecting artificial islands, offshore terminal. Installations and other structures and devices in the maritime zones,
- provide assistance for petroleum exploration and production in the maritime zones,
- render assistance to other agencies in acquisition of mineral exploration, seismic studies and assessment data in the maritime zones,
- cooperate with, and provide assistance to customs, coast guards and other departments, agencies and authorities in maritime zones in the discharge of their duties and functions,
- provide an effective secondary maritime force for deployment in any emergency, war or conflict,
- perform such other functions as may be assigned to it by the federal government from time to time, to protect maritime interests of Pakistan.

The Act also provides additional functions to the officers of the agency such as that of the officers of:

- Customs,
- Fisheries,
- Police,
- Any other agency as and when decided by the government.

Pakistan also operates an armed force in the name of coast guard which is an army water wing operating in the riverine waters at India-Pakistan border.

110. Palau

Palau is an island nation in the North Pacific Ocean. It has 1,519-km coastline. Its maritime claims are 3 nm territorial sea and 200 nm exclusive fishing zone. It has a navy that functions like a coast guard.

111. Panama

Panama has 2,490-km coastline on the Caribbean Sea and the North Pacific Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, and an exclusive economic zone of 200 nm or up to the outer edge of the continental margin. Panama has a national maritime service that is voluntary. It functions like a coast guard.

112. Papua New Guinea

Papua New Guinea has 5,152-km coastline on the South Pacific Ocean. Its maritime claims are 12 nm territorial sea, 200 nm exclusive fishing zone and a continental shelf of 200 m depth or up to the depth of exploitation. It has a navy but not a coast guard.

113. Paraguay

Paraguay is a landlocked country but it has a navy for operations in the Paraguay River (*Rio Parana*) bordering Argentina and Brazil.

114. Peru

Peru has 2,414-km coastline on the South Pacific Ocean. Its maritime claims are 200 nm territorial sea and 200 nm exclusive economic zone. It has a navy and a coast guard. The coast guard (*Guardacostas*) was set up in 1975 and has bilateral arrangements with the U.S. federal agencies in combating drug trafficking. The coast guard is tasked with patrolling the territorial sea, rivers and lakes.

115. Philippines

Philippines is an island nation with 36,289-km coastline on the South China Sea and the Philippine Sea in the Pacific Ocean. It claims 100 nm territorial sea from the coastline in the shape of an irregular polygon as defined by the 1898 treaty. In the late 1970s it has also claimed polygonal shaped area in South China Sea up to 285 nm in breadth. In addition Philippines claims an exclusive economic zone of 200 nm and a continental shelf up to the depth of exploitation. It has a navy and a coast guard (*Tanurang Baybayin ng Pilipinas*). Some of the coast guard vessels are staffed by the navy. The Philippine Coast Guard (PCG), originally founded on October 7, 1901 also operates in the rivers. It is under the department of transportations and communications. Its duties and functions are:

- Maritime law enforcement,
- Antismuggling,
- Antipoaching,
- Drug interdiction,
- Combating piracy,
- Maritime search and rescue,
- Protection of marine environment.

www.en.wikipedia.org/wiki/Image:PCG_SOG_operators.jpg

Figure 2. 14 Philippine Coast Guard's Special Operations Group Carrying out Anti-terror Exercise

116. Poland

Poland has 440-km coastline on the Baltic Sea. It claims 12 nm territorial seas and an exclusive economic zone as defined by international treaties. It has a navy and a coast guard. The coast guard is the sea detachment of the border guard (*Morski Odissal Strazy Gramenzj*) formed on August 1, 1991.

117. Portugal

Portugal has 1,793-km coastline on the North Atlantic Ocean. Its maritime claims are 200 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. It also claims a continental shelf up to 200-m depth or to the depth of exploitation. It has a navy, and a coast guard as part of the Government Maritime Forces (*Guardia Nacionale Republicana*) including a police wing.

118. Qatar

Qatar has 563-km coastline on the Persian Gulf. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone and an exclusive economic zone as determined by bilateral agreements or the median line. It has a navy, and a police marine wing that functions as a coast guard.

119. Republic of Korea

Republic of Korea has 2,493-km coastline on the Pacific Ocean. Its maritime claims are 12 nm territorial sea limited between 3 nm and 12 nm in the Korea Strait, 24 nm contiguous zone and 200 nm exclusive economic zone. The continental shelf is not specified. It has navy, customs and coast guard. The coast guard was originally established as the Maritime Safety Division on December 12, 1953. It became the Maritime Safety Police in 1962. In 1996 it was separated from the national police, and became a coast guard formally in December 2000. The functions are:

- Maritime security including maritime counter-terrorism,
- Maritime pollution response,
- Maritime safety

www.en.wikipedia.org/wiki/Image:ROK_Coast_Guard_vessel_3006.jpg

Figure 2. 15 Republic of Korea Coast Guard Vessel in Company with a USCG Cutter

120. Romania

Romania has 225-km coastline on the Black Sea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200-m depth or to the depth of exploitation. It has a navy and a coast guard as the border guard. The Border Guard is under the Ministry of the Interior. The Romanian Coast Guard was formed in 1999. The main functions of the Romanian coast guard have been:

- Drug interdiction,
- Antismuggling operation,
- Fisheries law enforcement.

121. Russian Federation

Russian Federation has 37,653-km coastline on the Arctic Ocean, North Pacific Ocean and the North Atlantic Ocean (Black Sea). Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200-m depth or to the depth of exploitation. It has a navy and a border guard sevice which is the ex-maritime border guard service. It functions as a coast guard and will be itnegrated with the navy in emergency. The force was formally run by the KGB (*Komityet Gosudarstvennoy Bezopasnosty*), the Committee for State Security in the Soviet era. But the origin of the Border Guard is more ancient. It can be traced to the 16th century. In October, 1991 it came under the ministry of defence. In December, 1993 it was placed under the ministry of interior. It merged with the federal security service on March 11, 2003. The roles of the coast guard are:

- Law enforcement,
- Port security,
- Counter intelligence,
- Counter terrorism,
- Fishery protection,
- Border protection.

122. Rwanda

Rwanda is a landlocked country in Africa. It has a navy meant for patrolling Lake Kivu bordering the Democratic Republic of Congo and riverine waters.

123. Saint Kitts and Nevis

Saint Kitts and Nevis is an island nation in the Caribbean Sea and has 135-km coastline. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200 nm or to the edge of the continental margin. It has a coast guard but not a navy. It was part of the police force until 1997. Thereafter it was transferred to the regular corps of the defence force. The coast guard is responsible for guarding the country's territorial sea.

124. Saint Lucia

Saint Lucia is an island nation in the Caribbean Sea. It has 158-km coastline and claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200 nm or to the outer edge of the continental margin. It has a coast guard but not a navy.

125. Saint Vincent and the Grenadines

Saint Vincent and the Grenadines is an island nation in the Caribbean Sea. It has 84-km coastline and claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and 200 nm continental shelf. It has a coast guard but not a navy.

126. Samoa

Samoa is an island nation in the South Pacific Ocean. It has 403-km coastline and claims 12 nm territorial sea, 24 nm contiguous zone, and 200 nm exclusive economic zone. It has a maritime surveillance police force that functions like a coast guard. The force also has aviation assets.

127. Sao Tome and Principe

Sao Tome and Principe is an island nation in the Gulf of Guinea. It has 209-km coastline. Its maritime claims are 12 nm territorial sea and 200 nm exclusive economic zone. It has a navy but not a coast guard.

128. Saudi Arabia

Saudi Arabia has 2,640-km coastline on the Persian Gulf and the Red Sea. It claims 12 nm territorial sea and 18 nm contiguous zone, Exclusive economic zone is not specified. It has a navy and a coast guard. The coast guard is part of the frontier force under the ministry of defence and aviation. However the ships of the coast guard and the navy are mixed. The coast guard is the smaller element of the Saudi Border Guard Directorate. There are reports that the Saudi Coast Guard is too stretched out for securing its maritime interests. The report emphasises the need for buttressing the coast guard to prevent flanking of its land forces by smugglers, terrorists and economic migrants by its long coastline.[17]

129. Senegal

Senegal has 531-km coastline on the North Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf of 200 nm or to the edge of the continental margin. It has a navy but not a coast guard.

130. Serbia

Serbia is a landlocked country. But it has a navy for the Danube and other rivers.

131. Seychelles

Seychelles is an island nation in the Indian Ocean with 491-km coastline. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf of 200 nm or to the edge of the continental margin. It has a coast guard but not a navy.

132. Sierra Leone

Sierra Leone has 402-km coastline on the North Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and 200 nm continental shelf. It has a coast guard as a maritime wing, but not a navy.

133. Singapore

Singapore is an island nation 193-km coastline on the Malacca, Johore and Singapore Straits. It claims 3 nm territorial sea and an exclusive fishing zone within and beyond the territorial sea as defined in treaties and practice. It has a navy, and a coast guard called the Police Coast Guard with a long history. In 1866, the police's maritime operations were formally established with the building of a floating police station to fight piracy. A marine branch came up in 1916 that was renamed marine police in 1924. The marine division underwent major modifications in the post independent Singapore and was renamed as the Police Coast Guard on February 13, 1993. Dedicated police patrol boats began patrolling the waters all around the time. It is an operational department of the Singapore Police. Its primary duty is enforcement of national laws in the territorial waters of Singapore and effective maritime border control.

www.en.wikipedia.org/wiki/Image:Police_Coast_Guard_PT.jpg

Figure 2. 16 Singapore Police Coast Guard in Sea-Rescue Demonstration

134. Slovenia

Slovenia has 47-km coastline on the Gulf of Venice. It claims 12 nm territorial sea. It has a navy but no coast guard.

135. Solomon Islands

Solomon Islands is an island nation. It has 5,313-km coastline on the South Pacific Ocean. It claims 12 nm territorial sea, and 200 nm of exclusive economic zone and continental shelf. It has a marine police like coast guard but not a navy.

136. Somalia

Somalia has 3,025-km coastline on the Indian Ocean. It claims 200 nm territorial sea. It has neither a navy nor a coast guard.

137. South Africa

South Africa has 2,798-km coastline on the Indian Ocean and the Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200 nm or to the edge of the continental margin. The South African navy has been there since 1922. In addition, the National Sea Rescue Institution (NSRI) was formed in 1967 when demand on maritime search and rescue was leveled up with the sinking of a fishing vessel killing all the 17 men on board. Since then the NSRI has grown considerably into an organization that plays a major role on the South African coastline like a coast guard. In addition to the NSRI the South African authorities can call on the services of the navy, air force, port administrations, marine salvage companies, private air and helicopter services. The NSRI's operations cove a wide range of tasks in marine safety.

138. Spain

Spain has 4,964-km coastline on the North Atlantic Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, and 200 nm of exclusive economic zone It has a navy and a coast guard as the coastal civil guard (*Guarda Civil del Mar*) of the police force.

139. Sri Lanka

Sri Lanka is an island nation with 1,340-km coastline on the Indian Ocean. It claims 12 nm territorial sea, 24 nm contiguous zone, 200 nm of exclusive economic zone, and a continental shelf up to 200 nm or to the edge of the continental margin. It has a navy but not coast guard.

140. Sudan

Sudan has 853-km coastline on the Red Sea. It claims 12 nm territorial sea, 18 nm contiguous zone, and a continental shelf up to 200-m depth or to the depth of exploitation. It has a navy but not a coast guard.

141. Suriname

Suriname has 38-km coastline on the North Atlantic Ocean. It claims 12 nm territorial sea and 200 nm of exclusive economic zone. It has no navy but has a maritime section that functions like a coast guard.

142. Sweden

Sweden has 3,218-km coastline. It is on the Gulf of Bothania, Baltic Sea, and the Skagerrak, Kattegat and Öresund straits and strategically along the Öresund and the Danish Straits linking the Baltic Sea and the North Sea. Its maritime claims are 12 nm territorial sea, continental shelf within agreed boundaries and a continental shelf of 200-m depth or to the depth of exploitation. It has a navy and a coast guard (*Küstbewakning*). The Swedish coast guard perhaps is the earliest coast guard formally established in the world. It was established in 1638. It remained as part of the Swedish Customs division for 350 years. From July 1, 1998 it became an independent civilian authority with a board supervised by the ministry of defence. It is duties and functions are:

- Surveillance of Swedish maritime zones including the continental shelf,
- Fisheries protection and enforcement of fisheries legislation,,
- Customs,
- Enforcement of pollution and dumping regulations,
- Environmental protection,
- Enforcement of marine traffic regulations,
- Prevention of drug running,
- Maritime search and rescue as part of the Swedish search and rescue organisation.

143. Switzerland

Switzerland is a landlocked country. It has naval forces as part of the army units with functions of coast guard for patrolling the lakes, primarily, Constance, Geneve and Maggiore.

144. Syrian Arab Republic

Syrian Arab Republic has 193-km coastline on the Mediterranean Sea. It claims 12 nm territorial sea and 24 nm contiguous zone. It has a navy but no coast guard.

www.kustbevakningen.se/kbvtemplates/Page.aspx?id=1439

Figure 2. 17 A Future Planned Surveillance Vessel of Swedish Coast Guard

145. Thailand

Thailand has 3,219-km coastline on the Andaman Sea, Malacca Strait approaches and the South China Sea. It claims 12 nm territorial sea, 200 nm exclusive economic zone and a continental shelf up to 200-m depth or to the depth of exploitation. Thailand has a navy and a marine police as a coast guard. Thailand is still involved in the long process of developing a formal coast guard force. On April 1, 1989 a trial force was established. The Coast Guard Squadron was officially authorized on September 29, 1992. Currently, ships and aircraft are rotated monthly from the navy. Coast guard functions are also performed by the marine police, which is responsible to the Ministry of Interior. Besides the to the coast guard and marine police there are also Armed Sea Rangers (ASR) who maintain counter-piracy patrols in converted fishing vessels.

146. The Former Yugoslav Republic of Macedonia

The Former Yugoslav Republic of Macedonia is a landlocked country. But it has a naval force for river and lake patrol that functions like a coast guard.

147. Timor Leste

Timor Leste has 706-km coastline on the Pacific Ocean. It claims 12 nm of territorial sea, 24 nm of contiguous zone and 200 nm of exclusive fisheries zone. It has a coast guard, which is the naval component of the defence forces. The primary functions of the coast guard are enforcement of fisheries regulations and fisheries control.

148. Togo

Togo has 56-km coastline on the North Atlantic Ocean at the Bight of Benin. It claims 30 nm territorial sea, and 200 nm of exclusive economic zone. It has a coast guard.

149. Tonga

Tonga is an island nation in the South Pacific Ocean. It has 419-km coastline. Its maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone and a continental shelf up to the 200-m depth or the depth of the exploitation. It has a coast guard.

150. Trinidad and Tobago

Trinidad and Tobago is an island nation in the North Atlantic Ocean. It has 362-km coastline. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf up to 200 nm or the edge of the continental margin. It has a navy, coast guard and customs and excise marine forces.

151. Tunisia

Tunisia has 1,148-km coastline on the Mediterranean Sea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, and 12 nm exclusive economic zone. It has a navy but no coast guard.

152. Turkey

Turkey has 7,200-km coastline on the Aegean Sea, Mediterranean Sea and the Black Sea. Its maritime claims are 6 nm in the Aegean Sea, 12 nm in the Mediterranean Sea and the Black Sea. It has exclusive economic zone in the Black Sea which is up to the maritime boundary agreed with the former Soviet Union. The exclusive economic zone is 200 nm in the Mediterranean. It has a navy and a coast guard (*Salil Güvenlik*). The coast guard was formed on July 9, 1982 from the naval wing of the Gendarmerie. The duties and functions according to the Coast Guard Act are to:

- Protect and provide the security of our (Turkey's) coasts and territorial waters,
- Provide the safety of life and property at sea,
- Take necessary measures for untethered mines, explosives and suspicious material identified in the sea and on the coast and report them to the authorities concerned,
- Observe and inspect the operating conditions of the aids-to-navigation and report the deficiencies observed to the authorities concerned,

- Disarm the refugees entering into our territorial waters and deliver them to the authorities concerned,
- Prevent all kinds of smuggling carried out by way of sea,
- Prevent the actions of the vessels and sea craft in violation of the laws on radio hygiene, passport, anchoring, mooring, fishing, diving and hoisting the flag,
- Inspect the fishing of aquatic products,
- Conduct inspections in order to prevent the marine pollution,
- Prevent the smuggling on antiquities by conducting inspections on diving activities,
- Perform search and recue missions within the search and rescue area of Turkey, in conformity with the International Search and Rescue Convention and National Search and Rescue Regulations,
- Inspect the yacht tourism,
- Participate in the operations conducted for the security of homeland under the command of the Naval Forces, when so ordered.

153. Turkmenistan

Turkmenistan is a landlocked country. But it has a navy under the border guard and a coast guard for operations in the Caspian Sea.

154. Tuvalu

Tuvalu is an island nation in the South Pacific. It has 24-km coastline. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. It has a maritime wing that functions as a coast guard.

155. Uganda

Uganda is a landlocked country. It has a marine unit that functions as a coast guard in rivers and lakes including Lake Victoria.

156. Ukraine

Ukraine has a coastline of 2,782-km on the Black Sea and the Sea of Azov. Its maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone and a continental shelf up to the depth of 200-m or to the depth of exploitation. It has a navy and a coast guard (Ukrainian Sea Guard) under the state border guard service. The coast guard was a successor of the erstwhile Soviet border guard naval units. The coast guard is an independent subdivision of the State Committee for Border guards.

157. United Arab Emirates

United Arab Emirates has 1,318-km coastline in the Persian Gulf and in the Gulf of Oman. Its maritime claims are 12 nm territorial sea, 24 nm of contiguous zone, 200 nm exclusive economic zone and a continental shelf up to 200 nm or to the edge of the continental margin. It has a navy and a coast guard besides police and customs vessels. The coast guard is under the Ministry of Interior.

158. United Kingdom of Great Britain and Northern Ireland

United Kingdom of Great Britain and Northern Ireland has 12,249-km coastline in the North Atlantic Ocean. Its maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone and a continental shelf as defined in accordance with agreed upon boundaries. It has a navy, Royal Maritime Auxiliary Services (RMAS) and other maritime forces that include Scottish Fisheries Protection Agency, Customs, Army (Royal Logistic Corps), Trinity House (General Lighthouse Authority), Northern Lighthouse Board, and Her Majesty's Coastguard. The coastguard has vessels, and helicopters on wet lease. Its function is mainly search and rescue. It makes significant use of Royal National Life-boat Institutions all weather and inshore lifeboats and military search and rescue helicopters. The origin of the coast guard can be traced back to 1809 when the Preventive Water Guard was formed. It was meant to prevent smuggling and provide search and rescue service to shipwrecks. In 1822 the service was transferred to the Board of Customs with an instruction to name it Her Majesty's Coastguard. The first coast guard instructions came into force in 1829. In 1990 the coast guard became a government executive agency. In 1998 the Marine Safety Agency and the Coastguard Agency and were joined together to become the Maritime and Coastguard Agency (MCA). The Maritime and Coastguard Agency is an executive agency that implements the government's maritime safety policy.

The functions of the MCA are:

- Development, promotion, and enforcement of high standards of marine safety,
- Response to marine emergencies 24 hours a day,
- Reduction of the risk of pollution of the marine environment from ships,
- Minimisation of the impact of marine pollution on the United Kingdom when it occurs,
- Search and rescue operations along with HM Coast Guard, including cliff and mud rescue.
- Inspection and survey of vessels belonging to United Kingdom,
- Port state control inspection of vessels that do not belong to the United Kingdom,
- Enforcement of merchant shipping legislation,
- Setting of ship and seafarer standards and maritime security.

Photo: by the Author

Figure 2. 18 A Helicopter of HM Coast Guard of UK MCA Preparing to Take Off

159. United Republic of Tanzania

United Republic of Tanzania has 1,424-km coastline in the Indian Ocean. Its maritime claims are 12 nm territorial sea, and 200 nm exclusive economic zone. It has a navy and also a maritime police wing that functions like a coast guard.

160. United States of America

The United States of America has 19,924-km coastline on the Arctic Ocean, the Atlantic Ocean and the Pacific Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone and 200 nm exclusive economic zone. The continental shelf is not specified. The United States has a navy according to the constitution and a coast guard with a long history. The coast guard was established by an Act of the Congress on January 28, 1915 that consolidated the revenue Cutter Service founded in 1790, and the Life Saving Service founded in 1848. According to the Act of Establishment the coast guard would be a military service and a branch of the armed forces of the United States of America at all times. The coast guard would be a service in the treasury department except when it was operative as a service in the navy. Congress further legislated that in time of national emergency or when the President so directs, the coast guard would operate as part of the navy. It operated as part of the navy during the two world wars. The Light House Service (1789) was transferred to the coast guard on July 1, 1939 and the Bureau of Steamboat Inspection on February 28, 1942. The coast guard was transferred to the Department of Homeland Security on March 1, 2003. Its missions are articulated under five strategic aims:

- Safety—prevent deaths, injuries and property damage associated with maritime transportation, fishing and recreational boating.
- National defense—defend the nation as one of the five US armed services. Enhance regional stability in support of national security strategy specifying maritime homeland security.
- Maritime security—protect maritime borders from all intrusions by:
    - Haulting the flow of illegal drugs, aliens and contraband into the US through maritime routes,
    - Preventing illegal fishing,
    - Suppressing violation of federal law in the maritime arena.
- Mobility—facilitate maritime commerce and eliminate interruption and impediments to the economical movement of goods and people while maximising recreational access and enjoyment of the water.
- Protection of natural resources—prevents environmental damage and natural resource degradation associated with maritime transportation, fishing and recreational boating.

The United States Coast Guard is undergoing transformation in its operational policy and authority since the September 11, 2001 terrorist attack on the United States. One of its enhanced functions is the protection of the restricted air space over Washington, DC. The function was transferred to the coast guard from the Customs and Border Protection (CBP) since September 2006.[18]

www.en.wikipedia.org/wiki/Image:44356_(1).jpg

Figure 2.19 A US Coast Guard Motor Lifeboat

161. Uruguay

Uruguay has 660-km coastline in the South Atlantic Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200 nm or to the edge of the continental margin. It has a navy and a coast guard.

162. Vanuatu

Vanuatu is an island nation with 2,528-km long coastline in the South Pacific Ocean. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200 nm or to the edge of the continental margin. It has a marine police that functions like a coast guard.

163. Venezuela, Bolivarian Republic of

The Bolivarian Republic of Venezuela has 2,800-km coastline on the Caribbean Sea. Its maritime claims are 12 nm territorial sea, 15 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200-m depth or to the depth of exploitation. It has a navy and a coast guard (*Comando de guardacostas*) as part of the naval command. The process of creating a coast guard began with its independence in 1823. It was in the later years the thought for a coast guard command took shape and a proposal was made to the naval high command in September 1980. The first squadron was instituted on April 24, 1981. The coast guard also carries out river patrol

164. Vietnam

Vietnam has 3,344-km coastline in the Gulf of Tonkin and South China Sea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200 nm or to the edge of the continental margin. It has a navy and a coast guard. The coast guard which is subordinate to the navy was formed on September 1, 1998. It is known as the Vietnam People Border and Coast Guard. It will also take on customs duties. It comes under the Vietnam People's Army (VPA). The duties and functions of the coast guard are:

- Drug interdiction,
- Maritime law enforcement,
- Marine assistance,
- Maritime search and rescue,
- National defense – alongside the Vietnamese Navy.

165. Yemen

Yemen has 1,906-km coastline in the Red Sea and the Arabian Sea. Its maritime claims are 12 nm territorial sea, 24 nm contiguous zone, 200 nm exclusive economic zone, and a continental shelf up to 200 nm or to the edge of the continental margin. It has a navy and a coast guard. The coast guard was established in 2002. The duties and functions of the coast guard are:

- Antismuggling operations,
- Immigration control,
- Pollution control,
- Environmental protection,
- Maritime search and rescue,
- Fishery protection.

166. Zimbabwe

Zimbabwe is a landlocked country. But it has a coast guard for the rivers and lakes, especially along the border.

All the 73 entities that figure in the list of protectorates and territories are either coastal or exclusive island territories with various claims on the maritime zones. Many of them have independent maritime forces exclusively for maritime protection.

1. Adélie Land (France)

Adélie land is a coastal territory claimed along the Southern Ocean in the Antarctic. Its claims are not specified.

2. Akrotiri (UK)

Akrotiri has 56-km coastline on the Mediterranean Sea. Its claims are not specified.

3. American Samoa (USA)

American Samoa is an island territory. It has 116-km coastline on the South Pacific Ocean. Its maritime claims are 12 nm territorial sea and 200 nm exclusive economic zone.

4. Anguilla (UK)

Anguilla is an island territory. It has 61-km coastline on the Caribbean Sea. Its maritime claims are 3 nm territorial sea and 200 nm exclusive economic zone. It has a marine police that functions like a coast guard.

5. Aruba (Netherlands)

Aruba is an island territory. It has 69-km coastline on the Caribbean Sea. It claims 12 nm territorial sea. It has a marine police that functions like a coast guard.

6. Ashmore and Cartier Islands (Australia)

Ashmore and Cartier Islands has 74-km coastline on the Indian Ocean. Its maritime claims are 12 nm territorial sea, 12 nm contiguous zone, 200 nm exclusive economic zone and a continental shelf at 200-m depth or to the depth of exploitation.

7. Baker Islands (USA)

Baker Island is part of the United States Pacific Island Wildlife Refuges. It has 5-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

8. Basses da India (*Iles Eparses*) (France)

Basses da India is an island territory submerged under high tide. It is a part of the French Southern and Antarctic Islands. It has 34-km coastline on the Indian Ocean when above water. It claims 12 nm territorial sea and 200 nm exclusive economic zone.

9. Bermuda (UK)

Bermuda is an island territory. It has 103-km coastline on the North Atlantic Ocean. Its maritime claims are 12 nm territorial sea and 200 nm exclusive economic zone. It has a marine police (Bermudian Police) formed in 1962 that functions like a coast guard.

10. Bouvet Island (Norway)

Bouvet Island has 30-km coastline on the South Atlantic Ocean. It claims 4 nm territorial sea.

11. British Indian Overseas Territory (UK)

British Indian overseas Territory is an island territory. It has 698-km coastline on the Indian Ocean. Its maritime claims are 3 nm territorial sea and 200 nm exclusive fisheries zone.

12. British Virgin Islands (UK)

British Virgin Islands has 80-km coastline on the North Atlantic Ocean. Its maritime claims are 3 nm territorial sea and 200 nm exclusive fishing zone. It has a marine police that functions like a coast guard.

13. Cayman Islands (UK)

Cayman Islands has 160-km coastline on the Caribbean Sea. Its maritime claims are 12 nm territorial sea and 200 nm exclusive fishing zone. It has a marine police that functions like a coast guard.

14. Christmas Island (Australia)

Christmas Island has 139-km coastline on the Indian Ocean. Its maritime claims are 12 nm territorial sea, 12 nm contiguous zone and 200 nm exclusive fishing zone.

15. Clipperton Island (France)

Clipperton Island has 11-km coastline on the South Pacific ocean. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

16. Cocos (Keeling) Islands (Australia)

Cocos (Keeling) Islands has 26-km coastline on the Indian Ocean. It claims 12 nm territorial sea, and 200 nm exclusive fishing zone.

17. Cook Islands (New Zealand)

Cook Islands has 120-km coastline on the South Pacific Ocean. It claims 12 nm territorial sea, 200 nm exclusive fishing zone and a continental shelf of 200 nm or to the edge of the continental margin. It has a maritime force similar to a coast guard.

18. Coral Sea Islands (Australia)

Coral Sea Islands has 3,095 km coastline on the Coral Sea. It claims 3 nm territorial sea and 200 nm exclusive economic zone.

19. Dhekelia (UK)

Dhekelia is a coastal territory. It has 28-km coastline on the Mediterranean Sea. Its maritime claims are not specified.

20. Europa Island (*Iles Eparses*) (France)

Europa Island is a part of the French Southen and Antarctic Islands in the Indian Ocean. It has 22-km coastline. It claims 12 nm territorial sea and 200 nm exclusive economic Zone.

21. Falkland Islands (*Islas Malvinas*) (UK)

Falkland Islands has 1,288-km coastline on the Atlantic Ocean. Its maritime claims are 12 nm territorial sea, 200 nm exclusive economic zone, and 200 nm exclusive fishing zone. It has maritime patrol forces whose functions are similar to that of a coast guard.

22. Faroe Islands (Denmark)

Faroe Islands has 1,117-km coastline on the North Atlantic Ocean. Its maritime claims are 3 nm territorial sea, an exclusive fishing zone extending to 200 nm or agreed boundaries or median line, and a continental shelf of 200 nm or agreed boundaries or median line. It has a coast guard and also fisheries force that come under *Landsstyri*—islands local government. Vessels work close with Danish Navy.

23. French Guiana (France)

French Guiana is a coastal territory. It has 378-km coastline on the North Atlantic Ocean. Its maritime claims are 12 nm territorial sea, 12 miles contiguous zone, 200 nm exclusive economic zone and a continental shelf of 200 meter depth or to the depth of exploitation.

24. French Polynesia (France)

French Polynesia is an island group with 2,525-km coastline on the South Pacific Ocean. Its maritime claims are 12 nm territorial sea and 200 nm exclusive economic zone.

25. Glorioso Islands (France)

Glorioso Islands group is a part of the French Southern and Antarctic Islands in the Indian Ocean. The group has 35-km coastline and claims 12 nm territorial sea and 200 nm exclusive economic Zone.

26. Gibraltar (UK)

Gibraltar is a coastal territory in the Strait of Gibraltar. It has 12-km coastline. Its maritime claim is 3 nm of territorial sea.

27. Greenland (Denmark)

Greenland is an island territory. It has 44,087-km coastline on the Arctic Ocean and the Atlantic Ocean. Its maritime claims are 3 nm territorial sea, 200 nm or agreed boundaries or median line of exclusive fishing zone and a continental shelf of 20 nm or agreed boundaries or median line.

28. Guadeloupe (France)

Guadeloupe is an island territory. It has 656-km coastline on the South Atlantic Ocean. Its maritime claims are 12 nm territorial sea, and 200 nm exclusive economic zone.

29. Guam (USA)

Guam is an island territory. It has 126-km coastline on the North Pacific Ocean. Its maritime claims are 12 nm territorial sea, and 200 nm exclusive economic zone.

30. Guantánamo Bay (USA)

Guantánamo Bay is a coastal territory on the mainland of Cuba on seemingly perpetual lease to the US Government. It has 18-km coastline with US naval and coast guard presence.

31. Guernsey (UK)

Guernsey is an island territory in the English Channel. It claims 3 nm territorial sea and 12 nm exclusive fishing zone.

32. Heard Island and McDonald Islands (Australia)

Heard Island and McDonald Islands are a group of islands in the Indian Ocean. It has 102-km coastline. The maritime claims are 12 nm territorial sea and 200 nm exclusive fishing zone.

33. Hong Kong (China)

Hong Kong is a special administrative coastal region of China with a coastline of 733-km on the South China Sea. It claims 3 nm territorial sea. It was a former British colony where marine policing was given high priority. The marine police was in existence since 1845. It has a marine police division that

functions like a coast guard. Its functions are restricted within the waters of the Hong Kong Special Administrative Region (HKSAR). They are:

- Maritime search and rescue and casualty evacuation
- Countering illegal immigration,
- Antismuggling operations,
- Enforcing maritime legislation including licencing and safety regulations,
- Providing visible government force presence in the remote areas of HIKSAR.

34. Howland Island (U.S.A.)

Howland Island is part of the United States Pacific Island Wildlife Refuges. It has 6-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

35. Ile Amsterdam et Ile Saint-Paul (France)

Ile Amsterdam et Ile Saint-Paul form a part of the French Southen and Antarctic Islands in the Indian Ocean. It has 28-km coastline. It claims 12 nm territorial sea.

36. Ile Crozet (France)

Ile Crozet forms a part of the French Southern and Antarctic Islands in the Indian Ocean. It has 33 km coastline. It claims 12 nm territorial sea.

37. Iles Kerguelen (France)

Iles Kerguelen island group is a part of the French Southen and Antarctic Islands in the Indian Ocean. It has 2,800 km coastline. The group claims 12 nm territorial sea, and 200 nm exclusive economic zone.

38. Isle of Man (UK)

Isle of Man has 160-km coastline. The group claims 12 nm territorial sea, and 12 nm exclusive fishing zone.

39. Jan Mayen (Norway)

Jan Mayen is an island territory between the Greenland Sea and the Norwegian Sea. It has 124-km coastline. It claims 4 nm territorial sea, 10 km contiguous zone, 200 nm exclusive economic zone, and a continental shelf of 200-m depth or to the depth of exploitation.

40. Jarvis Island (U.S.A.)

Jarvis Island is part of the United States Pacific Island Wildlife Refuges. It has 8-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

41. Jersey (UK)

Jersey is an island in the English Channel. It has 70-km coastline. It claims 3 nm territorial sea, and 12 nm exclusive fishing zone

42. Johnston Atoll (U.S.A)

Johnston Atoll is part of the United States Pacific Island Wildlife Refuges. It has 277-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

43. Juan de Nova Island (*Isles Eparses*) (France)

Juan de Nova Island is a part of the French Southern and Antarctic Islands in the Indian Ocean. It has 24-km coastline and claims 12 nm territorial sea, 200 nm exclusive economic Zone, and a continental shelf of 200-m depth or to the depth of exploitation.

44. Kingman Reef (U.S.A.)

Kingman Reef is part of the United States Pacific Island Wildlife Refuges. It has 3-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

45. Macau (China)

Macau is a special administrative coastal region of China with a coastline of 41 km on the South China Sea. Maritime claims are not specified.

46. Martinique (France)

Martinique is an island in the Caribbean with 160-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

47. Mayotte (France)

Mayotte is an island in the Mozambique Channel. It has 185-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

48. Midway islands (U.S.A.)

Midway Islands are part of the United States Pacific Island Wildlife Refuges. It has 15 km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

49. Montserrat (UK)

Montserrat is an island in the Caribbean Sea. It has 40 km coastline. It claims 3 nm territorial sea, and 200 nm exclusive economic zone.

50. Navassa Island (U.S.A.)

Navassa Island is in the Caribbean Sea. It has 8-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

51. Netherlands Antilles (Netherlands)

Netherlands Antilles is in the Caribbean. It has 364-km coastline. It claims 12 nm territorial sea, and 12 nm exclusive fishing zone.

52. New Caledonia (France)

New Caledonia is in the Coral Sea. It has 2,254-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

53. Niue (New Zealand)

Niue is in the South Pacific Ocean. It has 64-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive fishing zone.

54. Norfolk Island (Australia)

Norfolk Island is in the South Pacific Ocean. It has 32-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive fishing zone.

55. Northern Mariana Islands (U.S.A.)

Northern Marianna Islands are in the Northern Pacific Ocean. The group has 1,482-km coastline and claims 12 nm territorial sea, and 200 nm exclusive economic zone.

56. Palmyra Atoll (U.S.A.)

Palmyra Atoll is part of the United States Pacific Island Wildlife Refuges. It has 15-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

57. Paracel Islands (China)

Paracel Islands are in the South China Sea. The group has 518-km coastline. The maritime claims are not specified.

58. Pitcairn Islands (UK)

Pitcairn Islands are in the South Pacific Ocean. The group has 51-km coastline and claims 3 nm territorial sea, and 200 nm exclusive economic zone.

59. Puerto Rico (U.S.A.)

Puerto Rico is an island group in the Caribbean Sea. It has 501-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

60. Reunion (France)

Reunion is an island in the Indian Ocean. It has 207-km coastline. It claims 12 nm territorial sea, and 200 nm exclusive economic zone.

61. Saint Barthelemy (France)

Saint Barthelemy is a group of islands in the Indian Ocean. The group has about 30-km coastline. Its maritime claims are not specified.

62. Saint Helena (UK)

Saint Helena is a group of islands in the South Atlantic Ocean. The group has about 100-km coastline. It claims 12 nm territorial sea and 200 nm exclusive fishing zone.

63. Saint Martin (France)

Saint Martin is a coastal territory in the Caribbean. It has 59-km coastline. Its maritime claims are not specified.

64. Saint Pierre and Miquelon (France)

Saint Pierre and Miquelon is a group of islands in the North Atlantic Ocean. It has 120-km coastline and claims 12 nm territorial sea and 200 nm exclusive economic zone.

65. South Georgia and South Sandwich Islands (UK)

South Georgia and South Sandwich Islands forms a group of islands in the South Atlantic Ocean. The group has about 398-km coastline. Its maritime claims are 12 nm territorial sea and 200 nm exclusive fishing zone.

66. Spratly islands (China)

Spratly islands are in the South China Sea with 926-km coastline. The maritime claims are not specified.

67. Svalbard (Norway)

Svalbard is a group of islands in the Norwegian Sea with a combined coastline of 8829 km. The islands claim 4 nm territorial sea and 200 nm exclusive economic zone.

68. Tokelau (New Zealand)

Tokelau is an island group in the South Pacific Ocean with 101-km coastline. It claims 12 nm territorial sea and 200 nm exclusive economic zone.

69. Tromelin Island (*Isles Eparses*) (France)

Tromelin Island is a part of the French Southern and Antarctic Islands in the Indian Ocean. It has 4-km coastline and claims 12 nm territorial sea, 200 nm exclusive economic Zone, and a continental shelf of 200-m depth or to the depth of exploitation.

70. Turks and Caicos Island (UK)

Turks and Caicos Island is a group of islands in the North Atlantic Ocean. The group has a coastline of 389-km and claims 12 nm territorial sea and 200 nm exclusive fishing zone.

71. Virgin Islands (U.S.A.)

Virgin Islands form a group of islands in the Caribbean Sea. It has a coastline of 188 km and claims 12 nm territorial sea and 200 nm exclusive economic zone.

72. Wake Island (UK)

Wake Island is in the Pacific Ocean. It has 19-km coastline. It claims 12 nm territorial sea and 200 nm exclusive economic zone.

73. Wallis and Futuna (France)

Wallis and Futuna island group is in the South Pacific Ocean. It has a coastline of 129 km and claims 12 nm territorial sea and 200 nm exclusive economic zone.

Besides the member countries of the UN and protectorates and territories there are seven identified 'other (land) entities.' They too have the potential to be affected by threats at or from the ocean. Their maritime aspects are:

1. Antarctica

Antarctica is a common island continent under international management. It has 17,968-km coastline. France has claimed about 432,000 sq km of territory called Adélie Land on a 350-km coastal strip with historical perspectives that has not been recognised since no country is permitted to own territories under international agreement. There are many research stations set up by various countries in Antarctica, some of them permanent. Governance of Antarctica for all purposes is expected to be under the Antarctica Treaty that came into force on June 23, 1961. But there are various claims being put forward by other nations too. Australia, Chile, Argentina has claimed exclusive economic zone (**EEZ**) rights or similar over 200 nm extensions seaward from their continental claims, UK has plans to claim continental shelf. Other countries do not accept these zones. 21 of the 28 Antarctic consultative nations have made no claims to Antarctic territory (although Russia and the U.S. have reserved the right to do so) and do not recognize the claims of the other nations. The situation can be volatile in future.

2. European Union

European Union is an exclusive coastal entity that is governed by common supranational laws, and thereby could have forces including maritime forces if required. However since NATO with its collective forces overshadow the governing decisions on force application, it is unlikely that the European Union will have collective forces of its own in the near future. But it could very well have a European (Union) Coast Guard. If it has the will it will be the first supranational force in the world with a collective coast guard. European Union collectively has 65,993 km coastline with the existing 27 members (2008). The EU has not made any collective maritime claims. There was a proposal for a European coast guard to protect the maritime interests of the member States. But the proposal was dropped by the European Commission after deliberations, on October 10, 2007. On the same day the European Commission adopted a Communication setting out its vision for an Integrated Maritime policy together with a detailed action plan setting out an ambitious work programme for the years ahead. Along with the idea of a common coast guard the idea for a common registry for shipping was also discarded. The support from the member States was lukewarm for a common coast guard and ship registry.[19]

3. Kosovo

Kosovo is a landlocked entity, yet to be recognised for its independent existence. If recognised it could have a maritime force like Serbia which is landlocked.

4. Taiwan

Taiwan is a disputed island territory with 1,566-km coastline and claims 12 nm territorial sea and 200 nm exclusive economic zone. It has a strong combat naval force and a coast guard that is involved in serious operations. The coast guard was formerly the maritime security police. The name was changed on January 1, 2000. The Republic of China Coast Guard Administration (ROCCGA) comes under the administration of the Executive Yuan, which is the executive branch of the government. While it is under the ministry of interior, in wartime the coast guard may be incorporated with the military. It has operational integration with the navy. The coast guard administration is charged with:

- Maintaining law and order,
- Protecting the resources of the territorial waters,
- Antismuggling operations,
- Preventing illegal immigration.

www.en.wikipedia.org/wiki/Image:ROCCG_Keelung_Harbor.jpg

Figure 2. 20　Republic of China (Taiwan) Coast Guard Vessels

5. West Bank and Gaza Strip

Both the territories have been considered as a single entity that becomes coastal though geographically separated, from the future perception. Once concluded and the existing conflicts are resolved, they could have their own naval presence in the area on the Mediterranean Sea. The entity has a coastline of 40 km. There is no specified maritime claim yet.

6. Western Sahara

Western Sahara is a vast coastal territory with 1,110 km coastline. There is no maritime claim so far since the sovereignty issue needs to be resolved. Once resolved the entity is expected to have maritime forces from the geostrategic point of view.

7. Vatican City

Vatican City is a tiny landlocked country with a defined purpose. It is protected by Italy and is embedded within. Vatican City is not expected to show any maritime forces.

Out of the 277 entities, barring the five ocean entities, 272 land entities were examined for understanding their direct maritime association. Out of them 44 are landlocked, 127 are coastal having borders over the land as well as on the ocean, and 101 are islands. 174 of them have maritime forces. This includes 17 landlocked entities also. Four entities—three coastal and one island nation that are members of the United Nations do not have any maritime force at all.

There are 107 navies and 142 forces that are either formal coast guards or forces that functions like them in the world, distributed among the 174 geostrategic entities that form part of the identified 272 land entities. Many entities that have formal coast guards also have established maritime forces like the customs, police, fisheries, etc. Among them 74 entities have a navy and the coast guard. 68 of them have only a coast guard and 35 only a navy.

The research summarily identifies 142 coast guards in the world (2008).

The summary of the findings are given in Table 2.1

	Types of Entities and Particulars	Number
1	Identified	272
2	Landlocked	44
3	Coastal	127
4	Islands	101
5	Entities with maritime forces	174
6	Entities with a navy	107
7	Entities with a coast guard	142
8	Entities with the navy and the coast guard	75
9	Entities with coast guard only	68
10	Entities with a navy only	31

Table 2.1 World Coast Guards and Combat Naval Forces – Distribution (2008)

Table 2.2 gives the list of coastguards identified in the research among the 272 land entities.

	Entity	Nature	Maritime Forces	
			Navy	Coast Guard (Researched date of formation)
UN Members				
1	Afghanistan	Landlocked	--	--
2	Albania	Coastal	Navy	Coast Guard (*Roja Bregdetare*) (1982)
3	Algeria	Coastal	Navy	Coast Guard
4	Andorra	Landlocked	--	--
5	Angola	Coastal	--	Coast Guard
6	Antigua and Barbuda	Island	--	Coast Guard (1995)
7	Argentina	Coastal	Navy	Coast Guard (*Prefecture Argentina*) (1969)
8	Armenia	Landlocked	--	--
9	Australia	Island	Navy	Coast Guard (1936/1961)
10	Austria	Landlocked	--	--
11	Azerbaijan	Landlocked	--	Coast Guard (1992)
12	Bahamas	Island	--	Coast Guard
13	Bahrain	Island	Navy	Coast Guard
14	Bangladesh	Coastal	Navy	Coast Guard (1995)
15	Barbados	Island	--	Coast Guard (1973)
16	Belarus	Landlocked	--	Coast Guard
17	Belgium	Coastal	Navy	Coast Guard (2005)
18	Belize	Coastal	--	Coast Guard (2005)
19	Benin	Coastal	--	Coast Guard (1978)
20	Bhutan	Landlocked	--	--
21	Bolivia	Landlocked	--	Coast Guard
22	Bosnia and Herzegovina	Coastal	--	--
23	Botswana	Landlocked	--	--
24	Brazil	Coastal	Navy	--
25	Brunei Darussalam	Coastal	Navy	Coast Guard
26	Bulgaria	Coastal	Navy	Coast Guard
27	Burkina Faso	Landlocked	--	--
28	Burundi	Landlocked	--	Coast Guard
29	Cambodia	Coastal	Navy	--
30	Cameroon	Coastal	Navy	--
31	Canada	Coastal	Navy	Coast Guard (1962)
32	Cape Verde	Island	--	Coast Guard
33	Central African Republic	Landlocked	--	Coast Guard
34	Chad	Landlocked	--	--
35	Chile	Coastal	Navy	Coast Guard (*Prefectura*) (1848)
36	China	Coastal	Navy	Coast Guard (*Bian Jian*)

37	Colombia	Coastal	Navy	Coast Guard (1979)
38	Comoros	Island	--	Coast Guard
39	Congo, Republic of the…	Coastal	--	Coast Guard
40	Costa Rica	Coastal	--	Coast Guard (*Guardacostas*)
41	Côte d'Ivoire	Coastal	Navy	Coast Guard
42	Croatia	Coastal	--	Coast Guard (2007)
43	Cuba	Coastal	Navy	Coast Guard
44	Cyprus	Coastal	Navy	Coast Guard
45	Czech Republic	Landlocked	--	--
46	Democratic People's Republic of Korea	Coastal	Navy	Coast Guard
47	Democratic Republic of the Congo	Coastal	Navy	--
48	Denmark	Coastal	Navy	Coast Guard (1952)
49	Djibouti	Coastal	Navy	--
50	Dominica	Island	--	Coast Guard
51	Dominican Republic	Coastal	Navy	--
52	Ecuador	Coastal	Navy	Coast Guard (*Guardacostas*)
53	Egypt	Coastal	Navy	Coast Guard
54	El Salvador	Coastal	--	Coast Guard
55	Equatorial Guinea	Coastal	--	Coast Guard
56	Eritrea	Coastal	Navy	Coast Guard
57	Estonia	Coastal	Navy	Coast Guard (1992)
58	Ethiopia	Landlocked	--	--
59	Fiji	Island	--	Coast Guard
60	Finland	Coastal	Navy	Coast Guard (1929)
61	France	Coastal	Navy	Coast Guard (1952)
62	Gabon	Coastal	--	Coast Guard
63	Gambia	Coastal	--	Coast Guard
64	Georgia	Coastal	Navy	Coast Guard (1998)
65	Germany	Coastal	Navy	Coast Guard (*Küstenwache*) (1974)
66	Ghana	Coastal	--	Coast Guard
67	Greece	Coastal	Navy	Coast Guard (*Limenikon Soma*) (1919)
68	Grenada	Island	--	Coast Guard
69	Guatemala	Coastal	Navy	--
70	Guinea	Coastal	--	Coast Guard
71	Guinea-Bissau	Coastal	--	Coast Guard
72	Guyana	Coastal	--	Coast Guard
73	Haiti	Coastal	Navy	--
74	Honduras	Coastal	Navy	Coast Guard
75	Hungary	Landlocked	Navy	--
76	Iceland	Island	--	Coast Guard (1926)

77	India	Coastal	Navy	Coast Guard (*Tat Rakshak*) (1978)
78	Indonesia	Coastal	Navy	Coast Guard (2005)
79	Iran, Islamic Republic of…	Coastal	Navy	--
80	Iraq	Coastal	Navy	--
81	Ireland	Coastal	Navy	Coast Guard
82	Israel	Coastal	Navy	--
83	Italy	Coastal	Navy	Coast Guard (Guardia costiera) (1989)
84	Jamaica	Island	--	Coast Guard (1977)
85	Japan	Island	Navy	Coast Guard (*Kaijyou Hoan Chou*) (1949)
86	Jordan	Coastal	--	Coast Guard
87	Kazakhstan	Landlocked	Navy	--
88	Kenya	Coastal	Navy	Coast Guard
89	Kiribati	Island	--	Coast Guard
90	Kuwait	Coastal	Navy	Coast Guard
91	Kyrgyzstan	Landlocked	--	--
92	Lao Peoples Democratic Republic	Landlocked	--	Coast Guard
93	Latvia	Coastal	Navy	Coast Guard (1924)
94	Lebanon	Coastal	Navy	--
95	Lesotho	Landlocked	--	--
96	Liberia	Coastal	Navy	--
97	Libyan Arab Jamahiriya	Coastal	Navy	--
98	Liechtenstein	Landlocked	--	--
99	Lithuania	Coastal	Navy	Coast Guard (1992)
100	Luxembourg	Landlocked	--	--
101	Madagascar	Island	--	Coast Guard
102	Malawi	Landlocked	Navy	--
103	Malaysia	Coastal	Navy	Coast Guard (2005)
104	Maldives	Island	--	Coast Guard (1980)
105	Mali	Landlocked	--	--
106	Malta	Island	--	Coast Guard
107	Marshall Islands	Island	--	Coast Guard
108	Mauritania	Coastal	Navy	--
109	Mauritius	Island	--	Coast Guard (1988)
110	Mexico	Coastal	Navy	--
111	Micronesia Federated States of…	Island	Navy	Coast Guard
112	Moldova	Landlocked	--	--
113	Monaco	Coastal	--	--
114	Mongolia	Landlocked	--	--
115	Montenegro	Coastal	Navy	--
116	Morocco	Coastal	Navy	Coast Guard (1997)

117	Mozambique	Coastal	--	Coast Guard
118	Myanmar	Coastal	Navy	Coast Guard
119	Namibia	Coastal	Navy	Coast Guard
120	Nauru	Island	--	--
121	Nepal	Landlocked	--	--
122	Netherlands	Coastal	Navy	Coast Guard (*Küstwacht*) (1987)
123	New Zealand	Island	Navy	Coast Guard
124	Nicaragua	Coastal	Navy	--
125	Niger	Landlocked	--	--
126	Nigeria	Coastal	Navy	Coast Guard
127	Norway	Coastal	Navy	Coast Guard (1977)
128	Oman	Coastal	Navy	Coast Guard (1974)
129	Pakistan	Coastal	Navy	Coast Guard (1994)
130	Palau	Island	--	Coast Guard
131	Panama	Coastal	--	Coast Guard
132	Papua New Guinea	Coastal	Navy	--
133	Paraguay	Landlocked	Navy	--
134	Peru	Coastal	Navy	Coast Guard (1975)
135	Philippines	Island	Navy	Coast Guard (1901)
136	Poland	Coastal	Navy	Coast Guard (1991)
137	Portugal	Coastal	Navy	Coast Guard (Guardia Nacionale Republicana)
138	Qatar	Coastal	Navy	Coast Guard
139	Republic of Korea	Coastal	Navy	Coast Guard (2000)
140	Romania	Coastal	Navy	Coast Guard (1999)
141	Russian Federation	Coastal	Navy	Coast Guard (2003)
142	Rwanda	Landlocked	Navy	--
143	Saint Kitts and Nevis	Island	--	Coast Guard (1997)
144	Saint Lucia	Island	--	Coast Guard
145	Saint Vincent and the Grenadines	Island	--	Coast Guard
146	Samoa	Island	--	Coast Guard
147	San Marino	Landlocked	--	--
148	Sao Tome and Principe	Coastal	Navy	--
149	Saudi Arabia	Coastal	Navy	Coast Guard
150	Senegal	Coastal	Navy	Coast guard
151	Serbia	Landlocked	Navy	--
152	Seychelles	Island	--	Coast Guard
153	Sierra Leone	Coastal	--	Coast Guard
154	Singapore	Island	Navy	Coast Guard (1993)
155	Slovakia	Landlocked	--	--
156	Slovenia	Coastal	Navy	--
157	Solomon Islands	Island	--	Coast Guard
158	Somalia	Coastal	--	--

159	South Africa	Coastal	Navy	--
160	Spain	Coastal	Navy	Coast Guard (*Guardia Civil del Mar*) (1844)
161	Sri Lanka	Island	Navy	--
162	Sudan	Coastal	Navy	--
163	Suriname	Coastal	--	Coast Guard
164	Swaziland	Landlocked	--	--
165	Sweden	Coastal	Navy	Coast Guard (1638)
166	Switzerland	Landlocked	--	Coast Guard
167	Syrian Arab Republic	Coastal	Navy	--
168	Tajikistan	Landlocked	--	--
169	Thailand	Coastal	Navy	Coast Guard (1992)
170	The Former Yugoslav Republic of Macedonia	Landlocked	--	Coast Guard
171	Timor-Leste	Coastal	--	Coast Guard
172	Togo	Coastal	--	Coast Guard
173	Tonga	Island	--	Coast Guard
174	Trinidad and Tobago	Island	--	Coast Guard
175	Tunisia	Coastal	Navy	--
176	Turkey	Coastal	Navy	Coast Guard (Salil Güvenlik) (1982)
177	Turkmenistan	Landlocked	Navy	Coast Guard
178	Tuvalu	Island	--	Coast Guard
179	Uganda	Landlocked	--	Coast Guard
180	Ukraine	Coastal	Navy	Coast Guard
181	United Arab Emirates	Coastal	Navy	Coast Guard
182	United Kingdom of Great Britain and Northern Ireland	Coastal	Navy	Coast Guard (1829)
183	United Republic of Tanzania	Coastal	Navy	Coast Guard
184	United States of America	Coastal	Navy	Coast Guard (1915)
185	Uruguay	Coastal	Navy	Coast Guard
186	Uzbekistan	Landlocked	--	--
187	Vanuatu	Island	--	Coast Guard
188	Venezuela, Bolivarian Republic of…	Coastal	Navy	Coast Guard (1981)
189	Viet Nam	Coastal	Navy	Coast Guard (1998)
190	Yemen	Coastal	Navy	Coast Guard (2002)
191	Zambia	Landlocked	--	--
192	Zimbabwe	Landlocked	--	Coast Guard
Protectorates and Territories				
193	Adélie Land (France)	Coastal	--	--

194	Akrotiri (UK)	Coastal	--	--
195	American Samoa (U.S.A.)	Island	--	--
196	Anguilla (UK)	Island	--	Coast Guard
197	Aruba (Netherlands)	Island	--	Coast Guard
198	Ashmore and Cartier Islands (Australia)	Island	--	--
199	Baker Islands (U.S.A.)	Island	--	--
200	Basses da India (Iles Eparses) (France)	Island	--	--
201	Bermuda (UK)	Island	--	Coast Guard (1962)
202	Bouvet Island (Norway)	Island	--	--
203	British Indian Ocean Territory (UK)	Island	--	--
204	British Virgin Islands (UK)	Island	--	Coast Guard
205	Cayman Islands (UK)	Island	--	Coast Guard
206	Christmas Island (Australia)	Island	--	--
207	Clipperton Island (France)	Island	--	--
208	Cocos (Keeling) Islands (Australia)	Island	--	--
209	Cook Islands (New Zealand)	Island	--	Coast Guard
210	Coral Sea Islands (Australia)	Island	--	--
211	Dhekelia (UK)	Coastal	--	--
212	Europa Island (France)	Island	--	--
213	Falkland Island (UK)	Island	--	Coast Guard
214	Faroe Islands (Denmark)	Island	--	Coast Guard
215	French Guiana (France)	Coastal	--	--
216	French Polynesia (France)	Island	--	--
217	Glorioso Islands (France)	Island	--	--
218	Gibraltar (UK)	Coastal	--	--
219	Greenland (Denmark)	Island	--	--
220	Guadeloupe (France)	Island	--	--
221	Guam (U.S.A.)	Island	--	--
222	Guantánamo Bay (U.S.A.)	Coastal	Navy	Coast Guard
223	Guernsey (UK)	Island	--	--
224	Heard Island and McDonald Islands (Australia)	Island	--	--
225	Hong Kong (China)	Coastal	--	Coast Guard
226	Howland Island (U.S.A.)	Island	--	--
227	Ile Amsterdam et Ile Saint Paul (France)	Island	--	--
228	Ile Crozet (France)	Island	--	--

229	Iles Kerguelan (France)	Island	--	--
230	Isle of Man (UK)	Island	--	--
231	Jan Mayen (Norway)	Island	--	--
232	Jarvis Island (U.S.A.)	Island	--	--
233	Jersey (UK)	Island	--	--
234	Johnston Atoll (U.S.A.)	Island	--	--
235	Juan de Nova Island (France)	Island	--	--
236	Kingman Reef (U.S.A.)	Island	--	--
237	Macau (China)	Coastal	--	--
238	Martinique (France)	Island	--	--
239	Mayotte (France)	Island	--	--
240	Midway Islands (U.S.A.)	Island	--	--
241	Montserrat (UK)	Island	--	--
242	Navassa Island (U.S.A.)	Island	--	--
243	Netherlands Antilles (Netherlands)	Coastal	--	--
244	New Caledonia (France)	Island	--	--
245	Niue (New Zealand)	Island	--	--
246	Norfolk Island (Australia)	Island	--	--
247	Northern Mariana Islands (USA)	Island	--	--
248	Palmyra Atoll (U.S.A.)	Island	--	--
249	Paracel Islands (China)	Island	--	--
250	Pitcairn Islands (UK)	Island	--	--
251	Puerto Rico (U.S.A.)	Island	--	--
252	Reunion (France)	Island	--	--
253	Saint Barthelemy (France)	Island	--	--
254	Saint Helena (UK)	Island	--	--
255	Saint Martin (France)	Coastal	--	--
256	Saint Pierre and Miquelon (France)	Island	--	--
257	South Georgia and South Sandwich Islands (UK)	Island	--	--
258	Spratly Islands (China, Taiwan, Vietnam)	Island	--	--
259	Svalbard (Norway)	Island	--	--
260	Tokelau (New Zealand)	Island	--	--
261	Tromelin Island (France)	Island	--	--
262	Turks and Caicos Islands (UK)	Island	--	--
263	Virgin Islands (U.S.A.)	Island	--	--
264	Wake Island (U.S.A.)	Island	--	--
265	Wallis and Futuna	Island	--	--

Other Entities				
266	Antarctica	Island	--	--
267	European Union	Coastal	--	--
268	Kosovo	Landlocked	--	--
269	Taiwan	Island	Navy	Coast Guard (2000)
270	West Bank and Gaza Strip	Coastal	--	--
271	Western Sahara	Coastal	--	--
272	Vatican City	Landlocked	--	--

Table 2.2 Coast Guards of the World

Characteristics of the identified Coast Guards

The 142 coast guards of the world, thus identified are not identical in their design and other fundamental characteristics. They are dissimilar even with respect the terrains they operate. Their nature varies in many ways making them entity specific based on the policies and strategic perception that is exclusive to each entity. The asymmetry in characteristics can be appreciated in many ways:

- Their terrain specificity varies. While a set of coast guards operate in the ocean or related divisions and navigable waters, another set operates in the land waters—lakes, rivers, etc., independent of the ocean.
- Jurisdictional operability in the ocean—the area of operation of the coast guards in the ocean vastly varies. These variations are:
  - Extended oceanic navigable waters other than the territorial waters of littoral States,
  - High seas,
  - Continental shelf
  - Exclusive economic zones,
  - Contiguous zones,
  - Territorial seas,
  - Harbours and ports,
  - Archipelagic waters,
  - Inland waters open to the ocean.
- Functions as a navy with two missions—one navy two missions principle. An example is (Albania) where it is established by law. With many other entities it is by established practice as a policy decision. Under such system the force is primarily a navy but also carry out the functions of a coast guard.[20]
- Functions as a coast guard but isolated without a navy and thereby also committed for exclusive national defence in case such situation arises.
- Functions as an independent coast guard serving along with the navy during war or similar emergencies under government proclamation.
- Functions as a navy but with the duties and functions of a coast guard specific to situations, one being the absence of a coast guard.

- Functions as a coast guard but under the command of a navy or other combat forces.
- Functions as a coast guard but under the control of non-combat agencies.
- Functions as a marine police force.
- Functions as a police coast guard force.
- Functions as a customs force.
- Functions as a fisheries force.
- Functions as a volunteer force.
- Functions as multi-volunteer forces.
- Possibility of joint or continental coast guard forces either that of supranational entity, or association of entities (explained later in the chapter)

It is also seen that the concept of a coast guard is very ancient. It is not new. Many of the world coast guards have long and great histories. Some of the entities had a coast guard before they created a navy, whereas some formulated coast guards subsequently. Some of the newly formed coast guards came out of the navy, and others, independently or by partial or complete merger of various organisations carrying out similar functions.

The similarities among the coast guards are primarily in their duties and functions. The various duties and functions of the world coast guards by collective assimilations show everything associated with the ocean except direct combat action in a warfighting scenario. The duties and functions carried out by the coast guards of the world, as seen in this study, are:

1. Adjudication of cases
2. Air intrusion prevention, safety and security in designated area
3. Assistance during distress situations
4. Assist in the enhancement of institutional capacity in the field of maritime security
5. Assist in survey and scientific research
6. Assist in weather reporting
7. Boating safety
8. Bomb disposal
9. Border protection
10. Carrying out scientific ocean surveys
11. Coastal surveillance
12. Collection of scientific data
13. Combating piracy
14. Community interaction
15. Cooperation with relevant foreign organisations bilaterally and multilaterally
16. Counter intelligence
17. Countermeasures against suspected and spy ships
18. Counter terrorism
19. Creating and handling nationwide maritime safety toll free number and advising people concerned
20. Crowd control in maritime functions
21. Cruise ship protection

22. Defense readiness under the navy
23. Disarming refugees entering into territorial waters and deliver them to the authorities concerned
24. Dissemination of public information related to warnings
25. Drug interdiction
26. Enforcement of customs law
27. Enforcement of legislation for archaeological and cultural values in the sea area
28. Enforcement of legislation with regard to living marine and submarine resource protection, including on the seabed
29. Enforcement of maritime law
30. Enforcement of national and international legislation
31. Enforcing alcohol prohibition laws
32. Enrolment of military personnel
33. Ensuring safety measures in coastal areas
34. Ensuring safety measures within ports
35. Extending assistance and providing support to other national agencies
36. Extending humanitarian assistance
37. Fisheries law enforcement
38. Flag and port sate control
39. Formulate maritime security policy
40. Guarding naval installations
41. Harbour patrol
42. Hurricane preparation
43. Hydrographic survey
44. Ice breaking
45. Ice patrol
46. Induce marine safety awareness
47. Inspection fisheries markets
48. Inspection of national merchant ships all over the world
49. Inspect yacht tourism
50. Intelligence gathering on maritime accidents
51. Investigation of cases
52. Lake patrol
53. Legal proceedings in case of maritime incidents, offences or law violations
54. Licensing and certifying merchant marine personnel
55. Licensing fisheries operations
56. Logistics support to naval vessels including visiting naval vessels
57. Maintaining essential national services as part of nation building when called for
58. Maintaining law and order
59. Maintenance, operation, research and development of maritime navigational aids
60. Manage maritime communication network
61. Manage maritime education for the public

62. Manage maritime traffic information system
63. Manage maritime transportation
64. Marine environmental education
65. Marine environmental protection
66. Marine inspections,
67. Maritime navigational safety
68. Maritime rescue training
69. Maritime safety patrols
70. Maritime search and rescue
71. Maritime surveillance
72. Maritime traffic control
73. Merchant marine training
74. Monitoring the sanitary aspects onboard ships
75. Motivate for community participation in the field of maritime security
76. Nation building—support to essential utilities and facilities
77. Ocean research
78. Own vessel protection in foreign waters
79. Passenger and crew control
80. Peacetime security cooperation operations
81. Policing harbours, coasts and territorial waters
82. Port security
83. Preventing illegal immigration and human trafficking
84. Prevention of maritime accidents
85. Prohibition of waste an d debris dumping in the sea
86. Prosecution of cases
87. Protecting territorial integrity of the water bodies
88. Protection of public installations
89. Protection of national submerged archaeological property
90. Providing visible government presence in the maritime zones
91. Provision of marine information
92. Recreational boating safety
93. River patrol
94. Safety and protection of artificial islands, offshore terminals, and other structures and devices
95. Salvage operations
96. Security against strife at sea
97. Security cooperation operation
98. Security of sea ports
99. Supervision of port authorities
100. Support for capacity building of other coast guards
101. Support to international organisations
102. Suppression of unlawful activities at sea
103. Surveillance of boat traffic
104. Take necessary measures for untethered mines, explosives and suspicious material identified in the sea and on the coast and report them to the authorities concerned

105. Training maritime personnel
106. Vessel clearance
107. Various other duties as and when assigned by the government

Considering the universality, versatility, acceptability and adaptability of the coast guards, there are many other duties that could come or brought into the purview of the coast guards. The examples are:

1. Mine and other explosive devices countermeasures
2. Citizen participation in environmental security, disaster scenario and other issues of national and national interest
3. Monitoring illegal oceanic or other research activities at sea
4. Ocean peacekeeping in conflict scenarios
5. Monitoring seabed mining for safety and security
6. Escorting vessels through dangerous waters
7. Ocean fertilisation
8. Conflict resolution
9. Joint operations to avoid conflict across disputed maritime borders
10. Economic cooperation enforcement at sea
11. Maritime confidence building measures

There could be more duties and functions as the coast guards evolve and the demand for them increases at national, regional and global levels. The evolution of the coast guard will make an interesting study. It will not be complete without a mention of the historically defunct coast guards and an analysis on the future of this unique force in a terrain that is different—water, whether it is a river, lake or ocean, and also in air. Most of the defunct coast guards where created by nations that ruled nations by conquest or colonial invasion. The coast guards were left behind or transmuted into other organisations when situations changed. There was the Provincial Marine that provided coastal protection in the Great Lakes, the Saint Lawrence River and part of the Lake Champlain under the British control. It was controlled by the Royal Navy but was not a combat outfit. During war they were directly controlled by the Royal Navy. The Manchukuo Coast Guard that the Japanese Empire created in the erstwhile Manchukuo territory in 1932 was an exemplary example of how coast guards flourished in the early days and were put to effective use by authorities formally in enforcing desired security measures. Manchukuo was a state that lay within Manchuria and eastern Inner Mongolia. The region was the homeland of Qing Dynasty. The state was abolished in 1945 after Japan's defeat in World War II. The Manchukuo Coast Guard was different from the navy and had special ensign and operated mainly on the rivers bordering Russia. The region is now North East China. Since the ancient days, the traditional role of the coast guard is, quite plainly, to guard the coast keeping a watch on the sea or rivers for intruders, smugglers, poachers, bootleggers, people in distress, and passing ships in trouble. These traditional functions were regarded almost as that of a naval auxiliary. The coast guards personnel were often taken from the navy on transfer or deputation. In course of time the duties and functions of the coast guards expanded as the demand on them increased by changing national interests to meet the pressures of national and global development. Modern coast guards operate sophisticated machinery and equipment. Under the surge of international and national legislations related to the ocean, the States have to have coast guards that could meet the national demands and protect their interests

in the identified maritime zones. The requirement is also spreading out regionally that may expand to global cooperation. The underlying point here is the special character of a service that also wears a human face in terms of acceptability

While there are already joint task forces and multinational navies that come under unified entities like the NATO, the time is not far ahead when such entities including the supranational entities look for collective coast guards of their own. That could be effective from the coast–benefit analysis point of view for a member state. In fact the European Union, the only supranational entity in the world, could benefit highly by having European Union Coast Guard instead of individual member state's coast guards in different names and characteristics. There are associations of nations who have already come up with such ideas elsewhere.

The West and Central African States who are members of the Maritime Organization of West and Central Africa (MOWCA) had announced their plans to raise a joint coast guard force to face their problems at sea.[21] The joint coast guard is expected to combat problems of piracy, illegal fishing, illegal immigration and pollution. The problems, they feel, are not only common to all of them, but also needs bilateral and regional cooperation and coordination. The organisation has 26 member countries—Angola, Benin, Burkina Faso, Cameroon, Cape Verde, Republic of Congo, Democratic Republic of Congo, Côte d'Ivoire, Gabon, The Gambia, Ghana, Guinea, Equatorial Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Mozambique, Niger, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, Togo, Central African Republic, and Chad, The decision was taken in a technical meeting held in Abidjan, Côte d'Ivoire in June, 2006. The decision was based on the difficulties experienced by most of the countries in raising their own coast guards as effective forces at sea against the high profile illegal activists including terrorists. If raised, it will be a continental coast guard. The decision was further affirmed by the 20 member States of the Maritime Organisation of West and Central Africa (MOWCA) through a memorandum of understanding (MoU) on the establishment of a sub-regional coast guard during the 13th General Assembly of Ministers of MOWCA, in Dakar on July 30, 2008.[22] A feasibility study has been carried out by IMO. The MoU is aimed at suppressing piracy, armed robbery and other unlawful acts against ships and addressing illegal fishing, drug and weapon trafficking, illegal migration, oil theft , damage to gas pipelines and maritime accident response in the sub-region. It also provides guidelines for coastal surveillance, presence in the exclusive economic zones of the sub-region and enforcement of international conventions, regulations and codes—principally those of IMO and the UNCLOS. The MoU provides provisions for right of hot pursuit in case of unlawful acts perpetrated against ships. For the purpose of enforcement and service the sub-region will be divided into four coast guard zones.

Similarly under the Caspian Guard Initiative of the United States' European Command (EUCOM), meant to strengthen and coordinate the activities in Azerbaijan and Kazakhstan to enhance Caspian Sea security related to terrorism, nuclear proliferation, drug and human trafficking, and other transnational threats in the region, the vitality of the coast guards over river waters and lakes is poised to enhance.[23] There are similar initiatives by EUCOM for the Gulf of Guinea Guard on the Atlantic southwest of Africa.[24]

Such trends also come out of international pressure besides national demands. In a nutshell the world coast guards have serious responsibilities ahead. Their area of operation, as non-combatant armed forces and experts in the ocean terrain in law enforcement and services, is the maritime zones of the world. Their duties and functions will involve in the broad fields of:

- National and international law enforcement for suppression of unlawful activities at and from the sea.
- Ensuring safety of life and property at sea.
- Marine environmental security.
- Ocean research for bettering conditions of life.
- Developing ocean awareness in the community.
- Ensuring community participation in maritime affairs.
- Maritime disaster management.
- Ocean peace keeping in the areas of conflict.
- Ocean conflict resolution,
- Supporting confidence building (CBM) measures at sea,
- Extending humanitarian assistance,
- Preempting threats at sea or from the sea,
- Ensuring supply chain movement and continuity at sea,
- Ensuring the sovereignty and territorial integrity.

In all these findings the assumption is that the coast guard is an armed force that will use force only in self defense or in combat under a war scenario along with the navy. All these makes the coast guard a unique maritime service with its traditions rooted in the very long past with unlimited scope for the future in a world that is always on the edge for survival.

NOTES

[1] On September 11, 2001 the United States witnessed a series of coordinated attacks by the Al Qaeda. One of them was on the twin towers of the World Trade Center in Manhattan on the water front. Subsequently the United States President announced the establishment of the Department of Homeland Security (DHS). The coast guard along with other departments was placed under it for more effectiveness in homeland security matters.

[2] UNCLOS articles 12,68,70,148,152,160,161,254,266,269, 272 and 274.

[3] P. Paleri, *Role of the Coast Guard in the Maritime Security of India,* Second Edition (New Delhi: Knowledge World, 2007), p. 7-8. In this context, the term military means an armed force meant for combat against lawful or unlawful combatants to safeguard the sovereign rights and integrity of a nation. The term military is also used to denote the ground forces (army) in certain constitutions like those of India and Pakistan.

[4] J. Gettleman, Pirates Bit Off More than They could Chew, *International Herald Tribune,* Tokyo, October 1, 2008, p. 4,. and US Destroyer Watches Coast for Hijacked Ship, *International Herald Tribune*, Tokyo, September 29, 2008, p. 6. The militant pirates of Somalia equate themselves with the coast guards (2008).

[5] P.Paleri, 'Changing Concept of National Security and a Maritime Model for India,' *PhD Thesis* (Chennai: Department of Defence and Strategic Studies, University of Madras, February 2002), p. 167.

[6] The coast guard is a term used in English or other languages in the 'western' sense whereas the eastern block nations of yesteryears preferred to use the term border guards, though in similar sense. This term has more variations with respect to entity-specific applications like police coast guard, maritime security agency, etc. These are based on references. For this study all of them are taken up as coast guards in general sense.

[7] Warfighting forces are often called the military. But in the exact sense, the term 'military' applies to the warfighting forces of the land otherwise known as the army. The constitutions of India and Pakistan uses the term military to refer to the land forces other than the air and naval forces.

[8] Stephen Saunders (Edit), *Jane's Fighting Ships 2007-2008*, Cambridge: Cambridge University Press, 2007.

[9] Ibid.

[10] For the concept of terrain specificity see P Paleri, *National Security: Imperatives and Challenges* (New Delhi: Tata McGraw-Hill Publishing Limited, 2007).

[11] Information is combined from various sources including te CIA Fact Book 2008, Janes Fighting Ships 2007-2008. US Naval Institute publications, and Indian Coast Guard sources, www.wikipedia.org, accessed July 20, 2008.

[12] http://nippon.zaidan.info/seikabutsu/2004/00775/contents/0040.htm#. Weeks, S. B., Capacity Building for Maritime Security: Albania as A Case Study,

[13] Ibid. But according to this study all the roles except 1) Defense readiness, are coast guard functions

[14] http://faolex.fao.org/docs/pdf/alb60863E.pdf; Republic of Albania Assembly, Law on the establishment of the Coast Guard, Nr. 8-8-75, dated 4-4-2002., Establishment of Coast Guard Article 5 (1) (2)(3)and (4), accessed July 21, 2008.

[15] http://www.hicon.pl/~pothkan/hhwn/Albania2.html#CG/, accessed 27 July 08

[16] http://www.coastguard.com.au/home.html, accessed July 20, 2008.

[17] Saudi Coast Guard too Over-stretched to Secure Kingdom's 2,640 km Coastline, www.sawaya.com/story.cfm/sidSAWAYA20060610094340, June 10, 2006, accessed August 29, 2008.

[18] Edwards, J., Taking a Coast Guard Mission to New Heights, www.coastguardnews.com/taking-a-coast-guard-mission-to-new-heights/2007/02/05, and Coast Guard Assumes Job of Protecting Washington Airspace, www.cnn.com, both accessed August 16, 2008.

[19] EU Shelves the Idea of European Coast Guard, Ship Registry, www.eubusiess.com/Transport/119202582 2.25, October 10, 2007 and www.eubusiness/Tranpsort/eu-maritime.policy.qa, October 10, 2007, both accessed August 8, 2008.

[20] In this study the Albanian Navy is considered as a coast guard since there is separate coast guard legislation and the functions are similar to that of a coast guard.

[21] African Nations to Develop Joint Continental Coast Guard, http://findarticles.com, Sea Power, August 2006, accessed September 2, 2008.

[22] West and Central African States to co-operate in sub-regional Coastguard network, www.imo.org, accessed September 2, 2008

[23] www.globalsecurity.org/military/ops/Caspian-guard.htm, June 18, 2005, accessed January 9, 2008.

[24] Ibid.

3

EMERGING TRENDS IN THE THREAT MATRIX—THE MARITIME DOMAIN

3

EMERGING TRENDS IN THE THREAT MATRIX—THE MARITIME DOMAIN

Analysing Threat—Nature and Domain

A threat is a forewarning of impending danger or harm. It is multi-dimensional. It can be invisible or abstract. But still it can be appreciated by careful analysis. There are many methods in analysing threats. The decision to counter the threat will follow the path of the method chosen for analysing the threat. Therefore, the adopted approach will vary from system to system. In a previous research, the author identified a method by which the threats could be perceived clearly for analysing towards decision-making by using the threat matrix cube (TMC).[1] In this analysis a threat is characterised in eight different forms under the presumption that a threat is identifiable within the human system if analysed critically and carefully under any situation. According to research by the author, analysis of threat perception related to various situations can lead to a matrix as a primer for multidimensional threat analysis at macro level. In this case the threats are classified on a three dimensional cube, as follows, as applicable to the target towards which the threat is moving:

1. External
2. Internal
3. Covert
4. Overt
5. Direct
6. Indirect

These characteristics of threats can be shown as 'external and internal; covert and overt; and direct and indirect' (Figure. 3.1) on a cube. The types of threats as per the cube are real and present. The degree may vary with respect to time, and so too the preparedness level. The perceived threat can be brought under any of its eight dimensions under the threat matrix cube. The perception is a variable and a function of time and situation.

Threat perception is not an expression of fear and apprehensions. Wanton fears are not threats in reality. They are apprehensions. A realistic and scientific analysis of the situation is needed to understand the threat and find appropriate solutions. According to the TMC, the threats can be classified for macro-level analysis into eight different types:

(a) Direct-Overt-Internal (DOI)
(b) Direct-Covert-Internal (DCI)
(c) Direct-Overt-External (DOE)

(d) Direct-Covert-External (DCE)
(e) Indirect-Overt-Internal (IOI)
(f) Indirect-Covert-Internal (ICI)
(g) Indirect-Overt-External (IOE)
(h) Indirect-Covert-External (ICE)

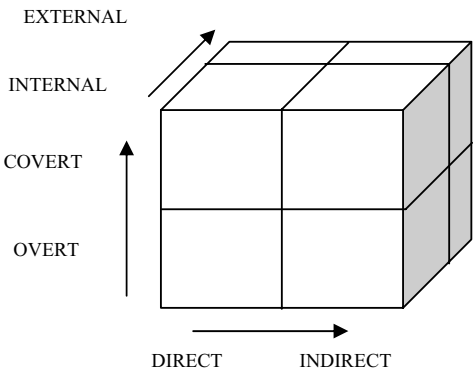

Figure 3.1. Threat Matrix Cube

As mentioned earlier, there are different ways of analysing threats. The perception in each analysis will also vary with respect to the person viewing it depending upon his or her level of decision-making. The TMC is a macro-level prescription for decision-making. Even with the TMC, the threat perceived by the decision-maker is what finally counts in responding or reacting to it. Sometimes threats can also be termed as risks involved. It depends upon the situation. The philosophy of approach changes with respect to situational demands. The TMC can support a maritime force like the coast guard in the preliminary understanding of a threat for situation appreciation to initiate the decision-making process for response and counter-measures. The threat matrix cube is applicable to threats from all perceived sources. Once identified, the threat is to be followed to protect the target either by pre-emption, elimination, or by moving the target from its path.

The next question that is relevant to this study is, '*Where is the threat perceived*?' In other words, '*Which is the terrain?'* This study relates to the ocean. So obviously it has to be in the ocean. But in terms of the individual State or other geostrategic entity, the entire ocean is not within its surveillance or concern. It has a portion of the ocean as identified by the concerns of safety and security in its overall interest. According to the current appreciation, especially since the terrorist attacks in the United States on September 11, 2001, the 'maritime_domain' became a key location in understanding the overall threat perspective. Maritime_domain awareness (MDA) thereby became a key word in combating threat in all forms in the futuristic mode. Maritime domain awareness is about generating information and intelligence about an identified terrain at sea and nearby area for access at any given time and appreciating for action. The formation of the Department of Homeland Security, placing the coast guard under it, subsequent changes that lead to the deepwater policy and layered security arrangement at sea, etc. in the

United Stats lead to the principles of maritime domain awareness.[2] According to this principle, the maritime domain of the United States is defined as,

> '*all areas and things of, on, under, relating to, adjacent to, or bordering on a sea, ocean, or the navigable waterway, including all maritime-related activities, infrastructure, people, cargo and vessels and other conveyances.*'

It is not necessary for other maritime States or geostrategic entities to follow this definition. It may depend upon their maritime policies in force. This study recommends total maritime terrain awareness (MTA) in relation to future is what a maritime entity is required to achieve. The domain awareness could be decided by the concerned entity depending on the scenario. An interesting question here is whether it is necessary even for a geographically disadvantaged or landlocked State to have its own system of MDA? This study will advocate that every identified geostrategic entity in the world should have a MDA programme that could be linked with a global MDA from the point of view of security and safety. To that extent this study also mentioned that every entity in this world has certain affinity to the sea. The MDA for each entity could be arrived at by incorporating parts of the other geophysical terrains—land and air—in the respective maritime terrain to include in the identified domain. Intelligence holds the key in any kind of terrain awareness. To that extent intelligence is not just information but intention derived from information. Such awareness will be of tremendous use to the governments and their enforcement agencies to manage the maritime terrain. For the enforcement agencies the future maritime environment could be uncertain and complicated. But technological edge should overbear on such a predicament

The threat that a coast guard will have to combat is not from the unlawful activities alone. Unlawful activities are those induced by humans in a human system whereas there may be threats that may come from nature and also as collaterals to human actions. The threats could be associated to the perils of the sea or attributable to the hazardous situations that cause distress to human life and property at sea and ashore when driven over the land from the sea. Some such human actions may not be in direct violation of law. A disaster situation that may fall under natural disaster or a collateral disaster by innocently induced human action may fall under such categories. The mission statements of a coast guard stretch accordingly.

One of the ways to analyse the emerging threats at sea or from the sea is by examining the role profiles of the coast guards around the world. It could be seen from the duties and functions assigned to them as analysed in the previous chapter. They are examined in the succeeding paragraphs with the naturally considered earliest unlawful activities before exploring other threats. The threats are explained as 'at sea' or 'from the sea.' In the case of the threat at sea the effect is experienced at sea. The origin of the threat could be external to it also. In the case of the threat from the sea the effect is external to the sea but the sea is central to its origin or passage.

The world coast guards are designed for enforcement of national and international legislation and providing service to humanity, especially the maritime community, as a whole. They perform various functions within these two specific duties depending upon their capabilities, mission statements, and national requirements by design and empowerment in an entity specific manner. The assimilated role of a coast guard

identified in this study according to their functions, summarised and reproduced from the previous chapter are:

- Enforcement of various laws in force,
- Ensuring marine safety,
- Search, rescue and protection of life and property in distress at sea,
- Protection and preservation of marine environment,
- Prevention and control of marine pollution,
- Ocean research for bettering conditions of life,
- Developing ocean awareness in the community,
- Ensuring community participation in maritime affairs,
- Maritime disaster management,
- Ocean peace keeping in the areas of conflict,
- Ocean conflict resolution,
- Supporting confidence building measures (CBM) at sea,
- Extending humanitarian assistance,
- Preempting threats at sea or from the sea,
- Ensuring supply chain movement and continuity at sea,
- Ensuring the sovereignty and territorial integrity of the entity at all times.

All these functions are very varied with threats looming over them at all times. Appreciation of these threats according to their nature is important for carrying out the functions under its charter. The threats may appear in varied forms according to the threat matrix cube. Response to them also will depend upon the design parameters of the maritime forces of each entity as identified geostrategically. While there is close symmetry in the nature of duties of the world coast guards, the asymmetry is in the nature of their functions and the mode of execution. For example a tropical coast guard may not be involved in ice patrol or ice breaking to ensure marine safety. Again a coast guard will not be responsible functionally in the maintenance and upkeep of navigational aids in a country where there is another agency for it but certainly will be concerned about the overall maritime safety and may work coordinating the efforts with the concerned agencies. The functions of a coast guard are not mutually exclusive because threats never come in an inclusively packaged form. Its impact is everywhere. Therefore the threats to each of these functions could have their reflections elsewhere in other functions too. The threats could be analysed from the past and their characteristics in the current state. To understand the future, it is important to view them with respect to their evolution in time and also the threat matrix cube. The threat matrix cube comes handy while examining decision-making models to counter the threats.

In the world maritime scenario the entire ocean along with its long coastline and facilities thereon is a threat cauldron if seen only from the threat perspective. Every port, coastline and point at sea is a convenient location for the import or export of threat in its varied forms. Locations shift based on surveillance with respect to unlawful acts. However the basic locations from where thereat in the form of unlawful activities can emanate are the disputed territories, transit points, uninhabited or isolated island territories, coastal areas, insurgent territories, militant sanctuaries, traffic points, piracy centres, coastal and island havens, identified landing and shipping points other than harbours and ports, harbours and ports lacking in surveillance and monitoring, etc.

Natural disasters, etc., will occur in recorded areas along the identified fault lines in the ocean. Perils of the sea could be based on seasonal variations and also the marine safety regulations followed. The threats are not from unlawful activities alone. They can be perceived from various parameters. The parameters that are chosen for this study to understand the threats and the emerging trends are:

1. Threats as unlawful activities viewed within the function of law enforcement,
2. Threats associated with the 'perils of the sea,'
3. Threats associated with natural disasters,
4. Threats to the ocean from land and air,
5. Threats as transnational diseases,
6. Evolving threats of the future.

The parameters identified here are only for classification of threats for the purpose of this study to understand their nature in their clear perspective for further study and analysis. Threats normally do not stand alone. They are often compounded and collateral to some other activity. That is why preemption is one of the major considerations in combating threat. The threats are not mutually exclusive within the chosen parameters. They are interactive within each parameter and also between them. For example there could be damages to environment under intentional or accidental violation of law, peril of the sea, natural disasters, land and air based threats, etc.

www.en.wikipedia.org/wiki/Image:A44.jpg

Figure 3.2 Threat could Breach any Point along a Coastline not under Surveillance

Threats Viewed under the Function of Law Enforcement

The functions of law enforcement originate from the duty of a coast guard to enforce the national laws including those under international obligations in the appropriate maritime zones of a nation. Here it is important to understand that law

enforcement is against unlawful activities. An activity becomes unlawful only if that activity is prohibited under a valid enacted law. Legislation is the cornerstone of law enforcement. Even within the legislation, the question '*What is unlawful*?' can pose divided attentions from the legal circles. There could be a blur in the legal vision if not clarified under international and internal laws of a country. That will have an impact on the enforcement capability of the country. The unlawful activities, therefore, have to be seen within this perspective. They are far too many.

There are many known unlawful activities that can be identified at and from the sea. Drawing a chronological hierarchy of these threats is not easy. They are also evolving in different outfits and modes. They are examined in the succeeding paragraphs with a view to understand their emerging trends. The trends regarding other emerging threats that are not visible today are also examined subsequently.

- **Crime at Sea**

'Crime at sea' is an entirely different unlawful activity by definition and a serious threat to the maritime community including to those out at sea either in vessels or fixed platforms. It is a crime committed by individual humans or small groups within a ship at sea according to the maritime law. It should have been there at sea since the beginning of ocean transportation commercially or otherwise. Such crimes come within the regulations of the good order and discipline of the ship and the national laws associated with it. But the activities and associated laws could be quite ambiguous at times. The master of the ship is normally the authority for handling such crimes and informing the authorities ashore. But there could be crimes committed by the master too individually or jointly with the connivance of ships' crews or agents. The threat of crimes at sea is a national subject in most of the cases where foreign nationals may also be involved. Though related to ships in maritime law, in this study, it is also extended to the crimes committed on other vessels, fixed platforms including artificial islands at sea, etc. by the personnel within. A crime by forced entry or unauthorised entry is an act of piracy or armed robbery depending upon the location as already mentioned. The vessels besides the crew may also comprise of passengers, visitors and other personnel in ports.

There is no record of the first ever 'crime at sea.' Crime at sea could be anything that will deviate a vessel or a fixed platform from its orderly conduct. Considering that crime at sea is an exclusive unlawful activity related to the crimes inside a vessel or fixed platforms, other unlawful activities are not brought under the category of crime at sea from the point of view of threat perception. They are unlawful activities other than 'crimes at sea.' Crime at sea is one of the unlawful activities committed at sea. Crime at sea affects a person or persons on board, a material or the platform itself. The platform could be moving or fixed. The moving platform could be a merchant ship or other vessels. The term is not applicable when the unlawful activity is committed outside the platform or against it externally, unless it is in relation to the ships activity as maritime fraud, etc. Crime at sea as one of the unlawful activities in the maritime dimension includes many crimes; some of them could even turn out to be violent. The list of crimes

under the law can be very exhaustive. A crime is committed when the criminal law of a country is broken or violated. Hence it needs legal clarification under the concerned law. The crime at sea is normally handled under domestic law. It has much to do with the human element at sea. The human element is a much talked about subject in IMO and other various maritime organisations and forums. The attitudinal compatibility of an individual to bear the stress and strain of the seagoing assignment has a lot to do with the probability of crime at sea. There were incidents when deranged crews had set fire to ships, held the master as hostage, or even committed murder and sexual assaults on the unsuspecting colleagues or visitors on board. Sexual assaults become more serious when women are being employed at sea. In a study carried out by the author, crime at sea is defined as,

> '*an unlawful activity leading to a crime on board a vessel or a platform other than vessel at sea, against the good order and discipline of the entity or in relation to its purpose or business by those who are associated with such entity.*[3] '

The term thereby extends to all the entities at sea and differentiates other unlawful activities leading to crime outside the niche, but within the maritime dimension.

A crime at sea is normally committed by:

- The crews other than the master, passengers or others embarked,
- The master,
- Those on board, jointly or partially together,
- Those on board in connivance with those external to it but associated with it,
- The entity with a public impact, where the entity is a ship, other vessel or a fixed platform.

Every perceivable crime can occur at sea. The entity too can commit a crime related to fraud including barratry, support to piracy as informers, militant support and subversion, smuggling and trafficking by the crews and others on board, environmental law violations, etc., are examples. Crimes can occur unexpectedly or in a premeditated manner at sea. Murder at sea is the worst. There are many cases of the master, other crew member, passenger or visitor on board getting killed. In most of the cases the body gets disposed off at sea. Though not publicised much for the fear of losing business, passengers of cruise vessels allegedly become victims of crime at sea very often. They get sexually assaulted by crew members or other passengers, robbed of valuables or even get killed in altercations. Some times the victims are the crews themselves, especially women. Reports of crime at sea on board cruise lines are allegedly kept under cover as adverse publicity may affect the industry. For some coast guards protection of cruise liners is an assigned task. The International Council of Cruise Lines (ICCL) has extensive guidelines for reporting sexual assaults and other crimes at sea while on board. That will help calling in the appropriate law enforcement agency deepening on the port of call of the vessel. But many victims remain silent to avoid publicity and going through investigations. But in the long run they get traumatic and spill the beans. It also shows there may be many fly by

night operators engaged in the cruise industry who may not take care of the security concerns of the passengers. Millions traverse the seas every year. They may not have sufficient protection once they leave the shores of their own country. Anything could happen on board a ship considering the situations and conditions under which it operates. The question of legal rights too comes up for the victim. It gets complicated depending upon the port they are in. The ports the cruise liners may visit could be termed exotic, but the legal systems there may be quite chaotic and confusing for the victim of a crime at sea. The law may not be forthcoming to protect the rights of the victim. It could be equally worse for the accused who may languish in custody for years without trial or under prolonged court procedures. Jurisdictional issues could also complicate the problem. Shipboard security and compliance with environmental regulations will call for tougher regulations. It will require uniform standards for reporting and prosecuting crime at sea by national governments. There are strong viewpoints on information release on crime at sea. Considering that crimes at sea can cause decline in the goodwill of shipping industry, and shipping and maritime affairs are seen and judged in the public domain in the advancing world, public disclosure of crimes is very essential. It is important that right to information is made applicable to vessels and platforms at sea. The companies need to be more aggressive in crime prevention with supporting government regimes. In all these situations the victim's case becomes more and more agonising. It is worse for the victims and their families involved in premeditated crimes at sea. This could be eliminated only when the rule of law is apparent at sea on board seagoing vessels and other platforms.

www.cruisecritic.com/articles.cfm?ID=240

Figure 3.3 A Pleasure Trip could Turnout to be a Night Mare if Law Doesn't Prevail and Passengers do not Follow the ICCL and National Advisories

- **Piracy**

Piracy existed since vessels plied on water. Piracy began as robbery, plundering, and pillage collectively in organised groups at sea or in its neighbourhood. The early pirates raided the coasts and villages from the sea. Some of them went even far interior through rivers and estuaries. The form and methods changed when they achieved mobility further into the sea. In course of time the pirates restricted their activities to the sea blockading the ships that crossed across. Pirates do not raid coastal towns any more though there are reported cross border thefts and robbery in the littorals separated by straits and channels. Today's pirates use the coastlines more as hideouts, contact points and forward planning centres. Though piracy as an activity had its ups and downs, no government has ever been able to eliminate it totally. Indications are that, in all probability, piracy will float into the future. The approach and modalities may undergo change. Maritime piracy has taken many human lives. It has rattled marine insurance companies. Piracy has been a thriving business with attractive returns to the perpetrators. The most dangerous situation will be when pirates, the masters of the ocean skills take to militancy, or are recruited for it. Is it already happening? Opinions vary. The maritime community seemingly has accepted piracy as a threat that will continue. It is obvious from various international agreements that take considerable time to mature, the acts of fraud claimers, the rising insurance premium in select areas and even State apathy in containing it if not sponsoring it as seen in the previous centuries. The pirates are experts in their job and are conscious and determined about the ocean, or whose survivability in the rugged ocean climate is better facilitated by adaptation and grit. The pirates existed in all forms and shapes in the modern world. There are poverty stricken petty thieves and anchorage muggers in almost every navigable port of the countries whose security forces are weak and lax in their duties. There are also pirates of the high seas who are better organised. Some of them operate under powerful and organised syndicates with formal orders. They have the no holds barred attitude for violence against their victims. It is probably driven by the nature of the business that has to be executed running against time besides the mindset of the perpetrators lacking in human concern. They can go to the extremes in executing their mission to hijack a ship and its cargo and then run it as a phantom ship. For the surviving victims of piracy the encounter will cause life long trauma. Modern pirates are also transforming as militant pirates whose main theme is fund collection for their masters elsewhere. Piracy in Somalia and Niger Delta revolves around this theme. Under the new garb, piracy is extending its tentacles in many parts of the world as an organised criminal business in its localised form. African continent is witnessing new types of piracies. While Somalia with its clannish militia finds piracy as a major source of finance under extreme lawlessness,[4] the pirates of the oil rich Niger Delta has reinvented themselves as stakeholders of big game money according to media reports.[5] There were incidents of kidnapping for ransom as well as attacks on even the Nigerian Navy. They also found easier means of income in the weaker section of the

population of the Delta—the fishers. The fishers sleeping after streaming their nets down expecting a good catch by morning are woken up in the dead of the night by machine gun fire from the pirates who board them. Often they get shot and die. The pirates take away everything. Pirate attacks on offshore oil installations and kidnappings continue (2008). The European Command of the United States, it is understood, has plans for activating the Gulf of Guinea Guard to patrol the area.[6] The Central and Western African States are also planning a joint continental coast guard.[7] But the greatest burden of lawlessness percolates to those in the lower rung, in this case the fishers of Niger Delta. There were 107 cases in 2007 according to the Nigerian trawler owner's association. The raids are increasing.

The International Maritime Bureau (IMB) reports Nigeria, Indonesia, Tanzania, India and Bangladesh as high risk areas in their incident map of 2008. In addition there are also reports of piracy from the Caribbean Sea, South China Sea and South American ports.[8] Reports of IMB highlight an upsurge in piracy activities in the Gulf of Aden (2008). The reports include attempted and actual boarding. The range of incidents varies from simple theft to serious kidnappings for ransom. According to IMB every such incident is an act of piracy as per its definition. Whereas the incidents of piracy that occurs in the territorial waters of a State have been treated as armed robbery under an IMO statement. Piracy is of different types and forms. It also has localised characteristics. The act of piracy has changed its character with the passage of time causing more problems in understanding it in its clear perspective. This affects standard measures of suppression. Each area may need different approaches with respect to the nature of piracy to contain and suppress it.

US Navy Photograph. www.en.wikipedia.org/wiki/Image:060121-N-5358A-008.jpg

Figure 3. 4 Suspected Pirates of Malacca Strait after and Aborted Attempt

For a more specific understanding the act of piracy has to be examined nationally (domestically) and worldwide (internationally). In most of the cases international and domestic laws need not be in agreement on matters related to piracy at sea. In the international scenario piracy is related to international law to which a large number of States subscribe. Understanding piracy becomes difficult under such situations. Acts of terrorism makes the situation more complicated under the law. While a terrorist attack is aimed at political or religious reasons as the end result, piracy in its original terms is aimed at economic gains to individuals or organised groups. The hybrid status of the perpetrators makes situation complicated. But the requirement here is the free and safe movement of traffic at sea and providing security to the seafarers. The definition of piracy matters a lot in finding a solution to it legally.

Though piracy is perhaps the most ancient unlawful activity within the maritime dimension, until 1958 there was no internationally accepted definition for piracy.[9] The Geneva Convention on the High Seas (1958) defined piracy as,

> '*consisting of illegal acts of violence, detention or depredation committed for private ends by the crew or passengers of a private ship or aircraft against another ship or aircraft (or the persons or property on board) on or over the high seas or any other place outside the territorial jurisdiction*.'

In this case the act involves voluntary participation in the operation of a ship or aircraft used or intended for use to commit any such act or acts of inciting or intentionally facilitating any such acts.[10] There may be difficulties in interpretation. The basic fact is that piracy, like in the case of war criminals, falls under the category of extraordinary State jurisdiction under international[11] law. If such acts were covered under the municipal law of a State they would amount to international tort for which the State would be responsible to the home state of the ship or aircraft on nationals thus injured.[12] Hence it has to be extraordinary jurisdiction over the pirates under international law. There is an estoppel here. The estoppel enables others to extend their jurisdiction to ships other than those sailing under their own flags as well as foreign aircraft and initiate criminal proceedings against the pirates.[13]

The more recent and wholesome definition that is taken as the standard world over for defining piracy is in the Article 101 of UNCLOS. The article defines piracy consisting of any of the following acts:

> *(a) any illegal acts of violence or detention, or any act of depredation, committed for private ends by the crew or the passengers of a private ship or a private aircraft, and directed:*
>
> *(i) on the high seas, against another ship or aircraft; or against persons or property on board such ship or aircraft;*
>
> *(ii) against a ship, aircraft, persons or property in a place outside the jurisdiction of any State;*
>
> *(b) any act of voluntary participation in the operation of a ship or of an aircraft with knowledge of facts making it a pirate ship or aircraft;*

(c) any act of inciting or of intentionally facilitating as act described in sub-paragraph (a) or (b).[14]

Piracy definition undergoes change under varying situations governing the organisational philosophies. The International Maritime Bureau, which is a responsible agency in matters related to maritime fraud among others under the international Chamber of Commerce (ICC), defines piracy as,

'an act of boarding any vessel with the intent to commit theft or any other crime and with the intent or capability of using force in furtherance of that act.'

This definition includes attacks against ships in the jurisdictional waters of a State as an act of piracy. The attack could be from the shore too when the ship is berthed or anchored in a port. Petty thefts are excluded from the definition unless the thieves are armed.[15] This definition is important from the point of view of the nature of the functions of the International Maritime Bureau in piracy reporting with a view to suppress it as an unlawful act leading to maritime fraud.

International Maritime Organisation (IMO) defines piracy within the ambit of the article 101 of UNCLOS. But also mentions about armed robbery against ships. The Code of Practice of the International Maritime Organisation for the Investigations of Crime and Piracy and Armed Robbery against Ships, States,

'*armed robbery against ships means any unlawful acts of violence or detention or any act of depredation, or threat thereof, other than an act of 'piracy,' directed against a ship or against persons or property on board such a ship, within a State's jurisdiction over such offences.*[16]'

In other words, armed robbery is 'piracy' in the jurisdictional waters of a State which could be easily handled under domestic law as per IMO Code of Practice.

The naval law considers pirates as the enemies of the State since beginning. The Indian Navy's Regulations, Part I (1985 revised in 1990) states,

'*if any armed vessel, not having commission as a warship from a recognised government, whether de facto or de jure, should commit piratical acts and outrages against the vessels or goods of India's citizens or the subjects of any other foreign power in amity with India, and if credible information should be received thereof, such armed vessel shall be seized and detained by any of Indian naval ships falling in with her, and sent to the nearest Indian port where there is a court of competent jurisdiction for the trial of offences committed on the high seas, together with the necessary witnesses to prove the act or acts and with her master and crew in safe custody, in order that they may be dealt with according to law.*[17]'

In the Piracy Act, 2001 of Sri Lanka, notified on August 10, 2001, piracy is termed as an offence under Part II, Section 3. It states, a*ny person who dishonestly takes or appropriates any ship, by means of theft, force, intimidation, deception, fraud or by other similar means, shall be guilty of the offence of piracy*

and shall on conviction be punished subject to the provisions of Sections 8, 9, and 10 of this Act with imprisonment of with description for a term not less than five years and not exceeding ten years and shall also be liable to a fine not less than one million rupees and not exceeding ten million rupees or of an amount equal to the value of the ship in respect of which the offence is committed, whichever is the greater.

Piracy comes in various forms. Precise classification of piracy, therefore, is not possible since the trend changes with respect to the scenario, situation and location. But in general, piracy could be classified according to their nature as:

- Marine theft, which is boarding and stealing from a vessel while moving or stationary without being noticed by the crews on board. The crew may come to know subsequently.
- Marine mugging, in which the pirates take away things from the vessel by threatening the crews. It is just a hold up and lasts for a short period. Normally no harm is done to the crews or passengers unless resisted.
- Cargo hijacking, which is a more serious activity than plain mugging. The cargo of the ship is hijacked either at sea or at a safe location. The ship will be sold or abandoned. The crew will have to leave the ship. They could also get brutally murdered.
- Vessel hijacking that often turns violent. Hijackers deal with the crew and passengers mercilessly. The pirates may even execute the crew. The entire vessel is hijacked for phantom operations under different names.
- Captive hijacking, which is a new phenomena seen along the African coasts especially along Somalia and Niger Delta. In this case the vessel and the crew are hijacked and kept in captive custody for ransom that otherwise serves as protection money. The vessel with the crew will be released on payment of ransom and can continue operating in the same area thereafter, sometimes under protection. This kind of piracy is frequent along the coastal areas of nations in the absence of a strong and recognised government or law enforcement forces. Often the crews and the vessels are safe as long as the ransom is paid. In many cases this kind of piracy will set the stage for the entry of maritime terrorism as a reality in the jacket of maritime piracy.
- Militant piracy, which is the trend in the changing face of piracy where piratical attacks are aimed at (alleged or proven) fund raising for militant activism, especially when the nations are cooperating to curtail the fund flow to terror through contributions, narcotic trade, arms trafficking and other means including direct investments. In this case the pirates hijack the vessel along with crews, and release on payment of ransom. The crew is normally unhurt and the vessel with cargo is returned. The pirates, as the projections show are probably operating under continuous flow of intelligence about the ships movements, nature of cargo, ransom opportunity, etc. Their attacks are not under chance as it is for normal piracy. However for casual observers it may look as piracy without much violence.

Photo: Courtesy, Indian Coast Guard

Figure 3. 5 Hijacked Merchant Vessel *Alondra Rainbow* After Boarded by Indian Coast Guard. The Pirates Changed the Name and Place of Registry after Hijacking the Vessel

There are many instances around the world where people board unmanned vessels under tow without the knowledge of the towing vessel and rob properties from them. Can it be called piracy or armed robbery as per the current definitions and interpretations? All these make it difficult to bring piracy and armed robbery at sea against ships within a universally acceptable definition and also to set accountability to a particular security agency to contain it. But it can be done only by prudent situational judgements. The location where the act took place is important to assess jurisdiction. A coastal State's jurisdiction is within the internal waters and ports, territorial waters, archipelagic waters and parts of straits used for international navigation that are within the territorial sea. Therefore piracy or armed robbery, as per the definitions, within the jurisdictional waters is to be handled in accordance with the national laws. The coastal State also has the power to pursue the perpetrators of crime by hot pursuit outside these areas.

It can be seen that under the international law an act to be called as piracy will require the following elements:

1. Illegal acts of violence or detention.
2. Committed for private ends.
3. By the crew or passenger of a ship or aircraft.
4. Against another ship or aircraft or against persons or property on board the other ship or aircraft.
5. On the high seas including the EEZ beyond territorial sea.

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「海賊待て」夜通
証拠隠しに放火、沈没図る
船影映る
40人以上が関与
ア号にも内通者?
現場発
攻撃許可
マハジャン司令官会見

Photo: Courtesy, Indian Coast Guard

Figure 3. 6 News about the Recapture of the Japanese Vessel *Alondra Rainbow* in Japanese Media

Establishing these aspects is important under international law in the judicial procedures for combating piracy. But there are more to piracy than what meets the eye if visualised in a futuristic perspective:

(a) The chances of piracy graduating into full blown maritime terrorism or in support to maritime terrorism.
(b) Likely spots of piracy in the future and causes and nature of such piracy.
(c) Threat of piracy to new shipping routes, like the Northern Sea Route, that are being envisaged.

The chances of piracy increasing in the world and its involvements in graduated unlawful activities like maritime terrorism are high considering its flow pattern since the earliest days. It is already happening. There are other forms of piracy in the modern day with sea as a base. Illegal broadcasting as part of information warfare, subversive propaganda and psychological operations are also known as piratical activities. They can be termed as piracy of the airways over the sea when conducted from vessels or platforms at sea. They are part of intelligence activities in most of the cases.

- **Smuggling and Trafficking**

Smuggling by sea is another endeavour rooted in violations of law that had its beginnings very early in history. Smugglers used the seas to transport their wares hoodwinking the customs and border authorities raking in huge profit. In the early days there were also vigilante actions against smugglers. They smuggled under cover of darkness and used the shore profiles to hide the goods and take them out when necessary. They do it even today, especially in the uninhabited islands or sparsely populated coastlines. The Indian Coast Guard has unearthed contraband including drugs hidden by smugglers in this manner. Corruption within the authorities too helped them to move freely. Surveillance at sea was often found wanting. Mostly they were successful. Initially goods moved freely across borders. Smuggling became an offence when the movement of designated goods was restricted by law. Nations imposed duties, levies, taxes, and other restrictions on such goods. The basic objective was to raise money to meet the military expenditures caused by many wars in the early days. Governments needed money to wage wars. Along with such restrictions smuggling flourished. The commodities were decided by demand. People too were in demand as a commodity. People were smuggled under the driving force of poverty or the need to escape the law and the local governments. People smuggling became lucrative when the emigration and immigration laws were toughened. Thus smuggling became an unlawful activity by evasion of customs and immigration laws and the sea became the most preferred route and sometime the only choice. The sea provided the required cover and safety except that it took time and was risky and perilous. But with modified techniques of survival, smuggling became a very lucrative transnational unlawful activity for the free movement of commodities in demand, including people. The activity netted huge profit to its perpetrators. Though human smuggling still continues, other commodities have undergone

many changes by demand fluctuations and profit margin. Demand and price variation determines the choice of a commodity for smuggling from one place to another. The sea will continue to remain the favoured terrain for the nefarious operators in the smuggling trade.

www.en.wikipedia.org/wiki/Image:Hudiakov_Smugglers.jpg

Figure 3. 7 A Skirmish between Smugglers from Finland at the Russian Border—Reproduction of a Painting (1853)

Maritime smuggling saw its height in the 18th century Europe, especially in England when unlawful trade grew at a prodigious rate. The steamships were yet to arrive on the scene. The business of smuggling was driven by a huge network in the supply and delivery chain. It included procurement, concealed storage, transportation to the destination, concealed storage at destination, further transportation and delivery to the customer. It had all the ingredients of a global business system with beneficiaries all along the chain. Initially smuggling was a disorganised trade. Soon it became a well organised unlawful activity. Smuggling along its growth induced many other unlawful activities—currency transfer, money laundering, illegal business ventures, bootlegging, hazardous waste transfer, etc. The list of contrabands changed and expanded in course of time.[18] Soon it included people also. For their illegal business, the smugglers need a well organised supply chain. The entire group of people involved in this supply chain can be brought under the term 'smugglers.' But it was the transporters who were mostly known as smugglers. Many communities lived and thrived on smuggling. Because of that the smugglers had ample local support. This social behaviour continues even today; hence it is difficult to get information from the locals on the

smuggling routes. Smuggling affects the economy of the State. Parallel economy thrives under such situation. In most part of the world creation of the coast guards where necessitated by such situations. India is an example. England started the water guard as early as 1809 to counter smuggling.

In the early history, empires and kingdoms supported smuggling of gold to support their currencies by discounting and laundering money abroad. Napoleons memoires mentions about smuggling of gold from England to France.[19] The psychology and practice of official bankrolling for smuggling continues today in areas where commodities are in great demand—it extends to insurgents, clandestine religious and cult organisations, industries, and many other agencies. Terrorist and fundamentalist activities across the world virtually thrive on smuggling and smugglers who clandestinely manage the supply chains. Offshore investments anonymously shed income from such activities in many other ventures abroad. It is an aggregate financial chain with greed unlimited.

Smugglers have many methods under their sleeve to hoodwink the law enforcement agencies, besides, in some cases, political supports, especially when smuggling is undertaken for political requirements. Most of the enforcement activities were land based. That is another reason why smuggling thrived at sea. Smugglers made full use of the ocean passages. They used vessels that could outmanoeuvre the enforcement vessels. They had better communication. Most of their vessels were purpose built. They even advanced in using sea planes and submersibles for transportation. They were professional seamen who could withstand the vagaries of the seas. While violence was limited unlike in piracy, there was graduated violence when the smugglers were resisted.

The economics of smuggling drives the entire unlawful business.[20] The contraband will depend upon economics. It will range from a simple consumer commodity to arts and antiques of high value.

Human smuggling was later addition. The earliest known case of human smuggling was at the time of the French revolutionary wars (1792-1803). There were great demands from the fugitive royalties to smuggle them out. They paid heavy amounts to the smugglers to take them to England. The flow reversed during the Napoleonic wars (1804-1815) when the French prisoners in England escaped and smuggled out to France. Human smugglers are in great demand under situations when people flee areas of persecution, conflict zones or the long arm of law. Well organised human smuggling syndicates are operating around the world. Many people from troubled areas also use the situation as opportunistic asylum seekers in more developed countries. Mostly the syndicates of organised human smugglers use the sea route. The inherent dynamics of human smuggling is very complicated.

For many governments, suppressing smuggling has been a prime objective because of parallel economy and illegal fund flow. But smuggling could not be eradicated from the world. The coast guards and similar agencies were found effective in suppressing smuggling to some extend. But smuggling not only continued but added an alternate branch with an entirely different supply chain to its unlawful activities—traffic. Though smuggling and trafficking are two terms used in a kind of joint parlance, the difference is basically in the commodity they

handle in relation to the laws that govern their movement. Smuggling originated when items were taxed for movement across borders. Smuggling means moving commodities including people across borders in violation to the laws that prohibits passage of such items conditionally. Whereas traffic is the recent inclusion of a term for moving commodities including people that are banned or totally prohibited across the border. Trafficking is smuggling with a difference. Or it could be taken as an entirely different unlawful activity. It is still evolving as an unlawful activity. It is a matter of law enforcement perception. The items of traffic are arms and ammunition; narcotic drugs and psychotropic substances; notified flora and fauna; nuclear, biological and chemical warfare materials; dual use technology substances; hazardous and toxic substances; nuclear materials and equipment; antiques and heritage items; genetic research products; legal and counterfeit currency; human organs and banned pharmaceutical products; … the list is long. The traffickers violate the official ban by governments on the item. And of course there are also people who are trafficked. The difference here is that whereas people may not be banned in another country in all the cases, the purpose for and mode by which they are moved could be clandestine. And thereby trafficking becomes a more adventurous and lucrative activity within the realm of smuggling or outside it. It depends upon how the governments and their law enforcement agencies handle the cases. Trafficking is a matter of very serious concern. It can jeopardise global security measures and also induce serious trauma to people. Trafficking supports nuclear proliferation, insurgency, militant activism, sex trade, slavery and menial labour, organ sale and transplant, etc. The ocean provides a favourable terrain for trafficking under stealth. And thereby, smuggling and trafficking thrive in the global illicit market by the sheer demand for the commodity.

In a global situation with States disintegrating, there could be more of unequal distribution of resources including clandestine and forbidden resources besides economic upheavals. Such situations cause anarchy in supply and demand of what is considered a necessity by States. This will promote movements of commodities by smuggling or its modified form of trafficking. It depends on situation, though. Fall of the Soviet Union in 1991 caused a tidal wave of smuggling and trafficking. The commodities included people, especially women and children for sex trade; nuclear, biological and chemical warfare materials and equipment; arms and ammunition; and narcotic drugs and psychotropic substances among many others. Many syndicates have flourished under this trade and now have their tentacles in areas like fisheries poaching and export, and other fields. It has been reported that the Russian attack[21] on Georgia subsequent to unrest in Abkhazia and South Ossetia in August 2008, will open more such transnational crimes of smuggling and trafficking in counterfeit US dollars and other currencies in demand, armaments and other commodities.[22] In that case a good amount will move through the sea.

www.mmjp.or.jp/amlang.atc/worldnow/00/sep/08.htm

Figure 3. 8 A Mini Submarine under Construction in the Suburbs of Bogota after Confiscation by Colombian Police. Suspected to be used as a Narcosub

Smuggling and trafficking by sea is normally carried out by vessels and in some cases sea planes. There are also reports in the past of using submersibles for drug traffic. On July 17, 2008 the Mexican authorities reported of apprehending a mini-submarine loaded with cocaine with four Colombian nationals on board off its southern coast.[23] More such submarines were seized by the authorities in the past since 2005. But the seizure of July 17 was the first off the coast of Mexico. It was packed with 5.8 tons of cocaine.[24] The crew members of the submarine said they were fishermen who were forced to execute the operation under threat.[25] It was also strongly suspected that the Russian and Colombian gangsters were in collusion for introducing submarines in drug trafficking since they were not easy to detect at sea by radars and other surveillance systems including submarine tracking sonar. The vessels were small and normally resort to snorting on the surface with the main hull underwater but not deep enough for detection unless side-scan sonar was used. A 100 foot partially built submarine was confiscated by the Colombian police on September 7, 2000 at Bogota, Colombia far away from the sea. It was suspected to have been built for the drug cartels of Colombia by Russian underground syndicates.[26]

- **Poaching the Sea**

Poaching is illegal hunting. In maritime terminology it has been used in relation to illegal harvesting of the living resources of the ocean, and damaging or destroying them. The word could be extended to more unlawful activities at sea. Poaching for fisheries resources has been a serious issue. It has raised considerable concern among the international community because of the conflicts at sea, economic issues, territorial disputes and resource depletion affecting the sustainability of marine environment. Poaching is also used as a cover for espionage, illegal sales and trafficking. It causes conflicts in international relations. The world of fisheries is full of disputes and conflicts. Fisheries are dynamic resources with seasonal migratory patterns. Fishers often breach the boundaries at sea. This is more so in the areas where the borders are disputed or where traditionally fisheries were going on. Fishers in their traditional role as well as driven by economic needs do not recognise borders in the sea. This causes conflicts. Poaching damages marine flora and fauna. The scenario of fishing has changed by technology, communication and transportation—which literally means that a fish caught in Barents Sea could be made available on a dining table in Antarctica if there is a demand. It could also be a 'poached one,' in legal terms. Such advancements in supply chain management also increase threat to fisheries resources from poaching.

Poachers often take advantage of corruption in the system and loopholes in the law. The government of India had often amended its national fisheries laws because of novel ideas of the fisheries poachers. Even then it has to succumb to ingenuity of the unlawful activists when the fisheries companies from abroad, who otherwise used to poach, sold their vessels to Indian entrepreneurs who colluded with them for keeping the vessels as (fake) owners flying Indian flags for a consideration. Actually money changed hands only from the foreign vessel owners to Indian surrogate 'buyer.' After a certain period the fake owners would report the vessels 'missing' or 'absconding' and lodge complaints. The deal in paper seemed legitimate under the law. The Indian Coast Guard has been able to bring it to the notice of the government who understood the game plan and subsequently changed the law.

A new term evolved under the premises of fisheries poaching is illegal, unregulated, unreported (IUU) fishing. The Food and Agricultural Organisation (FAO) considers IUU fishing a significant threat to the marine ecosystems worldwide. The practice if not controlled can wipe out the world fisheries from the Arctic to the Southern Ocean, all around, in course of time according to the FAO. Under the term IUU fishing,

Illegal fishing refers to,

> *'activities conducted by national or foreign vessels in waters under the jurisdiction of a State, without the permission of that State, or in contravention of its laws and regulations; conducted by vessels flying the flag of States that are parties to a relevant regional fisheries management organisation but operate in contravention of the conservation and management measures adopted by that*

organisation and by which the States are bound, or relevant provisions of the applicable international law; or in violation of national laws or international obligations, including those undertaken by cooperating States to a relevant regional fisheries management organisation.'

Unreported fishing refers to,

'*fishing activities which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations, or undertaken in the area of competence of a relevant regional fisheries management organisation which have not been reported or have been misreported, in contravention of the reporting procedures of that organisation.*

And, unregulated fishing refers to,

'*fishing activities in the area of application of a relevant regional fisheries management organisation that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organisation, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organisation; or in areas or for fish stocks in relation to which there no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.'*

Poaching on living resources of the ocean in an illegal, unregulated and unreported manner as declared by the FAO can not only overexploit them and endanger marine environment, but also extend human driven consequences to alter the world climate. The oceans are in dire straits today by such activities that run primarily on corruption and overall greed. There are records that state that poaching fuelled by corrupt practices has decimated various stocks of fish in the ocean. The dwindling stock of tuna worldwide is a typical example.[27] The much needed transparency in fisheries inputs and exports is lacking among the nations of the world. This promotes poaching and exporting the catch as a lucrative transnational unlawful business.

Fisheries and other poaching across borders can be a serious threat even where there are marked boundaries and bilateral cooperation. An example is the Indo-Sri Lanka border in Palk Bay. While the border is well demarcated the fishers, especially from the Indian side poach across the international boundary line in Sri Lankan waters as they have been doing traditionally in the past for many generations. Often they get caught in the ongoing conflict in Sri Lanka between the separatist forces of the Liberation Tigers of Tamil Eelam (LTTE) and the Sri Lankan security forces. Indian fishers who trespass the waters may get shot either by the LTTE or the vigilant forces of the Sri Lankan Navy causing serious political issues in the neighbouring state of Tamil Nadu in India. Often the people want Indian security forces to protect the fishers. That actually means

protecting those who go across the boundary line.[28] Such social problems culminate in embarrassing political situations.

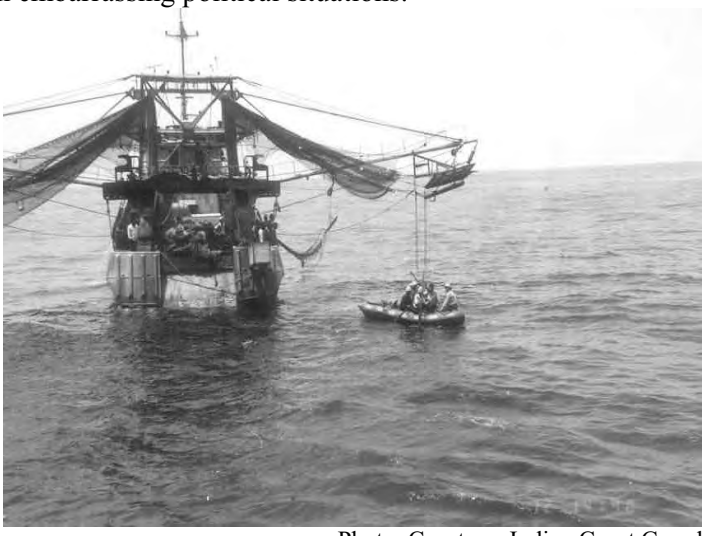

Photo: Courtesy, Indian Coast Guard

Figure 3. 9 Indian Coast Guard Inspecting a Fishing Vessel

Photo: Courtesy, Indian Coast Guard

Figure 3. 10 Indian Coast Guard Preparing to Rescue a Whale Beached on the East Coast with Citizen Volunteers

Poaching could go beyond living resource exploitation at sea. Illegal sales and transfer of products using the high seas as a place for the deeds is a major threat in the modern world. It may end up as smuggling or trafficking while

landing ashore through the jurisdictional waters of the State. Regulations in trade and transportation also promote illegal transfers at sea. From fish catch to prohibited commodities could be involved in such transfers. Gaps in the law and enforcement are effectively exploited by such activists in the transfer of everything based on the high seas. Anything could be made available and executed on the highs seas that have unlawful connotations in the normal places of State jurisdiction—oil, food, sanctioned items, weapons, banned equipment, spares, parts of illegal assembly of weapons and machines, human organs for transplant…The list could be endless. Such market poaching using the loopholes in the law is an existing threat. Establishing firm governance on the high seas is a difficult proposition. It is a free space where law can be easily breached. There are also other types of poaching. Occasional treasure hunt, information mapping and eaves dropping, unauthorised broadcasting from sea, etc., falls within the domain of poaching with cross connotations in other unlawful activities. The International Union for Conservation of Nature and Natural Resources (IUCN) had organised a meeting on fisheries and corruption with the support of the World Bank on January 30-31, 2008. It is an admission of the existing threat to fisheries and also the prevailing corruption that drives it. The resulting poaching overexploits the fisheries resources, destroy non-targeted and endangered species, smuggle catches, transfer at sea, steal from others catches, etc. The value of such catches by poaching is estimated to be US$ 4.9 billion per year (2008).[29] Most of the smuggled fisheries resources gets reprocessed and thereby 'laundered' and becomes genuine catches when exported as a legal product.[30]

Photo: Courtesy, Indian Coast Guard

Figure 3. 11　A Vessel Seized by Indian Coast Guard for Illegal Sale of Oil at Sea

- **Destruction of Marine Environment**

Marine environment is a sensitive domain. The stability of the oceanic forces determines sustainability of life. Violations of environmental principles can imbalance the marine environment. Here the threat need not come from intentional activities alone. Though wilful acts of marine pollution and destruction of marine habitats are common, accidents, disasters and marine casualties of various kinds can cause environmental upheaval. Intentional or accidental pollution, dumping of hazardous and toxic wastes including medical wastes, air pollution by ships, shifting of marine organism though ballast water, ocean based nuclear tests and nuclear waste dumping, disastrous scientific experiments at sea, destructive military operational practices, etc., could play havoc with the marine environment. The problem in environmental marine management is that attention needs to be paid to inputs external to the sea. Pollution by precipitation and input of pollutants from land are the major drivers external to the ocean.

Ships often pollute the ocean by tank washing and careless activities at the loading and unloading points. There are also cases of intentional sinking of ships as part of maritime fraud and other unlawful activities. A case in point is that of *MT Salem* that was sunk at sea south off Gambia with 117,000 barrels of crude oil on January 16, 1980.[31] The incident caused massive oil pollution in the area. Though the act can be brought under 'crime at sea' mentioned earlier it also trespasses into the marine environmental threat. The pollutants that may choke the ocean could be oil, chemicals, solid wastes, toxic and hazardous wastes, medical wastes, radio active wastes, plastic wastes, organisms, biological wastes, nutrients, etc., in various forms. Most of them enter the ocean as a result of not following the procedures in accordance with legal and other environmental guidelines. The marine environment also gets affected by overfishing, fishing by illegal means, destruction of endangered species, etc.

More recently attention was drawn towards bio pollution. Alien organisms that travel miles in the ballast water of ships get displaced from their native habitats. When dislocated, they turn predators and also become hosts to diseases some of them unknown. IMO is expected to functionalise a regime to control ballast water discharge to contain the widespread problem. Pumping out water from ships will become a violation once legislation on ballast water transportation is enacted.

Marine environment can get damaged in war as seen in the 1991 Iraq War when the retreating Iraqi forces released oil from the wells into the Persian Gulf.[32] The result was a spill that was 30 times larger than the *Exxon Valdez* spill in Alaska.[33] The Israeli air raids on the power plant in Jiyye, a seaside town in Mount Lebanon in July 2006 caused massive oil spill in the Mediterranean Sea.[34] Though these cases are rare, war could be very destructive to the marine environment.

Photo: Courtesy, Indian Coast Guard

Figure 3. 12 Demonstration of Oil Spill Response by Indian Coast Guard

- **Intelligence Activities**

Intelligence activities are big threats to the nations in the geostrategic mode. The sea as a medium can be used for intelligence activities involving many functions. Intelligence is big business for nations since the known times. Active intelligence involves espionage, sabotage and subversion. While the ocean provides space for a leisurely approach, and opportunities to keep outside the limits of jurisdiction of the target, it lacks the much needed swiftness. But nations have been using the domain for landing spies, recovering the landed spies, establishing contacts with the target countries, supplying logistics to the agency programme, airway piracy and other types of information poaching including evesdropping. Occasional ramblings in the international forums of espionage and illegal information gathering could be heard, but an exact record of such activities is not easy to maintain for any nation with corroborating evidences. A maritime nation has to be well aware of such activities.

- **Maritime Terrorism**

Maritime terrorism had shown its prowess to strike unexpectedly in the past though its probability is limited and activities are quite restricted. The reasons are of choice for the terrorists. But the indicators point out to militancy as a potential threat at or from the sea. There are insurgents and militants who had already proven their expertise at sea. The ocean provides many advantages to militants to trade terror. The domain is convenient for stealth. There are limitations too. Once the terrorists overcome the terrain related constraints, terror

could be easily extended to the ocean as a location or a medium of passage. It is very much practical, though the line between militancy and crime can be quite blurred.

Photo by the Author

Figure 3. 13 The Suspected North Korean Fishing Vessel Converted Spy Ship Apprehended by Japanese Coast Guard after a Fierce Gunfight in 2002. (The forward fish holds were converted to engine rooms for fitting additional engines for high speed and endurance, besides other alterations)

Terrorism is not a new phenomenon. It has been there since historic times. Only the purpose, perpetrators and the modus operandi had changed. The world community is still in a bind regarding terrorism and is sure that terror can be staged at sea or by the sea. According to this study, the first serious incident of maritime terrorism was seemingly the hijack of the cruise ship *Santa Maria* on January 22, 1961 by Portuguese and Spanish rebels just after it departed the port of La Guaira in Venezuela. The aim was to air their case in the media. Though it took 11 days it was easy for the Brazilian Navy to apprehend the vessel with 600 passengers and arrest the rebels who did not resist. But the hijack made history and headlines. It was a new incident never heard of in the modern world in those days. In another case that came up a decade later the Irish Navy intercepted the vessel *Claudia* involved in arms trafficking from Libya for the Provisional Irish Republican Army on March 28, 1973. The case of the Italian cruise ship *Achille Lauro* is more recent in memory. On October 7, 1985 four militants belonging to the Palestinian Liberation Front (PLF) hijacked the vessel in the Mediterranean between Alexandria and Port Said while the ship was cruising in Egyptian waters.

The hijackers killed a Jewish-American passenger. It was perhaps the first killing in an act of maritime terrorism. The hijackers demanded release of 50 Palestinian prisoners held in Israeli jails. The Egyptian rebel group Al-Gama'a al Islamiya attacked four cruise ships in the River Nile to detract tourists to undermine Egypt's economy in 1991-1994. There was an incident of Chechen rebels hijacking a Turkish passenger ship in the Black Sea in 1995. The rebels eventually surrendered in Istanbul. Armed Palestinian militants attacked the Greek passenger ferry *City of Poros* off Athens on July 11, 1998. Nine tourists lost their lives in the attack. There was a car bomb attack on the previous day on the pier where the ship was to be berthed. The ship was at sea. Investigations pointed out to Abu Nidal organisation supported by Libyan sponsors.

The first attack in 2000 was on the United States naval ship *USS Cole* berthed alongside at the Yemeni port of Aden. It was the first suicide attack in the maritime act of terrorism. 17 US naval personnel and two militants of the suicide squad were killed. 39 others were injured. The terrorist group Al Qaida claimed responsibility.[35] Less than two years after the incident, on January 3, 2002, a vessel *Karine A* carrying arms and ammunition of Iranian and Russian make was seized in the Red Sea allegedly for Palestinian authorities. In the same year on October 6, a French oil tanker *MT Limburg* carrying 397,000 barrels of crude oil from Iran to Malaysia was hit by an explosive laden suicide boat with two bombers. One crew was killed and another 12 were injured on Limburg. Al Qaeda claimed responsibility for this too.

There are many tales of kidnappings and terror in the South China Sea and Malacca Strait. The rebels belonging to the *Grekan Aceh Merdeka* (GAM) of Indonesia allegedly hijacked a fuel oil tanker *MV Penrider* on its way from Singapore to Penang on August 10, 2003. The hostages were released after paying heavy ransom. It is kidnapping for ransom to build up funds to continue their political plight. An attack by an insurgent group even if it amounts to piracy under the definition, is not aimed at individual economic gains. Hence strategically it has to be viewed as an act of terrorism, but the applicable laws may be that of piracy as well as terrorism if such laws exist. Again in another incident, armed rebels boarded and robbed Indonesia's *KM Karya Laut* motor vessel. It was on August 22, 2005. The next day fishing vessels *KM Putra Berombang* and *KM Mutiara* were pirated. On March 12, 2005 there was an attack on an Indonesian tanker *KM Samudra.* The blame for all these attacks was attributed to GAM. But GAM vehemently denied any involvement.[36]

A direct and convincing act of maritime terrorism came on February 27, 2004 in Southeast Asia. It was the world's deadliest maritime terror attack so far. The passenger vessel *SuperFerry 14* was bombed and sunk off Manila in Philippines by the Islamic militants of the Abu Sayyaf Group (ASG) combined with the elements of the Jemaah Islamiya (JI) and the Rajah Soliman Revolutionary Movement (RSRM). 116 people were killed. It was believed Abu Sayyaf ordered bombing of the ferry since the company refused protection money. There were more incidents around during the year. Lebanese Hezbollah attempted to transport weapons in an Egyptian fishing trawler *Abu Hassan* to support militant strikes in Israel. Israeli Navy apprehended the vessel on May 20, 2003.

On March 14, 2004 there were two suicide attempts in the Israeli port of Ashdod. 10 people were killed and 14 injured in the attack. The responsibility was claimed by Hamas and the Al Agsa Martyr's Brigade. Two Palestinian suicide bombers where smuggled into the terminal inside a commercial container. There were speculations of Al Qaeda support behind the attack. In another incident, the rebel group Jamaat al-Tawid carried out suicide attacks against the Al Basra oil terminal and the Khawr Al Amaya terminal on April 24, 2004 killing three US personnel.

All these indicate that maritime terrorism is a reality. The terrorist groups all over the world are amassing maritime inventory according to various reports and are also getting trained by leading and expert insurgent groups like the Liberation Tigers of Tamil Eelam (LTTE) of Sri Lanka. There are intelligence reports that active navies of sympathetic countries, or clandestinely supporting governments provide training to Islamic jihadists in maritime attacks. Maritime terrorism is different from other unlawful activities like piracy, armed robbery, smuggling, etc, though the activities will be identical in many parts. The main asymmetry is that terrorism is basically aimed at political or religious ends. It is a policy of asymmetrical conflict. Whether it is a winning choice or not is a question of debate. But undoubtedly it is a threat to governments including to those who support terrorism clandestinely. The international conference at IMO adopted the International Ship and Port Facility Security (ISPS) Code alongwith new provisions in the International Convention for the Safety of Life at Sea, (SOLAS) 1974. It was considered necessary subsequent to the terrorist attacks at various locations in the United States by the Al Qaeda on September 11, 2001, to detect and deter threats in the maritime transport sector by the close coordination of ships and port facilities. It is widely believed that there are possibilities of serious maritime terrorism in future. The Somalian and Nigerian incidents of attacks on merchant ships, naval forces and normal employees in the oil sector are all indicators of the simmering situations of terror inducement to earn funds for vested interests rather than plain unlawful economic and business interests. In Somalia they are driven by clan warfare and political mindset in the absence of appropriate governance. Whereas in Nigeria the driving force is ultranationalism because the Nigerian local tribes feel that they are not benefitted from the oil money that flows out of the Niger Delta. Similar patterns could exist in other parts of the world where governments are weak and enforcement machinery is incapable. Locals fired up under nationalism may resist outsiders. Vessel hijack, offshore hijack, attack including suicidal attack on enforcement and military vessels, kidnapping or destruction for ransom and protection money, etc., could be daily events. That could spread to the areas of economic development—an offshore area, a new identified commercial sea route, etc., could be targeted by terrorists and other unlawful activists. Already there are insurgent groups and militant outfits owning substantial navies with fleets and personnel equipped with state of the art weapons and equipment for attack at sea. Already they have well established ocean based supply chains for land and air based terror attacks. The armed forces of the world are unable to break the terror supply chain as seen by the mounting terror attacks and debates on new legislations around the world. The

militants also enjoy unlimited and easy fund flow. The existing initiatives including the much hyped but not totally successful Proliferation Security Initiative (PSI)[37] and the Container Security Initiative (CSI),[38] etc., are not expected to seal the cap on maritime terrorism according to this study.

US Navy Photograph. www.en.wikipedia.org/wiki/Image:060318-N-8623S-002.jpg

Figure 3. 14　Armed Militant Pirate Skiff off Somalia

Nuclear threat is still looming over the world, perhaps more seriously than ever. It will be the dead-ender approach for the terrorists who are never going to succeed easily against the governments. They could resort to nuclear attacks with dirty bombs when they are convinced that the ongoing scenario is not in their favour. That will be the ultimate suicide attack as seen in cult behaviour. That is to be watched. Nuclear programmes of the world are not under control and in safe hands, though it is made to believe that way. Many nations who possess nuclear technology are not with good track records. They could converge their knowhow to unlawful activists with or without the State knowledge. Pakistan's occupation with nuclear technology resulted in heavy black-marketing of nuclear materials and supply of nuclear equipment to many nations before it came to the attention of the intelligence communities.[39] North Korea is allegedly one of the beneficiaries of nuclear black market. In spite of general assurances that the nuclear fuse is under strict control by various regimes and international cooperation, it is firmly believed that the damage is already done. That means the situation is 'fused' like a weapon ready to launch. Worst is the situation when nuclear terror threat is associated with the ongoing Islamic fundamentalism in the world. It is extremely dangerous.[40]

Maritime terrorism may start as a fresh unlawful activity of its own or morph into the new form out of maritime piracy. What is seen currently is that maritime terrorism is following in the shadow of piracy. While the Palestinian attack of *Achille Lauro* or the Al Qaeda attack on *USS Cole* were directly from the terrorist mould with no complications in analysing the acts as terrorism, the kind of activities that are being witnessed in Somalia, Nigeria and part of South China Sea are indications of piracy transforming into maritime terrorism. If allowed to continue, the time is not far away when piracy will lead to full scale maritime terrorism. The rules of the game will be different. These findings are hidden in the message from the Somalian pirates who tried to convey to the world about serious consequences in the case of a vessel hijacked off Kenyan coast on September 25, 2008.[41] The Ukrainian vessel *MV Faina* carrying 33 Russian built T-72 tanks, ammunition and other weapons and accessories was hijacked by Somalian pirates who sought US$ 35 million for the release of the vessel and the crew.[42] A fully armed US naval vessel (*USS Howard*) was standby to see that the pirates would not remove the tanks and ammunition from the ship. In a letter to editor a reader expressed concern that law and order in Somalia is breaking down. It is based on the assumption that it is a simple and plain piracy. It has taken place far away from the Somalian coast. The reader pointed out that the northern horn of Africa is an Al Qaeda stronghold.[43] The methods adopted—mother ship launching attacks, conducting ransom negotiations, appointing 'official spokesperson' and even daring naval forces—shows far more sophistication in conducting the business of 'piracy.' These are signs of militancy and not piracy as a common act.[44] The world needs to understand that the virus of maritime terrorism has seriously infected the system at last. It may stay there and proliferate if not acted upon.

There are reports that the Algerian militants have regrouped under Al Qaeda's patronage in the Islamic Maghreb under the militant leader Abdelmalek Droukdal. His Algerian militancy was faltering until he contacted Abu Muzab el-Zarkawi the Iraq based leader of Al Qaeda. Algeria is one of the most potent of Al Qaeda affiliates. Their nationalist battles against Algerian military were faltering. There is tremendous Islamic resistance in Algeria. This merger with Al Qaeda can bring fresh risks in the Area.[45] The militants had already assassinated the chief of the coast guard as well as coast guard personnel in two different attacks. These activities show that the horn of Africa and beyond the Red Sea have become a haven for maritime terrorist activities.

The areas vulnerable along the ocean terrain are those where insurgency and militant activism are prevailing. It will extend towards a vast area all over the world. While these areas could be marked from the incidents and the goings on, it may not be appropriate to conclude since every location is vulnerable as the militants and insurgents have long range transportation capabilities for terror strikes either independently, by close networking through various other militant outfits, or through sympathisers and financiers. There are plenty of human pigeons[46] in the delivery chain. Many of them are attracted only by financial considerations. They will do the job without asking questions.

- **Illegal Research**

There are possibilities of unlawful scientific and strategic researches being conducted at sea or by making the sea as a base, when such researches are banned in a country or are related to sea for strategic reasons. Under the current law, boarding and apprehending such research activists in the high seas will not be possible because of primary jurisdictional problems. According to the UNCLOS, high seas do not fall under State jurisdiction. An example of an unlawful research could be genetic research that has very high pharmacological value. There are many research and surveys carried out by alien vessels in the ocean waters to understand the sea and bottom profiles for various purposes—treasure hunting to information gathering to military requirements. There are many reports. Russian ships were found carrying out alleged 'illegal' research in Estonian economic zone that the Russians have reportedly admitted was for laying the Russian-German gas pipelines in the Gulf of Finland. The conflict started when the Estonian Coast Guard discovered Russian research vessel Pjotr Kotsov performing research in Estonian economic zone without authorisation. The Estonian argument was that the research needed authorisation since it was within the exclusive economic zone under the UN laws. But the Russians argued that the research was done outside the Estonian territorial waters in the high seas and hence it did not call for any authorisation. Estonian government denied any such right.[47] Such problems are common in many countries that are littoral States. The Indian Coast Guard faced such problems and had to resolve them through diplomatic channels. It is a serious matter especially when the nations have narrow territorial waters. The situation becomes more complicated when the States are 'weaker' than those carrying out the alleged 'unlawful' research.

In the opposite are the attacks that are faced by genuine research teams from high profile environmental activists sometimes termed as environmental terrorists. Japanese sea research teams in Antarctica including coast guard personnel protecting them come across violence from environmental groups in the name of whale protection. On March 3, 2008 two research crews belonging to Japan's Institute of Cetacean Research (ICR) and two Japanese Coast Guard personnel were injured in an attack by the Sea Shepherd Conservation Group that comprised marine environmental activists. The four people were hurt in separate attacks when they were hit by butyric acid thrown at them from the Sea Shepherd vessel *Steve Irwin.* Hundreds of bottles containing butyric acid were allegedly thrown at the research vessel *Nishin Maru*, it was reported.[48] The acid could pollute the pristine waters of Antarctica. The International Whaling Commission (IWC) criticised and condemned the attacks after the matter was projected with evidence by the ICR, according to reports.[49]

- **Territorial Aggression in Other-than-War Situation**

Defending its territory is a nation's right. There could be many threats that could impact upon the national integrity and sovereignty of a country. Some of these could take place at sea or approach from the sea. They may range from the

ordinary threat of an unauthorised entry of an individual on the lookout for the means to etch out a living, to the ultimate threat of an alien invasion in the form of a military engagement. Here there are two situations—war and other-than-war. A nation has to be prepared for both in differing measures. Advances of other nations in the ocean in a threatening manner to the integrity of the State and the regions, flare up of existing disputes and their consequences, rising of nationalism and insurgency in the otherwise accepted protectorates and territories, fall outs of geostrategic issues in other places, etc., can give a snowballing effect to the advancing threat to the territorial integrity and sovereignty of a nation. There are many disputes in the world today. According to the CIA Fact Book 2008, there are 430 bilateral maritime boundaries of which 209 have agreements that include contiguous and non-contiguous segments[50]. There are many territorial disputes related to land and maritime boundaries. They vary in intensity. The disputes arise from various factors including post-war holdings, historical claims, cultural claims, resource sharing, driven by resource issues, etc.

A short list of disputes, or rather pending maritime issues, is given in Table 3.1. The issues indicate that the probabilities of international maritime conflict are still a possibility in the post UNCLOS world.

	Entities Involved	Issue
1	Antarctica	Land and maritime claims by nations
2	Arctic claims	The Nations around Arctic
3	Argentina—United Kingdom	Claim on Falkland Islands, South Georgia and South Sandwich Islands
4	Australia—Timor Leste	Maritime boundary
5	Bahamas—USA	Maritime boundary
6	Bangladesh—India	Maritime boundary
7	Bangladesh—Myanmar	Maritime boundary
8	Barbados—Trinidad and Tobago	Maritime boundary
9	Barbados—Trinidad and Tobago—Venezuela	Maritime boundary
10	Barbados—Trinidad and Tobago—Venezuela—Guyana	Maritime boundary
11	Belize—Guatemala	Maritime boundary
12	Belize—Honduras	Sapodilla Cays
13	Bosnia and Herzegovina—Croatia	Maritime access
14	Brunei—Malaysia	Seabed demarcation
15	Cameroon—Equatorial Guinea--Nigeria	Island at the mouth of the Ntem River, maritime boundary.
16	Cambodia—Vietnam	Maritime boundary
17	Canada—USA—others	Northwest passage
18	Canada—Denmark	Hans Island
19	Chile—Ecuador—Peru	Maritime boundary
20	China—South China Sea	Maritime boundary

	littorals	
21	China—Malaysia—Philippines—Brunei—Taiwan—Vietnam	Spratly islands
22	China—Taiwan—Vietnam	Paracel Islands
23	China—Taiwan—Japan	Senkakau—shoto , maritime boundary
24	Colombia—Honduras—Nicaragua—Jamaica—USA	Bajo Nuevo and Serranilla Bank
25	Comoros—France	Mayotte
26	Comoros—France—Madagascar	Banc du Geyser Reef
27	Croatia—Slovenia	Maritime boundary, EEZ
28	Cuba—USA	Discontent over leased Guantánamo Bay
29	Cyprus—Turkey	Maritime boundary
30	Denmark—Iceland—UK—Ireland	Faroe Islands continental shelf
31	Denmark—Faroe Islands	Independence
32	Dominica—Saint Kitts and Nevis—Saint Lucia—Saint Vincent and the Grenadines—Venezuela	Aves Island
33	El Salvador—Honduras	Conejo Island
34	Equatorial Guinea—Gabon	Maritime boundary
35	France—Madagascar	Bassas da India, Europa Island, Glorioso Islands, and Juan de Nova Island
36	France—Comoros	Mayotte
37	France—Mauritius	Tromelin Island
38	France—Surinam	Disputes with French Guiana
39	France—Vanuatu	Matthew and Hunter Islands
40	Georgia—Russia	Maritime boundary
	Gibraltar—United Kingdom—Spain	Sovereignty of Gibraltar
41	Greece—Turkey	Maritime boundary
42	Guyana—Venezuela	Maritime boundary
43	Guyana—Trinidad and Tobago	Maritime boundary
44	Guyana—Surinam	Maritime boundary
45	Haiti—USA	Navassa Island
46	India—Pakistan	Maritime boundary
47	Indonesia—Timor Leste	Maritime boundary
48	Indonesia—Australia	Maritime boundary, claim on Ashmore Reef and Cartier Reserve.
49	Indonesia—Malaysia—Philippines	Dispute over Unarang Rock and maritime boundary in the Celebes Sea.
50	Indonesia—Singapore	Maritime boundary
51	Indonesia—Palau—Philippines	Maritime boundary

52	Iran—Iraq	Maritime boundary
53	Iran—UAE	Dispute over Tunb Island and Abu Musa Island
54	Iran—Kuwait—Saudi Arabia	Maritime boundary
55	Israel	Gaza Strip
56	Japan—Russia	Sovereignty of Northern Territory
57	Japan—South Korea	Claim on Liancourt Rocks
58	Latvia—Lithuania	Maritime boundary
59	Malaysia—Singapore	Maritime boundary
60	Marshall Islands—USA	Claim on Wake Island
61	Mauritius—Seychelles—United Kingdom	Claim on Chagos Archipelago
62	Morocco—Spain	Claims on coastal enclaves sand islands—Ceuta, Melilla, and Penon de Velez de la Gomera, Penon de Alhucemas and Islas Chafarinas; martime boundary.
63	New Zealand—USA	Tokelau (New Zealand) included American Samoa's Swain's Island in its draft constitution.
64	Norway—Russia	Maritime boundary
65	Korea (North)—Korea (South)	Maritime boundary
66	Romania—Ukraine	Maritime boundary
67	Russia—Ukraine	Kerch Strait and Sea of Azov
68	Russia—USA	Maritime boundary
69	Spain—UK	Gibraltar autonomy issue

Table 3.1 Maritime Disputes of the World (2008)[51]

These data are restricted to the UN entities and are given basically to highlight nations will have differing viewpoints in their neighbourly territorial relationships. Most of these countries and many others who are not in the list are having problems regarding demarcation over land also. These simmering issues could turn into territorial defence issues, and promote cross border insurgency and various transnational unlawful activities. Even the issues on land could affect maritime affairs of the country. Hence preserving territorial integrity of a nation under such conditions becomes a serious matter. Therefore the consequences of unresolved territorial issues could be considered as a threat that has serious legal implications in which a coast guard could be involved in the reinforcements though higher military forces will be carrying out such functions in the case of a military confrontation.

The details at figure 3.1 consider the 192 UN entities with disputes at the maritime borders. 69 specific cases are identified in this study (2008). These are exclusive of the issues that have been resolved under the advice of the International Court of Justice's (ICJ). Many countries are parties to these disputes. A civilised approach may do well if accepted as a guiding principle in resolving

them under matured diplomacy. Without a resolved and well demarcated boundary, enforcement of law will be found wanting and agencies will find it difficult to seal the boundaries against unlawful activities. The perpetrators of unlawful activities are bound to take advantage of the situation.

The threat to territorial integrity comes form many counts. Though territorial disputes are very common in human society managing disputes can be very crucial in relationships. This study recommends five steps in the process of resolving a territorial dispute between nations:

1. Staking the claim.
2. Devoting to the claim.
3. Managing the claim.
4. Managing operations.
5. Resolving issues in a win-win mode.

Staking the claim is the first step in handling a territorial dispute. Normally most of the disputes will have a historical root even if it is based on a recent disintegration and subsequent partition of territories. This point has to be examined seriously and viability recorded for resolution. If the case in point is not strong it may not be worthwhile wasting years of conflict or keeping the situation in suspended animation. It is like an open fuel valve. Once the claim is asserted at a particular moment in the nation's time it should be followed by absolute devotion. Otherwise the claim may vanish in the long run without any advantage to the claimant. Thereafter, it is managing the claim among people of the country and the international community. Once the claims are asserted the area becomes a disputed case that will attract most of the threats since it will not be effectively monitored except for alien intervention across the border. This is where the coast guards and other maritime forces come up. They have an extraordinary task to perform—protecting the disputed 'boundary,' a boundary that is not there. It needs the highest level of international acumen as well as enforcement capabilities because of its illegal nature, or sheer absence of law. It needs the cooperation of the countries involved. Resolving a dispute is possible in the modern world with a win-win approach in the game under effective leadership and legal interpretation under international law. The situation may even improve when the world is advancing. Hindrance in resolving these issues comes from the economic and strategic gains a country may believe it will inherit under the UNLCOS, apprehensions under the prevailing geostrategic scenario based on bilateral relations, and the vacillating political environment driven by public opinion within the country.

Defending borders, especially disputed ones may become more serious in the future. The holding countries have the advantage of access and may use them effectively. It is the same with transnational criminal syndicates who rely heavily on corruption, a worldwide phenomenon in the social system that brings the new terminology transnational crime and corruption (TNCC) as the bane of the 21st century. The holding countries may land people to inhabit the disputed territories and bring out a demographic claim subsequently, or resort to cross border terrorism in collusion with terror outfits to clean up the 'aliens' from there. This will be supported by tough diplomatic strategy and media propaganda and people

mobilisation. On the other side, the stake holder will have to counter it by devotion to the claim and management of the claim. According to Japanese researcher Tadahiko Furusawa[52] there is no specific definition for the concept of territorial defence.[53] It is agreeable. Territorial defence is not simply an action against a specific task, but to the extent the task violates the sovereignty and territorial integrity of the nation. That means enforcement action against transnational unlawful activities as well as defending the territory against alien invasion in a war situation could be included in territorial defence. It may also be understood that there is airspace over the maritime territory where the State exercises its sovereign rights. The navy or other combat services are not designed for coast guard operations. They have to protect the national territorial integrity and sovereignty of the country during war or when called for in support of other armed forces in heightened situations of threat in other-than-war situations. The threats on territorial defence are viewed differently by various countries.

Threats that emanate form disputed maritime borders had often caught the eye of the international community. Often there are skirmishes across India-Pakistan maritime boundary with fishers crossing over to each other's territory. The coast guards of both the countries were careful to avoid incidents at sea (INCSEA) and also to have hotline communication between their heads of organisations to smother the issues before they flared up. Often such hotline may not be possible in disputed areas. It is an extraordinary and matured cooperative arrangement between India and Pakistan and their coast guards to have a hotline between them centred on the disputed maritime border. Problem becomes much more serious when a country involved in border dispute with another that is itself a disputed territory under the UN Charter. A case in point is that of Taiwan staking claim for maritime boundary with Japan. Nine Taiwanese Coast guard vessels entered Japanese waters on June 16, 2008 near the disputed islands of the East China Sea to accompany a ship of protesters angry over the sinking nearby of a vessel from Taiwan according to report.[54] Japan denounced the incident as a violation of its territorial waters because of its claim over the islands called *Senkakau* in Japanese and *Daioyutai* in Chinese. Officials in Taiwan announced that the protest was a mission to uphold it over the disputed territory. Japan Coast Guard's warnings went unheeded by Taiwanese protesters. According to Taiwanese report the protesters were blocked by nine Japan Coast Guard vessels. Taiwan despatched nine patrol vessels to protect the protesters boats. Taiwan did not consider notifying it to the Japanese Government since it was to uphold the sovereignty of its territory. It was said that the action was spontaneous. A Taiwanese pleasure boat collided with a Japan Coast Guard vessel near the island early June. The blame was attributed to the pleasure boat captain by the Japan Coast Guard. According to the Taiwanese captain the Japanese vessel rammed his craft. Taiwan even went to the extend of recalling its envoy from Japan to protest over the collision. Japan on the other hand denounced the alleged violations of Taiwan in Japanese waters. According to the Japan Coast Guard there were a dozen violations. The disputed island is small and uninhabited. The islands are claimed by Taiwan as well as China while Japan administers it. The islands were

seized by Japan in 1895. Later the US administered it during the Second World War and subsequently turned over to Japan in 1972.

These are examples of simmering conflicts situations that could very well be avoided by the use of coast guards under win-win situations for conflict resolution rather than conflict flaming up by incidents at sea.

Threats Viewed under the Perils of the Sea

Peril of the sea is an accepted situation. The ocean is a terrain with its own characteristics. Peril is associated with it and has been already accepted as a valid legal situation. Under the law of 'Carriage of Goods by Sea' perils of the sea limits the liability of a carrier of goods along with other specified situations. Perils of the sea come out of the situation for human survival in a terrain that is not meant for them but can access under conditions subject to the peril caused by such accession. A pearl diver can die out of nitrogen narcosis, a cruise ship can sink in a wave that was difficult to negotiate or by a collision with a wandering iceberg, a cyclonic storm can batter a fishing vessel against rocks, containers can fall off a ship and vanish into the bottom of the seas,…There are many such situations that can be visualised as caused by the sheer nature of the ocean. The threats associated with such situations are to life and property. Even for the most skilled, the peril is often difficult to overcome without the balancing forces that are required. These are the forces that have to be reached out to protect the life or property caught within the peril of the sea. It could be any time. Perils of the sea are thus defined as accidents and dangers peculiar to maritime activities. They include storms, waves, wind, collision, grounding, fire, smoke, noxious fumes, flooding, sinking, capsizing, loss of steering, loss of power, and any other hazards resulting form the environment that is peculiar to the sea. The bills of lading will carry the clause that the carrier is not liable for the perils of the sea. In its definition, the term 'perils of the sea' denotes the natural accidents peculiar to the sea but in more than one instance they have been held to extend to events not attributable to natural causes. In certain cases they have been held to include capture by pirates on the high sea and a case of collision between two ships where no blame is immutable either or at all events not to the injured ship. Perils of the sea are properly meant no other than inevitable perils or accidents upon the sea, and that by such perils or accidents common carriers are, prima facie, excused, whether there be a bill of lading containing the expression 'peril of the sea' or not. In any such event they have to be seen on case to case basis separately. The threats associated with the peril of the sea thus invariably converge on life and property involved.[55] And it could happen any time. It is seen more among fishers worldwide. They get caught in the changing sea conditions, vessel failures, grounding at mud flats, ice blocks and rocky bottoms or collisions with larger vessels at sea. Peril is a big threat at sea. Peril breeds there in its own terrain specific surroundings like the mythological Scylla and Charybdis of the deeps sea.[56] There are many perils that are real and lurking in the expanse of the abysmal sea. They had sent many sailors to the bottom of the sea with their ships. In one such incident a giant wave knocked off a large Japanese fishing boat *No. 58, Suwa Maru* in rough weather on June 23, 2008 in Chiba Prefecture.[57] The vessel was at anchor. Only three crews survived among 30. Their average age was 48. All of them were the earning members of their families. They were fishing for the migratory bonito, a favoured fish

that would have fetched them sufficient income. That was not an isolated case. Some 200 fishers die in Japan every year in spite of their vessels are modern, succumbing to the perils of the sea.[58] It is very tragic for the widows and children. Their life becomes depended on charities thereafter. The poignant tale of human face reflects in a letter written by a woman from Tokushima Prefecture to her husband who succumbed to the peril of the sea while on a fishing trip. It reads as a poem,[59]

> *Darling,*
> *I know how much you looked forward to our children's weddings and seeing our grand children,*
> *I will have the waves of the Indian Ocean to carry lot of memories to you,*
> *I will send pictures (of me) via cell phone and make sure they reach you.*

Many such one way promises are all what the families can give to their dear ones whom the monster perils of the sea had taken away.

United States Federal Government Photo www.en.wikipedia.org/ wiki/ Image: Beaufort_scale_12_notext.jpg

Figure 3. 15 Often ships Flounder while Negotiating Extreme Seas

Threats under Natural Disasters

The threats at and from the sea based on natural disasters too could happen anytime based on the vagaries of nature. But they could at least be expected if not predicted. These threats become disasters only if there is loss or damage to life or property. A disaster is not the incident per se, but the effect of the incident, if it is ruinous. The incident is the cause responsible for direct or indirect destruction of or damage to life

or property. Environmental damage too is associated with it. An unexpected El Niño can be an indirect disaster to human life. It can wipe out coral reefs from a vast area that will take many years to recover. The storms that originate from the sea, earthquakes and subsequent tsunamis, etc., fall under this category. There are many methods by which disasters can be prevented. But the ultimate disaster will come when global warming induces the decisive flooding and the subsequent deep winter by change in the equilibrium of the ocean. The threat is already active. Global warming is necessary to maintain life within the balancing forces. When it exceeds, it turns out to be a threat. The excess is attributed to human activities that will act as catalysts to natural disasters.

Natural disasters that could damage coastal areas could also spread toxic and hazardous materials across the marine environment. One such example was that of the hazardous waste dumps in Somalia that were hit by the Asian tsunami of December 26, 2004. Somalia became an ideal place to dump hazardous and toxic wastes of industrialised nations at relatively cheap rates in the absence of an effective government. The wastes also included medical wastes. These dumps along the coastline were hit by tsunami and spilled out the contents causing health problems among the people. There are many such potential pollutant storages and facilities that could have huge inventory of such materials along the coast even in developed nations that could become targets of natural hazards, military or militant strikes and subsequently a threat to the marine environment in the absence of proper precautions and safety measures.

Photo: Courtesy, Indian Coast Guard

Figure 3. 16 Indian Coast Guard Evacuating People in a Natural Disaster

Threats from Land and Air

There is threat to the oceans from land and air too. The land based threats come from sources of pollution, indiscriminate coastal constructions and development projects including illegal reclamation, etc. that may impact upon the overall environmental balance of the ocean. Land based sources of pollution to the marine environment is a serious matter because most of the persistent organic pollutants (POP) reaches the sea by land based sources. They not only remain for a very long time abut also get transported long distance and much deeper into the sea affecting the living resources. The result is the environmental threat from the sea to the land resources. The air is a source of pollution through precipitation that my include pollutants including persistent organic pollutants suspended in air.

Threats from Transnational Diseases

The threats could come by the sea in the form of diseases. The historic Black Plague or Black Death plague in Athens in the 14th century started around the port. Hundreds of visitors to Athens were killed by the local people accusing them the cause. Certain people were burnt alive. Today alarm bell rings when the epidemic of SARS (severe acute respiratory syndrome) or avian flue catches up. Spread of HIV (human immuno deficiency virus) around the world is also attributed to ocean transportation. The ballast water organsims are blamed for many diseases that have been otherwise not known in certain areas.[60] All these and perhaps more are in store in the future.

The threats of the Future

There is no indication that any of the ongoing threats will subside or get eliminated in future. They are likely to continue modified by time. There is also the probability of different types of threats to emerge. Therefore, it is important to analyse the emerging threats periodically to appreciate the trend. Happenings in the ocean, based on various changes in the human system of the world need to be watched carefully and constantly. The ocean can give a boost to unlawful activities. It could become a haven for fraudsters and criminals. The future could witness many unlawful activities at sea or from the sea beyond the territorial waters. Legislation always followed the activity that it decided to regulate. Under this principle an unlawful threat can be suppressed only when the act is declared unlawful. That means legislation may have to wait for the act it is supposed to suppress to occur. This will be a limitation in managing new threats from the sea that could be found unlawful and for which effective legislations may not exist.

Almost all the threats associated with identified unlawful activities will edge into future. Crime at sea, which means violation of criminal laws on board a ship in its traditional mould, may extend to other platforms whether stationary or moving including vessels of all kinds. ‘Crime at sea’ will continue in the future since the ocean transportation and other ocean based activities are expected to increase. There could even be long term ocean habitats.

Piracy is expected to continue its passage into the future more vehemently with nations collapsing economically and politically and terrorism taking new shapes. That

was the trend in the past. The pirates will be better organised, technologically advanced, and backed by well established organised syndicates and, in certain cases, also by authorities in power. Piracy hot-spots in the world may keep shifting. There are strong chances of piracy or at least part of it evolving into fully grown terrorism. Currently the ongoing maritime terrorism is supportive to land based terrorism in the form of fund flow and collection by piratical methods. The Somalian, Nigerian and South China Sea based hijackings show the purpose for money to meet political ends driven by fundamentalist or nationalist dead-ender philosophies. The number and nature of terrorist organisations and the spots they operate may undergo change. Their number may increase and behaviour patterns may become exclusive. Piracy could become a handy tool for the terrorists to build up their inventory and strengthen their supply chain besides fund collection.

Maritime smuggling could take new forms when commodities change according to situational demands. An insurgency or militant group fighting against the political system will need assured logistics support that could be outsourced to professional maritime smugglers. Terror logistics already flow through smuggling and trafficking lanes. The suppliers could be anybody—from outwardly legal to totally illegal operators. Prospective mercenaries of the terror world may either hijack ships or go on board stealthily as stowaways to their destinations. Trafficking in humans is a thriving business even otherwise. With continued population rise and unemployment in most part of the world people will be on the move through the smuggling and trafficking routes.

While on one hand the demand for seafood is increasing, on the other the fisheries resources are depleting. Vacillations in energy cost further aggravate the situation. Under these circumstances when the sea is left open by legal fishers because of unaffordable energy cost and other professional difficulties, poaching by well organised transnational IUU operators will flourish. The disputed territories will be haven for them since law enforcement in such areas will be at the ebb. Corruption will aid their activities. The overall nature of fishing industry could transform in future. Problems will mount for fishers as well as industries associated with fisheries. In addition there will be destruction to endangered species by poaching. Global demand for fisheries resources is going to increase continuously with increase in population.

Marine pollution will increase from various destructive practices and natural hazards as collective international measures are not far fetching. It will be a case of irreversibility. However with packaged regulations and observations by IMO, oil pollution and air pollution by ships may reduce. The single most cause for marine environmental damage will be human activities at sea and close to shore over land. Urbanisation, global trade, and exploitation of the ocean for resources will increase. This will have its impact on marine environment if caution is not exercised. It could be limited by legislation, enforcement and international cooperation. The consequences of global warming and apprehensions of climate change will make their marks in the waters of the ocean. Marine organisms will shift around. Wildlife in the ocean could reach to the edge of disaster scenario of absolute confusion.

The new form of terrorism at or from the sea will be full blown attacks depending upon reach. They may even extend their reach by commercially available and well fitted out unmanned aerial vehicles (UAV). Some of them are capable of taking off from the deck of a small ocean going vessel. In addition, the terror support supply chain will move through the sea to various parts of the world even using long range submersibles.

Movement of materials associated with weapons of mass destruction (WMD)[61] is expected to continue in the asymmetrical world. It may enlarge depending upon the demand and control measures. Terrorists can also develop special platforms and tactics to carry out lethal attacks on the military and other armed forces including the enforcement machinery. Explosive laden suicide boats, released from mother vessels or otherwise, can cause havoc in harbour, close to shore and high seas. Their targets will range from fishing vessels to ocean going military machines of war. The terrorists at sea can ram another vessel, hijack and use vessels for terrorist logistics as well as weapons against any maritime vessel or facility, use larger vessels to launch missiles against identified targets, carry out underwater attacks; land agents; use unmanned underwater vehicles (UUWV) to deliver explosives; deploy mines in preferred area; and sink ships and other vessels with the use of mines or improvised explosive devices (IED). Terrorism could extend to seaborne cyber attacks and also disruption of critical information networks.

New unlawful activities related to the sea may originate. There are possibilities of offshore hijack, and attack on offshore platforms or its supply chain. There could be a variety of offshore platforms. The sea could become a terrain for planning and coordinating terrorist strikes over land. The jurisdictional void or legal ambiguities on the high seas could prompt the untiring unlawful activists to try out new game plans. Human ingenuity finds no barriers within the right and the wrong. Bounded by the realm of innovation there are many unlawful activities that could use the sea as a convenient terrain. They are yet to surface. Such unlawful activities may include ship based gambling without licence; banned high value research activities like in cloning, pharmacogenomics, biological agents, etc; illegal business and trading in chemicals, wildlife, etc; information gathering and trafficking; money laundering; hideouts for dangerous fugitives; organ trafficking and transplant surgery; treasure hunts; etc. Human organ traffickers and transplanters are experts who could find ingenious means to thrive in their business. There could be organised health cruises which could deal with organ transplants aimed at rich and needy clients in the calm comfort of the ocean beyond the territorial waters of any country. It could even extend to 'death cruises' for the terminally ill or other willing people who like to bid farewell due to disabilities of life. They may queue up for the hospice ships for a comfortable death under mercy killing at a price that only a few can afford. Euthanasia at sea is a viable option in the out of jurisdiction waters of the ocean, especially when it is banned over land. A decent burial at sea could be an added bonus. Specialised hospital and hospice ships may throng in the space beyond national jurisdictions to 'kill' bills—willing billionaires. It could be called death tourism without a registered identity in the public domain. Ocean could also become a haven for the rich and strong fugitives to escape the law in the luxury of palace ships. Celebrities may find the ocean a good place to hide when overshadowed by sudden ignominy. It could also be temporary abode to people looking for privacy in their activities that may not be favoured by law.

The unlawful activities at sea could be used for terrorist funding especially when other avenues are getting blocked by international cooperation. The international community has been able to control the money flow to Taliban militants in a campaign lead by the United Nations. The UN campaign has been able to intercept several hundred tons of acetyl anhydride that would have been used for refining opium to make heroin in the poppy fields of Afghanistan or elsewhere. The main source of income for Taliban is

drug trade. It is about 60 per cent according to estimates by the North Atlantic Treaty Organisation (NATO). This money is used to purchase weapons and equipment for the Afghan insurgency which is going on since 2001 and still continuing (2008).[62] Such control is expected to 'cut the legs out of from under' the Taliban.[63] No, not exactly as the subsequent events prove. Taliban has intensified its operation through the proxy pirates of Somalia for fund collection. Ironically it is paid by the corporate sectors all over the world and governments as ransom money for their kidnapped crews and hijacked ships against the pressures from the public and commercial interests. The corporate social responsibility under Article 43 of UNCLOS is getting not only a beating here, but also a reversal where the shipping corporates are indirectly paying to the terrorists to continue their activities for easy money. Corporate agreements to pay ransom promote terrorism. Such incidents show that the terrorists will find alternate avenues when their source of funds is frozen. That means they could also look at other unlawful maritime activities when starved for cash. Most of the known unlawful activities that have been seen in general terms can be turned around for terror funding. Piracy, smuggling, poaching, etc. are very lucrative unlawful activities. Reports indicate that more and more avenues are explored by them. The terrorist have already identified another source of funding. They have heavily invested in wildlife trafficking, according to reports. The maritime dimension of the traffic involves marine endangered species and use of vessels to transport them. Endangered animals, according to the reports, are the new 'blood diamonds' identified by the militants, warlords and insurgents.[64] The poachers use brutal methods to collect wildlife trophies from the land and the sea and send them to the points of destination. The marine wildlife collections include shark fins, endangered species, reptiles, etc. China is reportedly the largest market. The United States follows a close second.[65] The wildlife extinction trade has grown into a more organised crime. The items are transported by containers with sophisticated false compartments that are made deftly using sophisticated metallurgy. It is difficult to identify by normal visual examination. The increase in wild life trafficking could have serious consequences. Because within the wildlife trade, it is not only the lives of the animals at stake, according to the news report.[66]

The logistics supply chain including energy and food will continue to be ocean dependent in the future. Ocean transportation requirement is expected to increase multifold. Therefore the international community has the responsibility of keeping the ocean safe for the supply chain movement. Under the globalisation process, the world is getting united by economic, cultural, technological and political integration across borders. The concept of borders at sea is very different from land borders. They are also more difficult to manage. There are many threats. The trends can be predicted by expert analysis. Warfare and incidents at sea between the navies will be a thing of the past unless the world moves ahead as brutally as it was in the foregone days. The chances are that there will be fewer wars at sea. This means less confrontations and minimal conflict situations involving warships. Absence of military conflicts at sea is an ideal situation for the rise of unlawful activities. For example piracy, poaching and smuggling were almost absent in the waters of conflict. Absence of conflicts at sea is a condition for unlawful activities to sustain. Hence, less the world at war, the more the unlawful activities over the concerned terrain. The legal maritime trade will flourish and expand in the future. The world will become more and more dependent on the sea lines of communication (SLOC).

Once upon a time it was believed that LASH (lighter aboard ship) would be a very successful commercial maritime venture and would revolutionise carriage of goods by sea.[67] It was an exclusive water based view looking at the sea and inland navigational avenues. But the changes in the world transportation system made intermodel transportation very attractive extending over the land. This aspect helped the container shipping to grow multifold pushing the LASH far behind and almost into oblivion. The container industry is poised for explosive growth based on demand, convenience and speed. Larger ships will carry more containers based on the 'size matters syndrome' of maritime transportation. Accordingly the ports will have to expand to accommodate and handle large numbers of containers and their carriers. Smaller and speedier ships will take over special territories including coastal trade. Safety concerns on the shipping lanes will increase. With energy keeping top priority, tankers will move across the world ocean in increasing numbers. The cruise ships will increase their capacity for passengers. The size will be large. The numbers will increase. Cruise industry will grow with more and more exotic places added to their ports of call against the fear of rising terrorism and other unlawful activities. For the terror groups, cruise ships will hold a lot of promise in ransom and kidnapping. Short distance transportation by sea will bustle with the introduction of faster and modern ferry services adding safety challenges. Pleasure and adventure sailing will join hands even underwater in exotic locations. The maritime administrations all over the world will be busy tracking such developments to ensure safety and security.

The transnational organised crime syndicates will advance further in search of new avenues in relation to the ocean. These syndicates may attempt to enter organised business related to the ocean that may include shipping, investments in ocean based projects, large scale fisheries, etc., to launder their money. Exploitation of living and non-living resources from the ocean will be continuously on the increase threatening their regenerative capacity. The sea will be cluttered with non-living resource exploitation equipment and platforms that may extend to deep waters under the new LCS (legal continental shelf) regime. All these mean every littoral State may have to have advanced regime for monitoring, control, surveillance and response (MCSR) in their identified maritime zones for specific tasks to contain activities detrimental to the State.[68] The demand for seafood—both fish and plants—are expected to increase. Food security will be vital when the population increase. With depleting resources and fisheries poaching at sea, there are chances of potential conflicts among nations on seafood resources. The requirement for demarcation of maritime boundaries, enforcement friendly legislations, bilateral and regional cooperation, and sound fisheries and other seafood management practices will be felt more than ever under the changing scenario. Managing the exclusive economic zones for sustained resource generation and exploitation will become a primary area of interest to coastal States. Trafficking in drugs will increase unabated because of rising demand all over the world. More and more drugs may be transported by altered methods making it difficult for enforcement agencies to monitor.

Considerable headway has been made in bilateral and regional cooperation related to the sea. But still the required level of preparedness is not achieved. The future does not seem to be any different. Engagements and interactions in this matter are expected to continue. There is a need for more appealing confidence and security building measures (CSBM) among many nations. There are many ongoing debates at various forums and levels that may have substantial impact on the future of maritime policies. The debates

comprise global warming and climate change, nuclear proliferation and clandestine transfers, possibility of terrorists using the maritime terrain, and many more such factors. There are many who consider globalisation inexorable. Many considers otherwise. According to the latter, globalisation often impeach the freedom of the citizens of a nation in contemplating their future. It is said that the State loses power under globalisation[69] though benefitted by it. Shipping industry is vital to globalisation. The living standards of the world would have suffered considerably without the boost the global economy received by shipping and ocean trade. Growth in shipping means growth in economy for all the nations that depend upon the ocean for trade. And that is almost all. At the same time the shipping industry is totally depended on other economic measures including industrial growth. Under such situation the maritime industry should flourish in the future, holistically by integrating transport, storage, processing and distribution of processed products, etc. Along with it competitiveness will increase by innovation. It is possible only if the safety aspects are nurtured and maintained carefully. The shipping standards are expected to improve in future. Marine casualties could even become a thing of the past. Along with advancements in shipping, the role of ports and harbours including that will provide refuge to ships in distress will change. Relationship of humans with their ports itself will undergo sea change, especially from the security and safety angle. Such people include not only the locals who live there or nearby but also those who visit them regularly in their ships or other vessels. It will be equally applicable with restricted waters of navigation that may otherwise act as choke points. Such restricted waters could be natural as well as artificial, maintained regularly like Malacca Straits or Suez Canal. The attitude of people towards their world at sea will govern most of the changes in a globalised world. Since the attitude of people varies around the world, the changes expected in future towards such relationship will not be uniform. But in the overall it is expected to be towards betterment, thereby favourable with a bit of supervision and regulation by international agencies and responsible nations. The International Ship and Port Facility Security Code, Container Security Initiative, etc. are indicators of such attempts towards involvement, though change can be expected based on the views of international community and variations in threat perception. Ports are the points of beginning of a long journey for goods and people that run the global community rather than the end points from the security angle. The vicinity of ports can turn out to be centres of unlawful activities thus making the ports vulnerable. It can be changed by port authorities through interagency cooperation. Many ports in the world have very high heritage values. But in spite of such past they can get choked under growing demand of the future and changing security conditions. In their effort to safeguard the interests of the port, the authorities will have to gather an image that symbolises them as the agents of economics and quality of life to people. Ports should be projected as centres that bring the world together by trade. The maritime environment needs urgent attention to preserve and protect them from further deterioration. It is possible only if every nation should work together under a globally identified thematic strategy for the marine environment. International Maritime Organisation (IMO) has been engaged in devicing various guidelines and regulations towards this objective. The organisation that turns 60 in 2008 has very proactive and result oriented programmes on the anvil.[70] The IMO will need the wholehearted support of the member States without partisan attitudes. The coastal waters of the world are the most affected today. They have to be restored to natural health to

retain their regenerative potential. If not, the sea will lose its sustainability, and the future generation will lose the sea. The problems faced by the marine environment are many. There is a strong link between economic development and environmental degradation. That should be watched carefully. Improving the maritime sector and the environment automatically elevates the income for the coastal people by associated activities. Ocean will be the hope for virgin habitats and seasteads untouched by the world population and also the source of energy other than hydrocarbon based energy like wind, tide, thermal, etc. The habitats, seasteads, energy lines and facilities will need protection. Many schemes are expected to be implemented to prevent damages to ocean habitats. The small island developing States (SIDS) schemes are also among them. These schemes will need security coverage from all threat perceptions.

The theme of maritime security, especially in other-than-war situation involves protection of maritime infrastructure and shipping, securing ports and waterfronts, implementing international codes and regulations, safeguarding the sustainability of maritime environment, maritime domain awareness, container security, increasing capability for MCSR, maritime coordination with various agencies, organisations and departments, regional cooperation, and a host of others. Within the international perspective and individual national perception, maritime safety and security efforts will vary in approach. There will be many activities aimed at the potential threats and the required preparedness level. Threats may involve terrorism, piracy, smuggling, espionage, poaching, trafficking, stowaways, environmental damages, various other criminal acts, disputes and conflicts, disasters, etc. Other aspects in relation to the preparedness will involve jurisdictional aspects, MCSR regimes, contingency plans, regional and intentional cooperation, security and threat assessment, ship and port security, cruise liner security, civil liability, etc. Many legislations and agreements will undergo changes accordingly.

A State or other geostrategic entity will have many enforcement agencies to safeguard its maritime interests. The future safety and security environment (FSE) is planned in relation to them. The enforcement agencies will include the navy, coast guard, police, customs, fisheries, environmental agencies, maritime administration, and others. The nature and capacities of these agencies will vary. It will depend upon the perception of safety and security in the national and geostrategic context of the entity and its capabilities and vision statements. But ultimately the entity has to remain at the core of the international system in relation to its focus on maritime issues as and when world advances in future. It will depend upon the way it perceives and handles the issues with its own forces either independently, through international cooperation or both. The role of the coast guard is very crucial in this matter, especially in other-than-war situation.

Advancement of technology also benefits the adversaries. They could take full advantage of it. The change that the adversaries may experience in future is also to be examined carefully while interpreting the emerging trends. The adversaries will have access to modern technology and the benefits of globalisation. While the adversaries in the past were almost predictable, the future may hold surprises. They may change in their characteristics and methods of approach. They could turn unpredictable and diverse. They could be well educated, networked, intellectual and constantly evolving in their behaviour pattern with a lot of influence over the common people of the world. Many of them may succeed in assimilating within the social structure. They may even succeed where the

States may fail—in winning the confidence of people, as can be seen in certain cases of the Taliban in Pakistan and Afghanistan.

Photo: Courtesy, Indian Coast Guard

Figure 3. 17 Eyes Set on Future

The maritime entities will have to have common minimum programmes (CMP) for preparing for the future with adequate provisions for the MCSR regime rooted in technology. The governments and the private sector business concerns own huge infrastructure in the maritime domain including the coastal areas. They are expected to expand in future and become highly vulnerable targets to maritime threats of all kind. Still there is potential for combat operations involving most advanced weapons and fleet formations in the maritime terrain. It is not yet subsided. War is legal when fought under the laws of it. But there could be many illegal combat zones and scenarios. Illegal wars may originate in the maritime terrain or from it. For the United Nations, preserving the freedom of the seas should be of utmost priority. This freedom could be availed by the nations of the world only if the threats at sea or from the sea are effectively controlled. This study shows that there is no nation that can defend its interests at sea in absolute totality today. Many of them are not even capable of providing rescue assistance to a disaster victim in their search and rescue region. But it may be possible by regional cooperation and international cooperation. It will require forces that could stretch out internationally under common objectives and networking. They could have the approval of the United Nations. The world has to be reengineered to protect the maritime terrain from the existing and emerging threats collectively, especially when the ocean is the largest terrain with so much free space. None of these tasks can be accomplished by any single nation alone however powerful it may be. This is where the coast guards become the forces of the millennium. But it may take time for the world, its governments, and the coast guards themselves to understand the ‘force’ that is there.

NOTES

[1] P. Paleri, *Role of the Coast Guard in the Maritime Security of India,* Second edition (New Delhi: Knowledge World, 2007), p. 25.
[2] National Plan to Achieve Maritime Domain Awareness for the National Strategy for Maritime Security, October 2005, http://www.dhs.gov/xlibrary/assets/HSPD_MDAPlan.pdf. Accessed July 20, 2008. The maritime domain of the United States includes the Great Lakes and all navigable inland waterways such as the Mississippi River and the Intra-coastal Waterway. While MDA is a common concept that incorporate extraneous terrain elements, it is important that such components beyond the maritime terrain are identified and included in each States maritime domain for inclusive definition of MDA
[3] P. Paleri, 'Unlawful: The Maritime Dimensions,' *Initial Manuscript,* External Research Project, *Institute* of Defence Studies and Analyses, New Delhi, 2008*,* p. 45.
[4] Editorial, America, Russia and the Terrorists of Seas, *International Herald Tribune*, Tokyo, October 3, 2008, p. 6. The piracy in Somalia could be the evolving face to maritime terror. Millions of dollars are earned by the pirates in Somalia who seem to have direct links with the terrorist outfit Al Qaeda. If so, it is also a new modus operandi for terror funding.
[5] Will Connors, Delta Pirates are Now Targeting Nigeria's Smaller Fish, *International Herald and Tribune*, Tokyo, June 13, 2008, p .2.
[6] www.globalsecurity.org, accessed September 1, 2008
[7] West and Central African States to Co-operate in Sub-regional Coastguard Network, www.imo.org, September 2, 2008
[8] http://www.icc-ccs.org/extra/display.php?yr=2008, accessed July 28, 2008.
[9] Paleri, n.1, p. 141-47.
[10] G Schwarzenberger, *International Law* (Delhi: Universal Law Publishing Co. Pvt. Ltd., 2000), p. 94
[11] Ibid.
[12] Ibid.
[13] Ibid.
[14] The Law of the Sea, New York: United Nations, 1983, p. 34.
[15] ICC International Maritime Bureau, Piracy and Armed Robbery Against Ships, Report for the Period 1 January-31 March 2003 (Barking), p. 3.
[16] International Maritime Organisation, The Code of Practice, MSC/Circ. 984, Article 2.2, (London: November-December, 2000).
[17] R Sawhney and N. A Mohan, "Role of the Indian Navy in Combating Piracy*," Paper* (Mumbai: Coast Guard Seminar and Workshop on Piracy and Armed Robbery against Ships, 22-24 March 2000).
[18] The term contraband extends to goods prohibited for export and import, goods thus carried under the ban across the border; goods that may be seized or confiscated by a belligerent if shipped to another belligerent by neutral; escaped slaves in the olden days; or smuggled or trafficked people. The root is *contra* meaning banned under legal proclamation. In the case of smuggling, contraband is not strictly a prohibited or banned item but anything on which there is a restriction—either by duty, tax or travel across the border. Contraband thus becomes a commodity possessed unlawfully.
[19] www.wikipedia.org, Accessed August 17, 2007.
[20] Paleri, n.3 , p. 125
[21] Russia sent forces on August 8, 2008 into the breakaway Georgian province of South Ossetia with the Russian prime minister declaring 'the war has started' as a response to the attack on the Russian peacekeeping forces stationed there by Georgian forces who entered the region on August 7. According to Georgia it was a premeditated attack by Russia to annex the Georgian provinces of South Ossetia and Abkhazia that were reeling under separatist insurgency. Georgian national Security Council said Russia invaded Georgia. Russia began withdrawal on August 22, after establishing check points in select security zones..
[22] E. Barry and M. Siegel, An Enclave is Finally Embraced by Russia, *International Herald Tribune, Tokyo*, August 27, 2008, p.5.
[23] K. Ellingwood, Mexico can't Revel in Drug Submarine's Capture, *Los Angeles Times,* www.seattletimes.nwsource.com, Accessed September 19, 2008.

[24] Chertoff: US Helped Mexico Detect Submarine Packed Full of Drugs, www. Iht.com. Accessed September 19, 2008.
[25] Ibid.
[26] http://www.mmjp.or.jp/amlang.atc/worldnow/00/sep/08.htm. Accessed September 19, 2008.
[27] Stephan Hesse, Even Oceans can Only Take so Much, February 27, 2008, www.japantimes.co.jp, Accessed September 22, 2008.
[28] Lankan Navy Attacks TN Fishermen again, www.msn.com, July 13, 2008. Accessed July 14, 2008
[29] Ibid.
[30] Ibid.
[31] www.lastingnews.com/maps/oilspill.php. Accessed September 22, 2008.
[32] P. Paleri, "Environmental Destruction as Weapon of War," *Point Paper* (Washington, D.C.: National War College, National Defence University, 8 April 1994).
[33] The tanker *Exxon Valdez* grounded at Prince William Sounds, Alaska and spilled an estimated 10.8 million US gallons (40.9 million litres) of crude oil. It caused a major ecological disaster.
[34] Israeli air forces bombed the Jiyye (Jieh) power plant in Lebanon on July 14-15, 2006. This lead to a catastrophic environmental disaster with crude oil spilling into the Mediterranean Sea. An estimated 16,000 tonnes of oil was spilled.
[35] www.en.wikipedia.org. Accessed January 22, 2008. It was reported that there was a trial attack on January 3, 2000 before on *USS Sullivans.* A bomb laden boat had sunk at sea, it was reported. Probably the trial attack culminated as full blown attack on *USS Cole*.
[36] C. Z. Raymond, Piracy in South East Asia—New Trends, Issues and Responses, Working Paper, No. 89, Institute of Defence and Strategic Studies, Singapore, October, 2005, p. 10
[37] On May 31, 2003 at a speech given just prior to the G8 summit President Bush announced the establishment of the Proliferation Security Initiative (PSI) which would result in the creation of international agreements and partnerships that would allow the US and its allies to search planes and ships carrying suspect cargo and seize illegal weapons or missile technologies. A statement of interdiction principles was released in Paris September 4, 2003 by eleven nations that are participating in the Proliferation Security Initiative. It is not largely welcomed by many nations.
[38] The Container Security Infinitive (CSI) was launched in 2002 by the US Bureau of Customs and Border Protection under the Homeland Security Department to increase security of container cargo shipped to the US. It is a way of extending zone of security outward to increase security.
[39] W. J. Broad and D. E. Sanger, Espionage, Secret Deals and Nuclear Deception, *International Herald Tribune,* Tokyo, August 26, 2008, p. 1,8. Also www. en.wikipedia.org/wiki/Abdul_Qadeer_Khan, accessed September 22, 2008.
[40] Toll at 53 in Bombing of Pakistan Marriott, *The International Herald Tribune,* Tokyo*,* September 22, 2008, p. 1. The report is an indicator of times to come and the advancement the terrorists are making in their favourite game plans. A dump truck laden with explosives blew up in front of Hotel Marriott in Islamabad, Pakistan's capital on September 21, 2008 at 8 pm when the restaurants would have been packed with especially Muslims gathered to break their daily fast during the holy month of Ramadan. It also shows that the fundamentalists do not respect even their own religious kith and kin in their war against the establishment. The report stated that this was the worst ever terrorist strikes in Pakistan. The explosion left 10 meter crate in front of the US owned hotel and set of huge fire. The hotel would have to be pulled down ultimately. The scenario if examined can provide indicators on the prospectus of maritime terrorism, by replacing the dump truck with a fishing vessel or any other vessel and the damage it can cause to any of the vital ports and establishments nearby.
[41] U.S. Destroyer Watches Coast for Hijacked Ship, *International Herald Tribune*, Tokyo, September 29, 2008, p. 6.
[42] The Belize flagged cargo ship is owned and operated by Kaalbye Shipping, Ukraine. The ship after attack was forced to proceed to Somali anchorage.
[43] Harsh Govil, Sea Pirates, Letters to the Editor, *International Herald Tribune*, Tokyo, September 30, 2008, p. 7
[44] Jeffrey Gettleman, Pirates Bit Off More Than They could Chew, *International Herald Tribune,* Tokyo, October 1, 2008, p. 4. The pirates of the vessel *MV Faina* later stated that they hijacked the vessel only for money and they did not know the vessel was carrying heavy weapons and military wares. According to the spokesperson the pirates were misunderstood. They were doing it for money and stop the world dumping

wastes in their wares and fishing illegally from their waters. For them the rest of the world who is exploiting their seas are the sea bandits. They even said to think of them as a coast guard. The spokesperson was talking to New York Times from the bridge of *MV Faina* a ro-ro ship hijacked on September 25, 2008 about 320 kms (about 180 nm) off Somali coast. Somalia considers 200 nm as their territorial waters. According to the spokesperson, they wanted US$ 20 million in cash. The name of the spokesperson was Sugule Ali. Piracy in Somalia is a highly organised, lucrative ransom driven business. 25 ships have been hijacked in 2008 (September 25). Millions of dollars were paid in ransom. There are many in the business. 'Piracy' started 15 years ago as a response to large scale fishing by foreigners, according to the Somalis. Somalia's central government imploded in 1991. The waters are tuna rich. Somali fishers armed themselves and confronted the fishers. Demanding that they pay tax. It extended to all. Sugule said his team was treating the crew of *MV Faina* well. But in spite of such remarks news that broke out at bbc.co.uk accessed on October 8, 2008 (Hijacked Tanks for South Sudan) says short of that it was a clandestine purchase by Kenyan government for Sudan. The article also mentions about Kenya playing the role of Cuba during the Angolan civil war through such arms shipments. The hijackers, who are seemingly the collection agents for cash strapped Al Qaeda, because of UN involvement in squeezing the drug trade, must know. Also C. Bohlen, UN Progress in the War on Taliban's Money Tree, *International Herald Tribune*, Tokyo, October 8, 2008, p 2.

[45] www.msn.com, source: IANS, July 14, 2008.

[46] Human pigeons are those who carry 'anything' for a consideration without knowing the background. They help to spread militancy. Even if they are caught they will not be able to give any information to the law enforcement agencies.

[47] Russian Ships Caught Performing, www.estonian-news.blogspot.com, November 28, 2005, Accessed June 10, 2008.

[48] www.icr.whale.org. Accessed July 6, 2008.

[49] Ibid.

[50] CIA Fact Book, 2008, www.cia.gov/library/publications/the-world-factbook. Accessed September 22, 2008.

[51] Ibid.

[52] Member of Research Committee, Defense Research Centre, Japan.

[53] Tadahiko Furusawa, On Territorial Defense: Policing Sea Area under Japanese Jurisdiction, www.drc-jjpn.org, Accessed September 20, 2008, p. 3.

[54] Taiwan Vessels Intrude, Japan Says*, International Herald Tribune*, Tokyo, June 17, 2008, p. 3.

[55] http://legal-dictionary.thefreedictionary.com, accessed September 28, 2008.

[56] Sea monsters of Greek mythology who caused certain perils to the sailors.

[57] Vox Populi/Vox Dei, Fishing Boat Tragedy Shows Nature's Fury, *International Herald Tribune,* June 26, 2008, p. 24.

[58] According to a study the most dangerous profession in the United States is that of a fisher or the crew of a seagoing fishing vessel. It was based on the 2007 workplace fatality statistics compiled by the U.S. Bureau if Labor Statistics. The death rate by 100,000 is 111.8. This, probably, is because they work in all kinds of weather, often hundreds of miles from shore with no help readily available. Crew members risk falling on slippery decks and going overboard. There are also potential risks of malfunctioning fishing gear and becoming entangled in them. http://www.forbes.com/leadership/2008/08/25/dangerous-jobs-fishing-lead-careers-cx_mk_0825danger_slide1.html?partner=msnhealth, In Pictures: America's Most Dangerous Jobs, accessed October 30, 2008.

[59] Ibid.

[60] P. Paleri. "Invasion of Killer Marines—Bio Pollution of the Oceans," *Journal of Indian Ocean Studies,* Vol. 11, No. 1 (New Delhi: Society for Indian Ocean Studies, April 2003), p. 66-67.

[61] The term "weapon of mass destruction" (WMD) is defined in 18 U.S. Code § 2332a (c) as including any destructive device as defined in [18 U.S. Code] section 921...; any weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals, or their precursors; any weapon involving a biological agent, toxin, or vector (as those terms are defined in [18 U.S. Code] section 178...); or any weapon that is designed to release radiation or radioactivity at a level dangerous to human life.

[62] C. Bohlen, UN Progress in the War on Taliban's Money Tree, *International herald and Tribune,* Tokyo, October 8, 2008, p. 2.

[63] Ibid.
[64] S. Begley, Extinction Trade, *Newsweek,* March 10, 2008, www.newsweek.com.
[65] Ibid.
[66] Ibid.
[67] P. Paleri, ‘ A Comparative Study of Shipping as an Industry and India’s Position in World Shipping,” *Project Report for MBA,* University of Madras, March 1977.
[68] Paleri, n.1, p.31. The term monitoring, control and surveillance is used in fisheries surveillance procedures associated with the Code of Fisheries Regulations of the FAO. The author in his studies modified it to include response also, thereby indicating monitoring, control, surveillance and response to incidents as a wholesome procedure within the mission statements to enhance its applicability for a coast guard in its duties and functions.
[69] Ibid, p. 154-78.
[70] Speech by Mr. Efthimios E. Mitropoulos, Secretary General, International Maritime Organisation at the commemorative event of IMO’s 60th anniversary programme organised by the Ministry of Land, Infrastructure, Transport and Tourism of Japan at the Nippon Foundation, Tokyo, October 21, 2008.

4

CONCEPT, CAPABILITIES AND CONSTRAINTS — COAST GUARDS OF THE WORLD

4

CONCEPT, CAPABILITIES AND CONSTRAINTS — COAST GUARDS OF THE WORLD

The Concept of Coast Guard

The coast guard is a unique maritime agency with a distinct role in maritime security. The world understood this fact very early in history as can be seen in the formation of many maritime agencies assigned with some of the duties and functions that today's coast guards perform. From that perspective the coast guard cannot be seen as a new concept. Many coast guards have long histories. There were also coast guards in the past that had gone extinct or became defunct because of geopolitical changes. All of them were designed for specific functions related to the ocean, and navigable rivers and lakes. As an important maritime agency the coast guard was evolving constantly. Developmental changes can be expected in future too thereby making it an evolving force of the future. It is a dynamic agent of change in the maritime security matters of not only a geostrategic entity, but also the entire global maritime community. From the very beginning, the coast guards aimed at securing the maritime terrain through identified functions which were not primarily related to war. The identified functions were entity specific. The duties and functions were modified as and when there were changes in the requirements of the entity. This can be seen in the frequency of changes in the structure, character, duties and functions of the coast guards of the world, especially in the early days. In the recent past the United States Coast Guard shifted place from the Department of Transportation to the Department of Homeland Security. It also assumed the role of protecting the airspace of the National Capital Region.[1] More and more geostrategic entities felt the need for the coast guards in the post UNCLOS world. The combat role was always with the navy. Coast guards did not engage independently in warfighting. This aspect is very important when defining the role of a coast guard in the modern world. It has been said that the world is always at war at some place or the other. It may be true. It could also be true in the reverse, that peace is a mythical paradigm when human community encounters various threats other than war in their daily struggle for sustenance. What is usually called 'peace' as a relative expression to war is actually the other-than-war situation in strategic studies.[2] That is the term used in this study. While the navy is primarily meant for combat in a war situation, the coast guard is designed to meet the other-than-war situation in enforcement and services in the interest of the geostrategic entity in its identified maritime zones. While the coast guards were not

designed for combat there were navies that performed the duties and functions of the coast guards. It continues today in many countries where there is no coast guard yet.

The coast guard is actually a generic term. Though for some, it is also the formal terminology used in the corresponding legislation. The coast guard is known in many names. But their duties remain within those identified for a coast guard. They are designed for other-than-war situation. Within the similarity of role definition, the coast guards of the world perform various functions that are entity-specific. The range of functions is broad for some. For many the range is narrow. The range of functions depended on the maritime interests of the entity and the time of formation of the coast guard. In many cases the entities had other maritime forces or agencies performing certain functions that some of the older coast guards were carrying out, when they decided to create separate and exclusive coast guards. That reduced the range of the functions of the newly formed coast guards. The role cropping was done to avoid duplication of efforts and the associated cost to the governments. Besides, some of the governments felt it better to steer clear away from the related problems of merger of already well established departments and agencies with the coast guard, which was asymmetrical in form and character. In such cases incorporating an added duty, 'assisting or supporting other government departments, agencies, institutions, etc.' was felt sufficient. The role of the coast guard remained within the duties of law enforcement and services in the maritime and associated terrains, other than direct warfighting in a declared combat scenario. The duties and functions of the coast guards are related to the maritime security of the entity they belong to as articulated in their instruments of charter which catered primarily for other-than-war situation.

Understanding the concept of maritime security is important. This is especially so when the attempt is to distinguish between the roles of the navy and the coast guard. Maritime security, in whatever expressions the term may be projected, is a constituent part of the overall national security, which is aimed at the sustainable well-being of the people of a nation. The modern concept of national security is not about the 'security of a nation' but, in a much larger scale, about the well-being of its people. It is well beyond the military and internal security of a nation. The maritime security is contributory to the overall national security in a terrain specific assessment.[3] The very fact that there are many agencies in the world performing the duties and functions of the coast guards, many of them with long ranging history behind them, is the proof that the coast guard has a niche of its own in the maritime security of a nation. Quite naturally its functional effectiveness will depend upon the rights and freedom it has in performing within its space.

The coast guard is an armed force with powers for law enforcement and mandate for serving the maritime community. Its authority is embedded in its mandate. The coast guards are created based on the compelling requirements of the governments after careful evaluation in accordance with their constitutions. The compelling requirements come from the prevailing and emerging threats short of alien military invasion and the obligations a country has under the national and international laws for enforcement and service. But there are also examples where the coast guard is considered a force to contain intrusions and ensure territorial integrity even on land boarders separated by riverine waters. There are landlocked countries with coast guards. As already mentioned, the role of a coast guard is entity-specific based on the identified maritime interests and

requirements of the entity. The role is projected by the entity that creates it by legislation. The functions of the coast guard are derived from the assigned role. Though the ocean is larger than the land area in the world topography, for a particular nation the land is relatively larger than its ocean in reality or in perception for the reasons that 1) humans inhabit the land, 2) land with the ocean lapping on its shore felt the ocean extends relatively distant and thereby unfamiliar, and 3) landlocked countries and people developed an exclusively land-centred mindset. Of course this mindset varies from entity to entity depending upon their geolocation and perception of the sea. Because of this limitation in perception, it is quite natural for maritime awareness to pull back in the mindset of policy and decision-makers. Maritime awareness is a relative term. It has to be imbibed separately in most of the cases since peoples' lives revolved around the land on which they were firmly rooted. It was so even in islands. It is, therefore, normal for the humans to perceive the land closer to their security mindset than the ocean. That belief system played the rules differently for land and ocean. Initially the navy existed with the main objective of reach driven by the urge for territorial advancement using the ocean terrain. Subsequently the coast guard evolved in the tailor made roles of law enforcement and service that fitted it very well in the maritime terrain. The navy and the coast guard thus became the fundamental forces of the ocean terrain with many variations in their roles.[4]

There is a tendency to attribute the formation of the coast guards with the United Nations Convention on the Law of the Sea, 1982 (UNCLOS). It does not seem to be exactly so, though it had some influence on the formation of the later coast guards. There were effective coast guards centuries before the UNCLOS. But certainly the Convention and its universal acceptance made nations who did not have the coast guards to think about them, and who already had similar maritime forces to modify them. UNCLOS magnified the need for a coast guard justifying functional expansion of the State within its identified maritime zones in its maritime interest. The rational for the coast guard evolved from the law of the sea (LoS) in the modern world. The navies expanded simultaneously their warfighting capabilities. Many countries established coast guards for the first time. According to Sam Bateman, a former commodore of the Royal Australian Navy, coast guards as national institutions for regional order and security through maritime cooperation and confidence building could be a revolution in maritime strategic thinking.[5] Within this statement lies the course to steer for the future coast guards—towards global maritime cooperation for the common good of the global commons. The force has the potential for it by design and charter if managed properly by governments with support and understanding for global commitments in their roles towards maritime security.

The concept of the coast guard is that of an armed force that is not a combat force. The creation of a coast guard is by statute with the duty of protecting the maritime and other national interests of an entity in its identified maritime zones in such a manner that will be specified in the charter. Since the concept is quite ancient, the coast guards of the world, therefore, will not be similar in their character and functions since the requirements are country specific. The similarity will be in their role design that will be in relation to law enforcement and service in the maritime zones. The coast guards of the world will be identical in their character, performing entity-specific duties in their jurisdictional waters.[6] The coast guards may have missions from the simplest to the most

complex depending upon their charter in accordance with the requirement of the entity. A certain degree of dualism will also persist in their functions in view of their support to territorial defence that cannot be separated from the duties and functions by drawing firm boundaries in a geopolitical and geostrategic situation. Collectively the functions of the coast guard amount to safeguarding the global commons and common interests in the maritime domain, though they will be functioning within their own national moulds. At least until such time the world and its governments realise their collective role towards global maritime security.

Photo: Courtesy, Indian Coast Guard

Figure 4. 1 Indian and Republic of Korean Coast Guards in an Exercise

The nature of duties and functions of the coast guard are fast changing remaining within the constitutional purview and international law. In the history of every coast guard there would have been a decisive moment when the entities decided to create them. Often, in the course of time, the coast guards surpass these causes in the changing scenario. Never there was a situation to abolish a coast guard or maritime agency carrying out the functions of a coast guard once formed because it outlived its requirement or was no more in demand. There were changes in the forms and structures and also in the execution of duties and functions. The anatomy of the coast guard as an armed force changes accordingly and so its path towards achieving the objectives. It will be based on the constitution of the entity that created it. The constitution sets the legal systems for performance. An armed force of a country has constitutional sanction. Thereby it is a constitutional entity. Without the constitutional sanction an armed force is strictly a force with arms, a militia of sorts, organised or disorganised, even if it is state sponsored as in the case of rogue forces that may have unconstitutional support even from the government authorities. The Somalian militant pirates calls themselves as armed forces similar to a coast guard organised to prevent foreign poachers and waste dumpers in their waters.[7] But the difference is in the absence of constitutionalism in such situation. Constitutionalism paves way for the rule of law. Constitution and constitutionalism are different terminologies. A nation may have a constitution, but may lack in constitutionalism.

Another issue is the definition of the term 'military' and 'paramilitary' in the study of armed forces. Clear understanding of these terms is necessary to appreciate the underlying principles of various organisations under the constitution. Certain constitutions use the term military to depict the land warfare forces that otherwise means the army in common parlance. In such cases the naval and air forces are separated from the military within their own standing. But in common parlance the three warfighting forces are terrain specific armed forces for combat. In course of time together they and their various specialised alternatives like strategic forces, etc. came to be known as the military forces. Therefore a military force is a warfighting armed force. A coast guard is an armed force that will be more in the role of an enforcement and service agency at sea but not in a warfighting role as the primary combatant. From this kind of a system arises the concept of military and non-military armed forces. It depends upon how the armed force is defined under the constitution. While the constitution may refer to the term military, it is not common to refer a non-military armed force as 'paramilitary' in the constitution. Often this terminology is used in general interaction more as a matter of convenience than a constitutional expression. It may be more appropriate to call an organisation 'paramilitary' if it is designed and formed under one of the constitutionally declared military armed forces under its own act—the legislated instrument. In the case of a non-military armed force under an independent and exclusive act the term 'paramilitary' is only a connotation without serious relevance to the intention. 'Paramilitary' therefore becomes a usage of convenience unless it refers to an armed force created under the act of a regular military force.[8] But it is quite possible for the non-military armed force to function under a military armed force, with it or under the same ministry or department. Such a force could also have commonalities with the military armed forces in its terms and conditions and may even be staffed by military personnel. It is based on the administrative action and convenience, and not as an expressive constitutional interpretation. Ultimately it is the constitution that decides the character of the 'armed force.' The coastguards, therefore, has to be considered as non-military armed forces unless specifically mentioned in the constitution. Even then they do not become combat forces. There could also be situations where the constitution does not call its forces military or war fighting. Still they may exist as a non-military force for defending the sovereignty and territorial integrity of the nation. Generally a nation is depended on its military armed forces to steer it through war. The *raison d'être* of the military is war. There is no way a nation can undermine its self defence capability. Military and non-military armed forces are derived from the tangible and intangible sources of national power that are not static or absolute. They are also not insular. The non-military armed forces are not military in their execution of duties even if they have a military character by design. The non-military armed force could be a self defence force or a force that is jointly operating with the own or other coalition militaries under national and international exigencies.

For this reason there are tendencies to perceive the role of the non-military armed force like the coast guard as of something with low value that lack lustre in national parlance. It will not be prudent for a government or the people to think that way if the exactitude of the national security concept is understood. Undermining the value of a coast guard will be a grave mistake. The duties and functions of the coast guard are

country specific according to its maritime interests. The operational philosophies of the coast guards are decided by their defined roles. The operational philosophy together with the articulated duties and functions characterises the mission statements of a particular coast guard. There are asymmetries among the world coast guards with respect to their duties and functions, operational philosophies and mission statements. That is natural since they are constitutionally designed to meet the interests of the geostrategic entities within their maritime zones. There lies the symmetry. The particular interests of each entity may be at variance within this symmetry.

The overall anatomy of an armed force does not change with respect to its functions though there will be dissimilarities in character with respect to duties and functions and the domain of operation. The non-military armed forces are generally domain specific and usually contained in the specific operational terrain unlike the military armed forces. Whereas the organisational principles of the non-military armed forces may follow the principles of military services for effective management and advantage during integration and jointness.

This study identified 142 maritime forces functioning as coast guards in the world (2008). They are distributed among 174 geostrategic entities that form part of the 272 identified entities other than the five ocean divisions. Out of the total 272 entities, 192 are members of the United Nations. The coast guards are known by their formal name as coast guard or by other names. The names for a coast guard included:

- Army marines,
- Armed sea rangers,
- Autonomous voluntary unit as coast guard incorporated by the merger of various services,
- Border and coast guard,
- Border guard,
- Border guard marine division,
- Border guard sea detachment,
- Border guard service,
- Border police,
- Coastal civil guard,
- Coast Guard,
- Coastguard,
- Coast guard administration,
- Customs marine,
- Defence force coast guard,
- Fisheries protection force,
- Frontier guard marine division,
- Gendarmerie,
- Her Majesty’s coast guard,
- Home guard service,
- Lake coast guard,
- Police coast guard,
- Police marine wing,
- Riverine coast guard,

- Marine enforcement agency,
- Marine police,
- Marines,
- Maritime and coast guard agency,
- Maritime police wing,
- maritime squadron,
- Maritime wing,
- Maritime safety administration,
- Maritime security agency,
- Maritime security coordinating board,
- National rescue institution,
- Naval component coast guard,
- Sea coast guard,
- Sea detachment of border guard,
- Sea guard,
- Voluntary coast guard.

In addition there are many navies that carry out the duties and functions of coast guards. Many of the entities that have a coast guard also have additional maritime forces like the customs marine, marine police, life boat association, excise marine force, marine auxiliary service, voluntary maritime services, and customs and border protection force.

Another asymmetry is in their hierarchical functioning. The coast guards functions under various ministries, departments and organisations according to the policies and administrative decisions of the respective governments. This study shows that they function under the:

- Army as part of it,
- Border Guard as apart of it,
- Department of Fisheries and Oceans,
- Department of Homeland Security,
- Department of Transportation and Communication,
- Directorate of Maritime Territory and Merchant Marine,
- Ministry of Communication,
- Ministry of Defence,
- Ministry of Emergency,
- Ministry of Home and Investment,
- Ministry of Interior,
- Ministry of Internal Affairs
- Ministry of Justice
- Ministry of Land, Infrastructure, Transport and Tourism,
- Ministry of Merchant Marine,
- Ministry of Transportation and Navigation and Ministry of Defense,
- National Defence Force as part of it,
- Navy As part of it,
- National Police Force,
- Police as part of it,

- Prime Minster's Department,

Their duties and functions of the coast guards also vary. Many entities do not have exclusive coast guards because of budget limitations and inability to wind up the existing established organisations that are partially undertaking the coast guard tasks.

The primary difference identified in the concept of the coast guard is its ability to function as an interactive global force without serious geopolitical connotations. This comes mainly from its expected 'human face' that follows the United Nations Law of the Sea framework and many international agreements for making the oceans safe, secure and clean that will require cooperative efforts between nations for which the coast guards will be the ideal vehicle compared to the navies. International cooperation between coast guards offers many benefits that are not available with the naval cooperation.[9] This is a peculiar aspect in the concept of the coast guard though yet to be utilised effectively. This concept could be used for regional order and security in many areas of the world and are likely to come up especially when it rises to the next higher step of forming collective regional coast guards. That will be a revolutionary and cost effective change in cooperation among nations. Many coast guards communicate through real-time hotlines for conflict resolution and confidence building even under serious geopolitical differences. The coast guards have the potential by concept to promote international cooperation in maritime security in other-than-war situation. It is a positive factor that could modify maritime strategic assessments. This concept makes the coast guards as armed forces that could be used in a much wider perspective. They are more ideal for cooperative engagements with other countries than the navies.[10] According to researcher Sam Bateman this trend is more evident in the Asia-Pacific region.[11] It could also be possible under the European Union as well as in the African situation.

The concept of the coast guard is also broadening around the original themes of enforcement and service at sea towards maintaining order, stability and sustainability in the maritime domain. In this respect coast guard forces are more acceptable for deployment in sensitive areas than warships. There is also the issue of cost-benefit ratio, with the coast guard operations being much less costly than military naval operations. Besides, the coast guards are also expected to attract access funding and capacity support from other nations and international organisations willing to support without much interpretational problems.[12]

But all these come with demand for capacity to perform. The coast guards of the world are expected to carry out their duties and functions in accordance with their roles defined by their respective charters. However their performance and operational effectiveness will be based on their capacities to execute their duties and functions. The capacity will depend upon many factors. They are:

- The absoluteness of their charter,
- The authority vested in them along with responsibility and accountability,
- The force level including personnel strength and quality,
- The demand with respect to the threat situation and scenario,
- Professional and operational competence to face the challenges,
- Bureaucratic conflicts under various situations,
- The overall character and conduct.

Each of these parameters will cover a host of other topics while evaluating the state of affairs. This study evaluated the general threat perception in the maritime

scenario that will require the coast guards to suppress or handle. The function of the coast guard as a maritime armed force is ideally to dispel the range of threats by identification and interception in deep waters well before it reaches the shore. Besides, it should have the capacity to engage the threats nearshore, onshore and close to the boundary lines with other maritime States. The threats are not from unlawful acts alone. The coast guards have to carry out monitoring, control, surveillance, and response (MCSR) in their domain. The area is generally vast. The challenges they face are monumental in scale, and complex under the ever changing scenario.

The coast guards will have to develop capabilities to perform their identified duties and functions that comprise all the duties and functions identified so far. When compared with continuing and emerging threats, they should have the capacity to meet the requirement of their role definition at the highest level at all times. The capacities required for the coast guards to perform their functions in general will be:

- Armed reconnaissance in air and water—graduated higher intensity operations as in combating maritime terrorism…
- Blockading—escape route of criminals, prevent unauthorised entry, sea denial…
- Bomb and mine disposal…
- Boarding all weather—all vessels and offshore facilities…
- Casualty evacuation—all weather, all vessels and offshore installations, islands, coastal areas…
- Close in weapon—warning, engaging for self defence in confrontation…
- Combat environmental security—ensuring marine environmental security in a war situation, when environment is used as a weapon of war or under militant threats and attacks…
- Combat search and rescue—war and conflict casualty situations…
- Combat service support—war, joint operations…
- Community interaction for people participation, awareness programmes, training…
- Conflict resolution…
- Container security…
- Contingency support—situation support and response at sea and ashore…
- Crowd control in maritime functions…
- Cruise ship, pleasure boats and yachts monitoring—inspection, safety and protection…
- Diplomatic interaction for cooperation…
- Disaster mitigation and management—preparation, relief operations…
- Disputed territory monitoring and surveillance…
- Education and training in coast guard functions…
- Endurance—personnel and force for long periods of continuous activity…
- Emergency evacuation—all weather from vessels, offshore facilities, coastal areas and islands…
- Environment—protection and preservation…
- Escort—sea, rivers, lakes…
- Examination at sea…

- Fire fighting…
- Flag and port state control…
- Force protection against external threats…
- Handling and investigation of crime at sea…
- Hot pursuit…
- Humanitarian response…
- Hydrographic survey and charts…
- Ice breaking…
- Ice patrol…
- INCSEA management…
- Information service…
- Inspection…
- Intelligence gathering and dissemination on maritime threats…
- Intelligence gathering and dissemination on marine casualties…
- Interdiction…
- International cooperation…
- International law and treaty support…
- Interoperability…
- Investigation…
- Laying siege against illegal traffickers, smugglers, fugitives, illegal immigrants etc….
- Law and treaties…
- Law enforcement—national, international, supranational …
- Living resource protection…
- Maintenance and management of navigational aids…
- Maritime strategic research on other-than-war situations…
- Medical assistance—all weather, extended…
- Medical evacuation—all weather, extended…
- Maritime administration…
- Merchant marine transport protection—navigable waters…
- Mobility and traffic flow…
- Monitoring—coastal sea, islands…
- Negotiation (hostage crisis, etc)…
- Non-lethal techniques…
- Non-living resource protection…
- Ocean data collection…
- Ocean peacekeeping…
- Ocean research…
- Ocean survey…
- Operational sustenance…
- Passenger and crew control and safety…
- Pollution assessment…
- Pollution risk assessment…
- Pollution remediation—prevention, response, control…

- Port and harbour security…
- Prevention of alien intelligence and information gathering…
- Preventive deterrence…
- Primary fire control—warning, conflict situations…
- Provision of maritime information…
- Reach—long range and quick response…
- Reconnaissance—monitoring…
- Refugee management and enumeration…
- Rescue—all weather, extended…
- Risk assessment—pollution, ecological damage…
- Safety and security audit…
- Salvage—surface, underwater…
- Scientific support…
- Search—all weather, extended…
- Seaward support for land based law enforcement, safety and security operations…
- Security operations at sea, independent, joint, bilateral, multilateral…
- Small arms—conflict situation, warning, identification…
- Supporting other agencies—national, international…
- Surveillance—coastal, sea, islands…
- Territorial defence against alien occupation, attack, transnational crimes…
- Towing…
- Treaty and agreement adherence—bilateral, multilateral, international…
- Underwater—diving, archaeological and environmental preservation…
- Vessel examination…

The list is exhaustive and can be broken down into elemental functions like piracy control, etc., and may include many more, as the practical situations at sea will demand. Of course, it will be limited to their charter and threat perception. But future may hold many new situations. A coast guard may be called upon to interdict the conduct of ocean based bioresearch that is banned elsewhere over land. It may not have the desired capacity in terms of authority, force level, knowledge, competence, legislation, agreements, etc., for handling many of the future situations. The capability requirement will be known to the coast guards during their daily operations. New threats and additional demands may add to the requirement of capacity upgradation of the coast guards within their respective charters. The role of a coast guard can be universally appreciated. It could be anything that is in the maritime interest of the entity except direct warfighting and activities associated with it. It may not be necessary to amend the act of the coast guard if it is originally a well thought out legal instrument. It need not be so in many cases since the coast guards for most of the countries remain stagnant within their limitations *ab initio*. In such case the charter will need amendments and formalisation to meet the challenges. The capacities required by particular coast guards will vary with respect to their charter of duties. A coast guard will have to develop its capacity accordingly. For example a coast guard that is not dealing with the maritime administration, like the Indian Coast Guard, need not develop the capabilities for merchant marine survey, licencing or preparing and maintaining navigational aids, etc. In

India there was already an organisation to deal with shipping affairs under the Ministry of Shipping and Transport[13] when the coast guard was created and the government did not feel the need for including the charter in the Coast Guard Act, 1978 except for the fact that the coast guard would provide necessary assistance to the agencies concerned '*as it deemed fit*' without '*duplication of efforts*.' The maritime administration in India deals with the Merchant Shipping Act, 1958 of India among other legislations related to the maritime industry. Some of the powers under the Act are also delegated to the Indian Coast Guard in which it was expected to develop capacity. The Chief Hydrographer to the Government of India, serving under the navy as a part of the naval organisation under the Ministry of Defence looks after the hydrographic surveys in India. Therefore, the Indian Coast Guard does not have to perform hydrographic duties also. Similarly the tropical coast guards may not have to deal with ice patrol or escort services in such terrains. But they should be ready for all the relevant duties under their charter with cutting edge capabilities progressively enhanced to meet the emerging requirements. The range of functions narrows down to essentials without duplication of efforts. When the range needed to be broadened the function turns into cooperative engagements with other organisations. It is a better option under such circumstances. In fact narrow range of functions gives the opportune advantage to sharpen the cutting edge. They should use the chance to remain lean and efficient at all times. The coast guards that operate under a wide range of functions can get bogged down under their own weight. In the process they can blunt their cutting edge if not careful. This principle is applicable to most of the organisations and not just armed forces alone. An organisation can perform better and also expand further within a narrow range of functions.

Photo: Courtesy, Indian Coast Guard

Figure 4. 2 An Indian Coast Guard Ship Preparing to Launch Helicopter on a Rescue Mission

The capacities of the world coast guards will vary with respect to their charter, national policies and internal management. Most of the coast guards in the world are along with a navy. Some of them are part of the navy and many others come under its management even if autonomous by charter. There are only a few coast guards that are free to function as independent organisations. Many others are alone without a navy where they may have to perform the role of a navy also causing an identity shift that often impacts on their performance. Yet others are in the outfit of a navy but chartered for tasks that are normally carried out by the coast guards. Some of them perform their duties based on the 'one navy-two functions' principle. The capabilities and constraints of the coast guards to perform their duties and functions effectively should be seen and analysed within these frameworks. The concept of the coast guard as an armed force with an internationally compatible character in the post-UNCLOS world takes a beating in the asymmetries prevailing in their structure and administration even though there is not much difference in role allocation. In some cases the coast guards have been assigned the duties of national defence. It is based on a false sense of security or rather to find yet another use to conclude the charter. It is vague. The opinion expressed by Stanley B. Weeks on Albanian Coast Guard[14] as a confusing national legacy is applicable here. What a coast guard has to perform in war is still the professional coast guard functions, many of them in demand in a war situation. For some nations it gives a false sense of security against their lowered confidence in their geostrategic approach. At the same time a war situation is a very serious matter. The fog and friction of war will cause uncertainty in decision-making every moment. Even then, expecting a coast guard to be a powerful combat force, or a navy to be an effective coast guard is a dissolute strategic assumption by misjudgement of roles between the navy and the coast guard. In the former, a coast guard cannot be a combat force without a role shift. It is a difficult process if not impossible. Where as a navy can perform the role of a coast guard. But the danger lurks in the fact that the navy that performs the role of a coast guard can never get into combat readiness since there will be an accumulated inertia by role reversal. It will be a dangerous and unacceptable situation for a country or similar entity. The coast guard has to support the navy in the event of a war performing 'its own roles' at sea that will be required even in war situations. Primary constraints in the operative nature of the coast guards in the world lie in the asymmetries of their individual design, organisation and management. The coast guards are not standardized across the world except to some extend in their role definition and understanding. Hence there is a long way to go for international cooperative efforts between coast guards to gain momentum even if they have international acceptance as admissible forces. To start with, the coast guards are not even known in a standardised format like the navies across the world. The word 'coast guard' is still considered a western connotation. It is expressed under many different terms. The coast guards also differ in their capabilities. Most of them are with partial charter of a coast guard in the maritime security matters either making them just segments in a maritime security chain along with a multitude of others who under any circumstances cannot be effective coast guards. Such organisational system curtails the effectiveness of the maritime operations of a country as far as the command and control required in such operations. The United States Coast Guard is an example of a progressive and effective coast guard. It has been the oldest by formal creation. It has the highest capacity by charter. Even then it has been found wanting during the terrorist

attacks on the waterfront in Manhattan, New York on September 11, 2001 in the largest ever terrorist attack in the history of the world. The attack was not at sea. It did not come from the sea either, though one of the target facilities has been on the waterfront. The coast guard's functions have been rewritten after a review. The coast guard was subsequently shifted to a different department, the Department of Homeland Security in the force overhaul. Previously the coast guard was under the Department of Transportation. The United States Coast Guard was formed in 1915 with the amalgamation of certain existing maritime organisations. It is the oldest full fledged, or rather looked up coast guard with a host of duties and functions. The Japanese Coast Guard was formed in 1948. It can be seen as another standard for a coast guard next to the US Coast Guard though there are differences in their capacities and functioning. Rest of the world coast guards are country specific forces with charters that are partial when compared to the duties and functions of a coast guard. These coast guards will find it difficult to identify themselves with a particular task and the community they serve under various ambiguities and practical constraints. Besides duplication of efforts there will also be command and control problems during practical operations. The government budget allocation will be shared by many agencies doing similar jobs. The return in terms of operational effectiveness will not be appropriate to the expenses. Still there are coast guards that could function effectively if the bureaucratic conflicts created by situations can be avoided and the government focuses directly on their operational effectiveness by operational audits. The Indian Coast Guard is one such entity that could effectively progress alongside a navy, marine customs and federally managed marine police under the Constitution of India by understanding the potential of its charter. It has a firm charter under the Coast Guard Act, 1978. The most important aspect for many other coast guards in the world to make a niche for themselves is to rename them as coast guards in whichever language it may be for better international understanding, besides reframing their charter by studied review and revision. There are many countries that do not have coast guards. Some of them may have practical difficulties in creating coast guards. Sri Lanka is an example. It had made more than one attempt to create a coast guard in the past, but did not materialise. It will not be able to manage a coast guard under the current conditions of insurgency. Kenya is an example for a country that may perhaps need a coast guard urgently with specific charters especially when instability prevails in the neighbourhood in Somalia that is turning into a haven for maritime terrorism as a leading partner for Al Qaida. Modern maritime terrorism is expected to breed from Somalia. Australia had concluded that a formal coast guard may not be necessary because of cost. But considering its problems on the north and the emerging trends in threat perception it may do well with a consolidated and well framed coast guard. A coast guard takes time to develop once initiated. Indonesia's *Bakorkamla* could be converted formally into a coast guard especially when it is an archipelagic State and issues of Malacca and Singapore Straits need serious attention. Most of the countries that desire to have coast guards could learn from the constraints other's face to incorporate changes to preempt them from the very beginning. It is important to call a coast guard, a 'coast guard,' for international standardisation. It is a touchstone requirement to make the entity-specific coast guards a world body by incorporating sufficient freedom for operation. The coast guard of an entity should be in the most appropriate ministry or department with direct access to the government. It should never be under another organisation, especially a combat military

service unless the entity is at war. Because, during war the combat armed force commands the terrain. The autonomy for the coast guard should come direct from the government. The coast guard's effectiveness otherwise will be low.

The coast guards should have sufficient basic inventory for operations—force, equipment, sensors and personnel. The type of force will be based on its charter of duties and functions and the terrain specificity of their performance. The coast guard will have to operate in air and on surface and also carry out under water tasks. In many cases, especially in archipelagic and island States, the coast guard may also have land-based functions like hot pursuit, disaster management, investigations, etc., independently or along with the land forces and agencies. Its force level should cater for it. In all cases the inventory should be at optimum level, a variable that has to be calculated periodically or by advance planning by value analysis. The force and equipment level should also be compatible with the personnel strength and their quality standards. Large personnel strength will make the organisation heavy whereas a very lean one will make it highly stressful limiting personnel endurance. Optimum level is therefore called for. This has to be arrived at by careful calculation and periodic reviews. Often there can be problems in assessing it. The opinions and government polices may vary. Hence within the command and control structure the organisation is forced to allocate people and force along with equipment for operational performance. Under such conditions the operational effectiveness of a coast guard will give a mixed result. It is very important to understand that optimisation of force level, equipment and personnel are essential mainly because the coast guard is a dynamic force. It is in demand at all times. The kind of duties and functions it has is without a break. The demand begins the moment the coast guard is created, and continues uninterrupted.

Photograph: Courtesy, Indian Coast Guard

Figure 4. 3 Protecting Offshore Assets

The coast guards of the world will face many constraints in meeting the demands on them. Constraints of a coast guard can be examined by understanding the facts that can reduce its operational effectiveness. Many of them are related to human nature and personality changes depending on the system of governance of an armed force. In general it is seen that the effectiveness of a coast guard can decline if,

- It is not called a 'coast guard' but was expected to perform like one under a different name,
- It is not backed up by strong legislation and the authority required to execute their duties,
- It is not autonomous and directly under the government,
- There are other services similar to coast guard performing their roles by duplication,
- They are not utilised to their maximum capacity under the optimum cost-benefit ratio.
- Its operational effectiveness is not value audited directly by the government and internally by the organisation at least annually,
- Its operations are not value analysed,
- Its charter of duties and functions are vague and ambiguous,
- It has to perform the role of a navy,
- Its interoperability with the regional and other international coast guards is not smooth,
- Its personnel strength is not at calculated optimum,
- Its force level and equipment are not at calculated optimum,
- Its inventory is not compatible with changing operational needs,
- It doesn't have the reach in the entire maritime zones at will,
- It cannot reach out to extended areas,
- It doesn't have the competence to handle its designated duties and functions,
- It is not developing competence to handle the emerging situations prior hand,
- It is not people oriented,
- It is indulging in corrupt practices,
- It has the nature of a militia or covert militancy,
- It lacks the human face,
- It lacks cohesion within the organisation,
- It is substandard.

There could be more. These standards are arrived at after studying the formation, structure and effectiveness of the world coast guards. They are further amplified in the succeeding paragraphs.

The coast guards of the world do not have a common overarching or standard name. This makes them difficult in identifying with each other as well as in finding common ground in their activities. They perform similar functions or part of such functions in different names. Considering the international nature of the coast guard and chances of it evolving as joint or collective coast guards in some parts of the world under common natural acceptance, an internationally established common title is important for the identity of mind in their role execution. The name 'coast guard' is the most appropriate and specific. It is already established. It could be in any language appropriate

to the entity. Already the coast guards, even those without that name, barring a few, follow the symbol of stripes and other similar common logos. It has considerable effect in their attitude towards their assigned task. Independently they will be able to compare. The *consensus ad idem*, identity of mind, will support their jointness as regional forces of security during other-than-war situation as well as in their interactions at different levels in various operations. Control of piracy is one such operation. It could also develop them further to handle the graduated situation of terrorism at or from the sea.

For both its duties—enforcement of law and service—the coast guard should have the authority. It is the authority that makes its activities formally and socially acceptable. There is a need for authority even for the duties they perform under service. There could be issues of civil liability in the case of service provided. For example, a vessel in distress that is being towed out to safety could meet with danger while towing. It may claim compensation from the towing vessel. To limit liability, the towing vessel should be able to present its authority in whichever form it may be. There are cases where survivors of a shipwreck, after floating in a life raft for many days sued the manufacturer for causing blisters on the skin. Often civil liability claims come up in pollution response. Many facilities or affected parties could sue the responders and salvors for causing damage during the clean up operations. It is more important to be empowered under law for law enforcement duties to see through the case to the end. The law should be sufficient to empower the coast guard with authority for such duties without which neither it will be accountable nor it can frame charges for applicability in a court of law. Besides it is also important to limit the liability of the coast guard while executing its duties and functions.

The coast guard is an independent entity in its performance specific to a terrain. Its principal domain is the ocean. Its responsibility is as vast as its domain. Therefore, the coast guard has to have direct access to the policy makers in the government. That is why it has to be regulated by a separate act with autonomy and placed under a ministry or department for direct access to policy makers according to the constitution of the entity. Being under another service or organisation will dilute the coast guard's accessibility to policy makers. Being under a navy, other armed force or agency will make the situation worse by asymmetrical organisational chain of command. It will reduce the operational effectiveness of a coast guard by the absence of autonomy for feed back and execution of duties. It will also not be able to perform international functions effectively. In fact its performance will be in accordance with the duties and functions of its asymmetrical holder department or as perceived by it. There will be total mix up in performance. The management will be distorted with respect to the duties and functions. Even with direct accessibility, the governments are quite distanced from the coast guards except in a few countries. In spite of access difficulty the coast guard should become a direct partner in policy decisions of the government in relation to its duties and functions.

In most part of the world the coast guards came up much later than other agencies dealing with maritime administration, law enforcement and providing services towards ocean management. Examples are shipping and navigation, customs, police, fisheries, environmental protection, narcotics control, immigration, hydrography, search and rescue, etc. The navies and voluntary or localised service agencies were engaged in various coast guard functions. With the codification of the international law of the sea and other demand situations of the developing world, the coast guards became a necessity. The world entities had to engage the ocean more precisely and effectively in other-than-war

situation. The coast guard was found capable of performing the duties and functions of all the above agencies to a great extend as a single unique organisation. With the entry of coast guards, the existing organisations faced problems of adjustment. Governments found it difficult to introduce coast guards by their amalgamation or merger. This amounted in duplication of efforts. Overall effectiveness reduced. Some of the governments understood these problems and designed the coast guards for specific charters modified and legislated to avoid turf problems. India is an example. These countries not only demarcated the duties and functions carefully, but also introduced clauses of avoiding duplication of efforts in performing their jobs as deemd ft in the coast guard legislations. Even then practical problems are faced by the coast guards in deciding whether they should go at a particular problem or not when there is another agency. Often the coast guards were found more suitable for a task that other agencies had the mandate to perform. It was based on their design. There are also tasks assigned to a coast guard for which it may have to get the support of a combat force like the navy.

The coast guard is a force, and the force gets blunt if it is not utilised to its fullest capacity. It is important, therefore, that the coast guard is kept alive by operations in the optimum manner. It is possible since the coast guards are ever required to be active. Thereafter it is a matter of cost that could be examined by value analysis or cost-benefit analysis (CBA) for operations.

The coast guard may be relatively less costly than the navy. But it is still an expensive outfit. The advantage is that the cost can be recovered and will have high value returns if examined carefully under value engineering and opportunity cost. It will vary for different entities. The entities will be able to arrive at an optimum usage level for coast guard operations. Some countries follow a system of target allotment. That is not a comprehensive system for understanding the operational efficiency of the armed force. It could be done by external value audited periodically, at least annually. The value audited assessment will be a tool for the government to understand the coast guard's operational efficiency directly rather than from its internally projected image and take appropriate decisions in its development plans and heeding to its requests for additional facilities. Value analysis is also important while carrying out operational assessment of the coast guard with respect to each operation or on completion of it. This could be done internally in a satisfactory manner and could be used as a tool in projecting requirements to the government.

The coast guard is a legal entity with designated duties and functions. The duties and functions, therefore, have to be specific and unambiguous to avoid duplication and disarray in operations. Otherwise it will be costly as well as embarrassing for the coast guards and the governments.

Photo: Courtesy, Indian Coast Guard

Figure 4.4 Indian Coast Guard Providing Relief to Disaster Victims

There are many coast guards that also stand in for a navy in the absence of it, or small navies that functions as a coast guard. In all aspects they are considered regular coast guards because the functions of the small navy ultimately end as that of the coast guard in its daily activities. What is important here is to understand that one navy two-mission methodology will not work at any time effectively though the idea may look attractive in policy papers. In reality these functions are different and have to be performed by people trained on each with a focussed mindset with the forces and equipment appropriate to such functions. The coast guard or navy cannot be good in the reversed role performance. While both can perform the coast guard functions because of their flexibility, warfighting and heightened combat can only be undertaken by a navy exclusively meant for it even in small scale situations. In case a navy is deployed for coast guard tasks it will end up incompetent for combat by wearing down its warfighting or combat demeanour. This is to be understood. Whereas the coast guard as a single maritime force will still be able to perform in war since it has to carry out primarily the coast guard tasks under the command of other defence forces including coalition forces.

As mentioned earlier, a coast guard is a force with a human face and international character even under situations of dispute. Therefore its value enhancement also comes from its ability for operation under close cooperation with other coast guards in the neighbourhood or beyond. This capability is important while value assessing the coast guard.

Personnel strength of a coast guard is an ambiguous situation that is often debated. On one hand the coast guard needs personnel. On the other the government may like to cut down expenditure on personnel. Here it is important to understand that numbers do not mean efficiency in the coast guard which is equipment and sensor depended, and

knowledge based organisation. High quality personnel in optimum numbers are what the coast guard needs to make it lean and efficient. A lean organisation is easy for command and control eliminating various human problems that could affect the overall operational effectiveness. This aspect is well established in the merchant marine. How optimum is optimum is what the authorities have to research and study instead of estimating casually.

Optimisation is also important in force level application. It is a matter of cost to the entity. Therefore vessels and aircraft that are appropriately fitted out as demanded by the scenario for maximum operational effectiveness are the natural platforms the coast guard should have in its inventory. The use value of each item in the force inventory is important to estimate before procurement and operation.

Freedom of manoeuvrability and extended reach are important aspects of an effective coast guard. It should have the capacity to patrol the maritime zones adjacent to its land under various situations. Restraint on this requirement can be very frustrating to the coast guard in the execution of its duties. It will need force level and personnel for that. To some extend this aspect is related to the optimum personnel and force level already mentioned. In addition it should be able to reach out to the extended areas of its maritime zones like the search and rescue areas and distant waters of interest that normally lie beyond the exclusive economic zone. Some of the pirates (especially the militant pirates of Somalia) have much longer reach than many coast guards. They are capable of boarding and hijacking vessels at about 200 miles range. However, extended reach does not mean the coast guard should reach out on its own. It could establish the reach with the international advantage it has in interoperability. Most of the areas could be patrolled by interactive reach along with the help of other coast guards in the neighbourhood or extended region. There were situations when the Indian Coast Guard sought the assistance of the Pakistan Coast Guard (Maritime Security Agency) in a search and rescue situation of an Indian vessel, or the Indian Coast Guard provided assistance to the Japan Coast Guard in the Indian Ocean to rescue a pirated vessel. Such reach can be achieved by international jointness and communication capabilities. Communication can be established by direct lines, through Maritime Rescue Coordination Centres (MRCC), special rescue operation centres or relayed through other means. Reach need not come at a cost to the requisitioning government but by the very nature of the coast guard operations under international obligations if care is taken to nurture and develop it.

The situation can become not only worse but also risky for a coast guard when it cannot execute its duties and functions according to the charter. There could be situations when coast guard suffer damages while attempting to land over islands suspected to be protecting insurgents, personnel are held captive after boarding suspect vessels, sinking or facing casualties while under fire from an adversary in the absence of proper armouring or close-in-weapon systems (CIWS), or simply could not respond to a situation by lack of capacity including professional competence. This is a bad situation where not only the coast guard flatters in its role but also endangers the safety of own personnel in the process. Delegation of authority; capacity supported by optimum force level, equipment and sensors; professional competence by high degree of personnel quality standards (PQS) are essential for the coast guards to perform their chartered duties effectively.

Advance operational planning and continuous exercise of the plans to learn from lessons are very important for any coast guard. It means planning for emergent situations

sufficiently early so that when the incident strikes the coast guard does not have to learn before responding. Though each incident in the execution of the duties of a coast guard may vary, some of them occurring for the first time, they will have common parameters that would enable the coast guard to respond if prepared sufficiently early. Coast guards of the world considering their nature of duty, have to be on constant alert and at high degree of preparedness level at all times.

An important aspect of the coast guard is its human face. It needs to excel in the task of community interaction and people participation. That will considerably help in spreading maritime awareness among the community. Citizen participation is critical for coast guard tasks. Besides, maritime awareness among the public will also reduce the cost of operation for the coast guard as people will be conscious about safety, security and environment. This is a task the coast guard can do in the best possible way.

Compassion to fellow human beings is what makes a service organisation to achieve its objectives. In the absence of a human face a service organisation will be found wanting. Often it is expressed as beyond the call of duty. The coast guard will be often pressed into action under extreme situations for such tasks. The efficacy in accepting it as a challenge to serve humanity is what gives it the human face. It counts towards operational effectiveness of a coast guard.

The worst that could happen to an enforcement and service agency is when it is embroiled in corrupt practices. Corruption is a global phenomenon that emerges from the common feeling of insecurity and greed. It is a serious matter world wide and also one of the driving forces behind transnational crimes. A coast guard if involved in corrupt practices will nosedive in the execution of its duties. This is a matter about which the government and other authorities have to be vigilant at all times.

The coast guard becomes a militia of sorts when it is indulged in practices that are beyond constitutionalism and also against its international nature of law enforcement and services to humanity. This is another factor the governments have to understand along with the international organisations.

An organisation like the coast guard works under the principle of *esprit de corps* which is attributable to the inherent cohesion among personnel within it. Cohesion as part of organised human element has been a much studied subject. Team work may lose its flair and lustre without cohesion. The coast guard is a force where cohesion will be a basic requirement for operational achievement.

In the scenario around the world, majority coast guards will have to perform under various situational constraints related to the threats that have been explained. Besides there are operational constraints related to terrain, force applicability, personnel demand, logistics limitations, budget limitations, bureaucratic conflicts, political assertions, and a host of others that the coast guard leadership will have to overcome. It is a challenging situation. Overcoming these constraints itself can become a daunting task. It is for the coast guards to understand the constraints under which they are working in clear perspective and overcome them under prudent management and effective leadership, and for the governments to examine them at the time of operational audit. Performing under constraints can reduce the operational efficiency of a coast guard. Each one of them has to understand it in terms of the type of constraints as well as their magnitude. SWOT (strengths, weaknesses, opportunities and threats) analysis is one of the tools available. The constraints could be examined against the threats perceived around the world. There

are many methods and feedbacks available to test a country's or entity's coast guard. The annual reports of a coast guard, the reports of international organisations like IMO, piratical reports of IMB, reports and findings of various researchers on coast guard, public opinion, etc., will speak volumes of the capabilities of an entity's coast guard. The capacity of a coast guard for environmental security can be analysed from the state of the marine environment around the entity. There are situations that a coast guard may not be able to handle. It shows the need for upgrading the coast guard if the activity falls under the charter of the coast guard. Maritime terrorism or piratical attacks may probably fall within such categories where the coast guard may find difficulties if not properly equipped. Maritime terrorism is also to some extent war on a State by unlawful combatants. It is very much within the purview of the navy to handle and coast guard to provide support. The lines are often blurred where the coast guard could support the navy which has higher combat capability than the coast guard by design.

Most of the nations and other geostrategic entities do not have organised and well codified ocean policy statements in any form. The Code of Federal Regulations (CFR)[15] of the United States and the Ocean Law of Japan (Appendix F) [16] are examples towards such codifications. The ocean policy statements should not be centred on any particular force or agency but the government at the apex level. It is best in the form of an original legislation or the rules flowing from such legislation.

The coast guards of the world face many limitations. They vary from coast guard to coast guard and are also based on the view points and policy decisions of their respective governments. The limitations can cause much hindrance to the coast guards in achieving operational effectiveness. While it is for the individual coast guard and its entity in authority to identify the constraints it faces, it is possible to generalise the limitations the coast guards of the world may be facing at varying degrees. This study shows the possibility of limitations such as:

- Absence of enacted ocean policy statements of the government as the primary framework for all its maritime activities.
- No universal standard in the name and design of the maritime force as a 'coast guard,' though the duties and functions are universal.
- Frequent movements from one ministry or department to another that affects settlement period and delays rebuilding operational effectiveness.
- Being under the navy or other combat armed forces directly or indirectly under extreme incompatibility situations in operational character causing serious problems in operations and organisational development.
- Ambiguity in role definition.
- The combat naval forces functioning as a coast guard in a role shift.
- One navy two mission operations.
- Coast guard functioning as a navy.
- Duplication of efforts by the coast guard and other parallel organisations.
- Voluntary coast guards sans empowerment.
- Partial coast guards with limited powers and activity profile.
- Limitations of personnel strength.
- Excess personnel strength (a possibility, but not focussed in this study).
- Lack of adequate empowerment.
- Lack of sufficient and enforcement friendly legislation[17]

- Lack of international interaction.
- Problems of interaction and interoperability with other coast guards.
- Problems of interagency cooperation.
- Limited attention of governments and policy makers
- Capability dilution by:
  - Insufficient personnel quality standards,
  - Insufficient force level,
  - Insufficient weapons, sensors, systems and equipment,
  - Overlapping authority,
  - Command and control problems,
  - Bureaucratic conflicts,
  - Lack of cohesion,
  - Turf problems and overlapping authority,
  - Absence of actionable intelligence in coast guard roles,
  - Others….

The coast guard is a unique organisation as an armed force for a geostrategic entity that is not only littoral but also land locked with large lakes or long rivers with or without international boundaries to monitor for law enforcement and provide service. To that extend it is not just limited to the maritime zones. The concept is old and though evolved in course of time remains unchanged at the core. But as in the case of governance of any organisation the operational effectiveness of a coast guard can be limited by various constraints. The effectiveness of a coast guard will impact upon the overall global maritime security in other-than-war situations, as is evident in matters related to piracy and the evolving maritime terrorism in the world since the coast guard has an international outlook in its duties. The reason for a coast guard, therefore, is also international in the evolving world.

NOTES

[1] For the Department of Homeland Security in support of North American Aerospace Command (NORAD), Edwards, J., Taking a Coast Guard Mission to New Heights, Coast Guard News, www.coastguardnews.com / taking-a-coast-guard-mision-to-new-heights/2007/02/25, accessed on August 16, 2008.

[2] The term used by the author in connotation with strategic studies to explain the two different situations—war and other-than-war, to specify the role of the combat forces, and the enforcement and service forces respectively under the constitution of a geostrategic entity.

[3] P. Paleri, *National Security: Imperatives and Challenges* (New Delhi: Tata McGraw-Hill Publishing Company Ltd, 2007). See Chapter 6: Terrain Assessment and Specificity.

[4] This statement does not mean that the navy preceded the coast guard in all the countries. There are countries that created navies subsequent of the coast guard. But the concept of the navy as the first thought out force is predominant in the world.

[5] S. Bateman, Coast Guards: New Forces for Regional Order and Security, Asia-Pacific Issues, Number 65, East-West Center, Honolulu, Hawaii, and January 2003.

[6] P. Paleri, *Role of the Coast Guard in the Maritime Security of India*, Second edition (New Delhi: Knowledge World, 2002). See Chapter 3: Role Definition and Operational Geometry.

[7] See note 44, Chapter 3.

[8] Paleri, n. 5, p. 7.
[9] Bateman, n. 3, p. 5.
[10] Ibid, p. 2.
[11] Ibid.
[12] Ibid.
[13] The ministry had undergone changes since then. It is the Ministry of Shipping, Road Transport and Highways since May 2004.
[14] See Chapter 2.
[15] The CFR is the codification of the general and permanent rules and regulations published in the Federal register by the executive departments and agencies of the United States Federal Government. It is a conveying means to relate to every branch of the Federal Government including that of transportation and other ocean related matters, under appropriate titles. It is not all about ocean policy or ocean law, or a reference publication only on ocean based matters.
[16] Basic Act on Ocean Policy (Act No. 33 of April 27, 2007). The Act is an attempt of the Government of Japan towards establishing and implementing an ocean policy and further its collaboration with the international community. The Ocean Policy Outline and the Outline of the Basic Ocean Law were adapted by the Basic Ocean Law Forum established by the Diet in April 2006 with the Ocean Policy Research Foundation serving as the Secretariat.
[17] P. Paleri, 'Unlawful: The Maritime Dimension,' *Initial Manuscript,* Institute of Defence Studies and Analyses Research Project, 2008*,* p. 8. The term 'enforcement friendly' legislation does not mean the legislation is with a bias or favourable to the enactors or enforcers of it. It means, as expressed here, 1) existence of legislation that clearly depicts the unlawful activities and punitive measures that serves the purpose of deterrence, 2) clarity of jurisdiction and 3) absence of limitations or constraints in enforcing it under intent (enforceability in the society), 4) expediency of judicial system, and 5) resistant to abuse. One of the advantages of enforcement friendly legislation is the expeditiousness of judicial process.

5

CONCLUSIONS

5

CONCLUSIONS

Many nations, especially the developed ones, are cutting cost and downsizing their military combat wares. The United States brought a substantial reduction in its naval strength subsequent to the end of the Cold War after the fall of the erstwhile Soviet Union. As a challenge to global response, France created a new national policy in 2008 in 14 years to cut cost on the military and shrink it by replacing with equipment and intelligence. It was a significant shift from French exceptionalism, as reported in the media.[1] According to the new military and security strategy presented by President Nicolas Sarkozy on June 17, 2008 the French Army will become smaller with better intelligence and equipment. In the emerging world conventional military threats are downgraded compared to a multitude of globalised complex risks raging from transnational diseases, to cyber war to militant activism. According to the plan unveiled by the French President, most of the reductions will be in the standing army and its non-combatant support services. The intent is to reverse the support to combat personnel ratio of 60-40. The reduction in personnel is a way to provide more financial room. The ratio is important to study the military to coast guard equation. The exclusive support personnel for a coast guard is generally much less compared to the active enforcement and service personnel in what is known as the teeth to tail ratio.

Will the French President succeed in his attempt? Will such plans be adapted by all the nations gradually in terms of their combat forces? At least the second question cannot be estimated easily in a highly volatile world where demand for military wares is incessantly driven upwards by various forces. But the thought process that war is expensive and preparation for it is equally costly is slowly percolating the mindset.[2] At the same time threats are looming large over the horizon across various terrains because of the world's adamant inheritance in accepting breaches in safety and security as things of the past. In spite of the fact that the world is finding it difficult to change for the better, there are opinions against war at various corners of the world. But at least theoretically there are also increasing requirement for law enforcement and services in every terrain. In the ocean this facet of activity has been attributed to the coast guard. That alone makes the coast guard a forward looking armed force with a futuristic outlook. So to say the coast guard will be a growth industry will not be out of context at least theoretically. Besides crime picks up where war ends. This is more appropriate in the ocean terrain. But will the coast guards evolve and assume more serious roles under this situation?

It is clear that the coast guards will not replace the navies. The navies will keep expanding regionally with increased budgets in most of the cases, because the idea will be country specific. The combat naval forces give a sense of security to the littoral States against alien aggression and show of power, if not power projection, especially to those

who are not global players. The global players have a different perspective. Many smaller nations have relatively large navies. Their budgets in military wares soar every year. The coast guards, almost all of them, are disproportionate to the real-time demand over them or they just break even. Most of them are secondary to the combat navy in attention, and command and control even in the more developed countries. This trend is expected to continue for a very long time because of the centuries old political and administrative outlook. If that is so, the regional navies will expand further while global navies may face reduction by sheer incremental cost weighing them down.

This study points out that the consequences of not giving the desired attention to the coast guard can be serious for a nation or other geostrategic entities. This is also applicable to the landlocked entities with similar interests in large inland waters. The coast guards today are not fully capable of carrying out preventive deterrence as well as suppression of the ongoing threats in the maritime terrain to their fullest extend. Most of them will not be able to face up to their chartered duties if the demand rises. Under such situation any kind of subordination in policy aspects will make them only weaker. Many new threats are emerging. The chances are that the existing threats will heighten. It will be a continuous process as time advances. For the coast guards it will be a double jeopardy. There is a general feeling that the coast guard is more economical than the navy. It may be true to some extent but comparing the coast guard with the navy will not be a good idea in capital investment for a nation. Because the coast guard and the navy are theoretically asymmetrical except for the terrain they operate. But the coast-benefit ratio will be quite high for the coast guard in real terms of return as long as the threats exist. The threats for the coast guards to involve are real and present for every nation. The threats will only increase with global development. The navy and the coast guard have their respective roles. These roles can clash. It is a question of how much a country should subscribe for a navy and a coast guard. It is for each country to realise it in their clear perspective analysing their needs and the emerging trends in the geostrategic context. Out of the 192 members of the United Nations 42 are landlocked and 150 are either coastal or island nations. Nine out of the 42 landlocked States have a coast guard to manage the issues related to sensitive lakes and rivers. Among the coastal and island members, 31 States do not have a coast guard. The reasons are specific to each State. It will be interesting to examine whether they should have one. Under the UNCLOS management these countries certainly need coast guards to manage their identified maritime zones for which even external assistance for capacity building could be utilised. The coast guard has the freedom for access funds and inventory. There are also approaches towards collective coast guards on regional basis. The navies do not have such freedom for access funds and inventories as well as creating collective forces. Even for a supra nation there could be resentments from within and parallel build up. For the navies collectivity will be in terms of coalition with distinct and defined area of support often weighed by public opinion mostly under resistance that will reflect in government decisions.

Though there are 142 identified coast guards in the world among 272 territorial entities, most of them are small and ill equipped for their roles. Many of them face various bureaucratic constraints in their professional charter. It shows that the governments are either not aware of their importance or are incapable of deploying them effectively. Barring a few cases, the coast guards seem to be neglected. It is evident from

their activity profiles and operational inventory. The projections that lead to this conclusion are many:

- the unlawful activities at sea are not found seriously hindered by the presence of so many coast guards around the world,
- the coast guards are not able to minimise casualties in a disaster scenario,
- the reach for search and rescue at sea in the case of an eventuality in the maritime search and rescue region is far from satisfactory,
- the search and rescue coordinates for most of the counties are not firmly established under bilateral agreements which in some cases may be due to simmering border issues and in others by sheer apathy,
- maritime terrorism has already established and is likely to expand,
- the insurgents and militants are able to target the navy and coast guard with amazing ease,
- the marine environment is polluted at will,
- the world is yet to witness jointness among the coast guards seriously for collective operations,
- every coast guard seems to have a tale of apathy from the much needed quarters of authority,
- many nations simply doesn't have formal coast guard,
- the coast guards are not known as coast guards in many nations, thereby limiting the overall purview of their roles as coast guards that stand for enforcement and service at sea.

The list of projections could expand. The fact that many coastal and island nations do not have formal coast guards in the post-UNCLOS world also shows the general indifference towards the service as an effective tool against maritime threats in other-than-war situation. While the navy is the first thought out defence against the feeling of territorial insecurity, it is peculiar to the coast guards that the nations will not be able to appreciate their usefulness in their absence. The advantage of the coast guard will be known only if it is there and that too if audited for operational effectiveness in all its earnestness. Many nations may have to change their existing coast guard outfits into formal coast guards for upgradation in their roles, the desired identity as an armed force of recognition, and for interactive global participation. Does the coast guard give a coast effective alternative to the navy? It is difficult question considering the asymmetry prevailing between their operations and requirement. Therefore it is advisable that under no circumstances the coast guard is seen as an alternative to the navy. But the fact is that the coast guard will have daily demands on its charter round the clock. And the navy or a marine police outfit are not the agencies to handle such demands effectively. So how are the nations going to meet these requirements including their international obligations? Navies are costly and not tuned for coast guard operations; the marine police are under capacitated for the job. But both can complement a coast guard if used with precision in the overall cost-benefit analysis.

The coast guards, where they exist, are being deployed in varied roles today though their charter in law enforcement and service remains at the core of their activities. They are also used beyond their jurisdictional waters as an aid to foreign policy.[3] Many national coast guards like the United States Coast Guard, Japan Coast Guard, Indian Coast Guard, etc., have established foreign policy ingredient in them that has been found

very useful for international cooperation and global understanding on the common maritime areas of interest. But these are exceptions. Many nations are yet to understand the value of a coast guard as a national institution capable of contributing internationally for order and security. Even the established nations who are interactive are yet to come out of their inhibitions regarding global cooperation. The coast guards can be excellent substitutes for regional and even global cooperation where concerns exist over naval hegemony. Maritime cooperation is a subject that is much talked about, but not practically exploited seriously. There is reluctance in allowing an alien military force to enter a jurisdictional territory. It is more rooted in the experience the world had in the past than the real apprehensions about the future. It is not the case with the coast guards. Though the coast guard is an old concept, it is a new idea in most part of the world. The forte of the coast guard is its acceptability around though for many the coast guard is still an idea that has to be shaped formally.

The coast guards are not considered instruments of power projection at sea. It is a sign of State power for maintaining law and order in its maritime zones and assisting others in the region if required. It is one of the instruments available to the State or entity for maintaining constitutionalism in governance. It projects the intention to maintain constitutionalism within the State or entity to provide the rule of law and services to people under a constitution and also in its commitment towards global society. It could be achieved by other means too. But others may lack the dexterity of the coast guard, and thereby the effectiveness. There are many nations where the warfighting forces are restricted in law enforcement under the constitution. There is marked separation of civilian and military law enforcement under such regimes.

The UNCLOS certainly is not created for setting up coast guards or increasing the jurisdiction of the navies. It is a Convention under international law meant to guide the States in understanding their jurisdiction at sea so that there is equitable allocation of marine resources to all under acceptable terms that would avoid conflicts and clashes. There are provisions for the disadvantaged or landlocked States. It is the responsibility of a nation to protect its sovereignty and rights within the law. It is entirely for the nation to decide on how to achieve it. According to one opinion, the rational way ahead was to convert warships into lawships in a society where the benefits of war are clearly decreasing.[4] Such opinions have to be seen from their relative advantages over other ideas and the back up of the constitution. The UNCLOS not only gave the rights to littoral States but also enhanced their responsibilities. They will have to find ways to handle the additional responsibilities. Part of the rationale for a coast guard is embedded within these enhanced responsibilities.

The greatest advantage the coast guard can provide to an entity in its geostrategic outlook lies in its acceptability as a confidence building force. There are 69 international maritime disputes identified in this study. These disputes can flare up any time into more serious conflicts. In addition new threats are emerging that could influence international relations. Besides border disputes, there are also disputes across the settled borders at sea. Most of them cause political embarrassment to the involved parties. The settled maritime border between India and Sri Lanka in Palk Bay often turns a conflict zone between the Indian fishers, and Sri Lankan forces as well as Sri Lanka based insurgents operating in the area. Indian fishers trespass into Sri Lankan waters in their traditionally moulded mindset. Many gets killed in such clashes that raises voice in India. Besides, there is also

traffic by the insurgents and their Indian logistic suppliers across the border. While the matured governments of India and Sri Lanka handle the issues at various stages from flaring up further, absence of a coast guard for Sri Lanka has made the Indian Coast Guard mere observers in the negotiations that are regularly held by the two navies in general. The entire episodes give such interactions a military twist. The Indian Coast Guard does not have suitable counter part across the border to negotiate and instil confidence. Sri Lanka does not have a coast guard. Therefore the approach is made by the two navies. In contrast to that scenario the coast guards of India and Pakistan by having appropriate monitoring systems and direct dialogues over hotline are able to maintain balance through confidence building measures and interactions to avoid conflict at their highly disputed border in the northern Indian Ocean. Similar situations arise elsewhere in the world too. It will be of interest to note that often the number of fishers getting shot and killed are more across the settled territories than unsettled ones.[5] While the cooperation between the Mexican Nay and the U.S. Navy provoked controversy, the interaction between the Mexican Navy and the U.S. Coast Guard did not. Similar procedures could be followed by nations with coast guards while interacting with nations that do not have coast guards, towards confidence building. Cooperation between or with coast guards will yield more benefit under most of the circumstances in international maritime cooperation. Naval cooperation is seen in naval expansionism and submissiveness to higher powers, much objected by nationalistic opinion. It is evident all over the world. There are many politically motivated symbolic blockades to naval ships on goodwill or logistic turnaround visits in many parts of the world. But the visits and turn around by the coast guard vessels are well accepted. According to researcher Sam Bateman, the cooperation between the Indian Navy and the U.S. Navy in joint exercise and patrols in Malacca Strait in escorting merchant vessels could be counter productive in the long run for regional stability. Besides it may become a catalyst for naval expansion.[6] It has also drawn criticism among Indian political parties especially in the opposition. The littoral States of the Malacca Straits too had expressed their views seriously when it became a matter of user State support to them for capacity enhancement. They argued vehemently on the sovereignty issues and jointly opposed any kind of military intervention in the area. 'Would it have been different if it was coast guard cooperation?,' is a matter for study.[7] Though there are many coast guards in the world, interaction between coast guards are yet to gain momentum because it is not a serious agenda in the national planning and governance of many countries who find difficulties in breaking off the method inertia of long term practice. Occasionally there are meetings of the heads of coast guards and also forums organised by a select few countries at local or regional levels. These meetings do not move further and culminate into serious interactions. Japan has taken considerable interest in developing jointness and cooperation among coast guards. There were many initiatives. Japan had successfully interacted with many regional coast guards focused on regional requirements of ocean security. There are also bilateral meetings and interactive operations organised under the initiatives of other countries like China, India, Japan, South Korea, Russia, United States and Vietnam with their maritime neighbours, close and extended. Major coast guards also assist other coast guards for capacity building through training, information and logistics. But all these activities are in a much restricted scale except Japan's bilateral dialogues with relevant States in a flexible manner on Track 2 basis under the initiatives of the Ocean Policy

Research Foundation (OPRF). Japan has such dialogues with India, Indonesia, China, Malaysia and Turkey.[8] The dialogues cover major issues ranging from the security of the SLOC vulnerable to piracy and terrorism at sea, marine enjoinment and resources, and maritime search and rescue operation. But in the global perspective, interaction between coast guards on common subjects is in a much restricted scale.

This also brings out the issue of naval and coast guard cooperation. It is not restricted to international cooperation alone but also institutionally within the country itself in handling problems in the maritime domains of the nation. It is nothing new. The U.S. coast guard has been practicing it. India has arrangements in which the Indian Navy supports the coast guard's development in various ways by providing assistance in resource management, training, etc. This reduces the cost to the national exchequer by avoiding duplication of efforts and infrastructure. But there can be difficulties in operations true to the nature of their charter of duties, especially in the future. The navies and the coast guards have two different paths in their operational approaches. They are diverging paths. Chances are that they will continue diverging from each other towards future. That means the cooperation between the two forces may face additional challenges by the increasing asymmetry in operational demand and character. The naval ships will become more and more sophisticated and the operational culture will shape up towards advanced warfare techniques. The coast guards will be modernised for their operational environment of law enforcement and services under all kind of threats and situations. The operational culture too will change accordingly. Theoretically, the expertise, force, equipment, sensors and operational approaches of the navy and the coast guard will change in course of time. There will not be similarities in acquisition. The asymmetry between the two maritime forces will widen. At that stage, perhaps, cooperation may not be necessary or it may be restricted to select and specific tasks. It is thinking far ahead in time. It will also depend upon the changing concepts of security and safety, and the prudence in the appreciation and judgments of the entities in handling them.

The coast guards could become the forces of the future or the millennium force in the maritime terrain for international cooperation in controlling threats to a civilised world in other-than-war situation. But it has not reached that stage anywhere in the world except that many territorial entities have coast guards or similar organisations. At least having a coast guard is good news. That shows the world has generally accepted the coast guard as an essential maritime force. Those who do not have a coast guard yet at least in its minimal form may understand that there is a danger in ignoring reality when it is about risk assessment in the face of threats. The reluctance in meeting a requirement at critical juncture may lead to paying up more at a later stage. And those who have the coast guards may be able to enhance their value by formalising them as 'coast guard' separate from the navy meant for the entity-specific coast guard functions with an international approach free form the constraints identified in this study.

There is much talk on itenratnaional cooperation. It is not the panacea for all the ills, but certainly a way out for an individual entity to get into the world of diplomacy, the much needed approach for breaking the inertia of insularism in safety and security affairs. But how suitable is the world for international cooperation? While enhancing international cooperation is ideal in a globalised world, the efforts could get bogged down by internecine issues and historical belief systems. The much needed mutual trust and

confidence will be absent. That could delay agreements and treaties. Or such belief systems may result in partisan approaches and alliance diplomacy, which actually means against another. International cooperation is meant for the entire global community. It is preferable for acceptability to have such understanding under the aegis of the United Nations. In the maritime world, collective integration of maritime territory awareness and security activities is the only solution available to the responsible nations to prevent unlawful activities at or from the sea. It is about securing the ocean from the evil of all colours and shapes jointly by the geostrategic entities of the world. It is not an impossible dream. Not the way the world is changing. There will be new initiatives to ensure cooperation and coordination among international community. Shared understanding of threat perceptions and priorities will be part of such set up. Effective decision-making will call for absolute terrain awareness at any given time against all kind of threats telescoping into the future. It means terrain and time awareness. That should form part of the terrain awareness shared among all concerned for combating them. The information will require worldwide intelligence set up on maritime affairs. That again cannot be undertaken by a single constituent party to any maritime agreement. It has to be global in an integrated network system.

Under such collective maritime arrangement, the coast guards[9] of the world definitely have a place for international cooperation by their sheer acceptance worldwide. Considering their nature of duties it could be an excellent proposal to integrate world coast guards including creating them where it is not there.[10] The coast guard is an evolving and supportive organisation that has the capability to change the perception of a maritime nation. The duties of the coast guard in the maritime terrain within the identified zones of a nation cannot be fixed firmly. The duties cannot be standardised in the present. They should flow outside the desired capabilities identified at the time of inception because their nature and the capabilities required to perform them will change in the course of time. Those who administer the coast guards should be on watch to meet the challenges as the coast guards evolve within the charter and the policy thereon. Otherwise, the coast guards may blunt their cutting edge in handling maritime issues of the future. Many littoral States in the world do not have coast guards. Some of them have enforcement agencies for limited purposes and with jurisdictional authorities. These nations may do well if such forces are enlarged to meet the requirements including those of the future. Upgradation of such forces into full fledged coast guards should be in their agenda instead of creating new coastguards. It is possible by amalgamation, either partially or totally, of various maritime agencies already existing within the constitution. Malaysia created a coast guard in this manner by amalgamating part of the customs, fisheries and marine police along with ships transferred from the navy to start with.[11] Earlier, India had undertaken similar experiment in a different way when it began the coast guard absorbing vessels from the navy and the customs. Oman, a crucial maritime State at the mouth of Hormuz has a marine police that currently deals within the territorial waters. It could be a full fledged maritime law enforcement force along with the navy at least to the exclusive economic zone of the Sultanate that is segmented in two parts in the Persian Gulf. It will not be ideal for a nation to have too many armed forces unless the need for them is strictly justified. It will be too costly not only in fiscal and monetary terms but also from the point of view of strategic impediments within. But a coast guard is a must for every maritime nation subsequent to the promulgation of

UNCLOS and its ratification by most of the nations in the world. The coast guard should be firmly footed in the future in its charter. With a global identity it will be able to handle most of the issues related to at least unlawful activities at sea whether independently or jointly with other coast guards. For that the coast guard is much beyond a policing force. It should have other charters related to maritime aspects—marine safety, search and rescue, environment, etc—embedded in its charter and mission statements. If possible it could extend to maritime administration also to unify the system of maritime governance as in the case of the United States Coast Guard (USCG). Whether it is a coast guard or any other enforcement agency, the inability to meet the requirement of a changing scenario is called functional obsolescence. Functional obsolescence of an organisation can be avoided by incorporating flexibility in the organisational design *ab initio* to meet futuristic demands. For an armed force, over the horizon demands of the future may require commitments either by enlargement of the statutory duties and functions, by upgradation of existing capabilities or incorporation of additional required capabilities. In a world where coordination and cooperation are important to meet the growing maritime challenges, interoperability of the forces becomes very important. Interoperability means compatibility of forces to operate together. Such compatibility comes only if the forces are designed with certain degree of standardisation in their operational nature. It is important to see that the duties and functions of the armed force or other enforcement agency do not become antiquated over time. The charter should permit enlargement of duties and functions to meet evolving challenges. An armed force or other enforcement agency can become redundant in course of time if it does not have the capability built in it to withstand the forces of change and remain afresh. Future carries change with it. Therefore it is important in governance that the change is managed as a continuum of process. In the study of coast guards of the world the changes are applicable in their evolution as well as in the maritime threats they will have to face in the call of duty. Obviously the coast guards will have to carefully evaluate these changes while moving forward. This has to be done weighing the cost and benefits. It is expected that in future the coast guards will turn out to be a more viable and cost effective option in handling maritime threats in other-than-war situation.

Many situational changes can happen to coast guards in the future provided they get the attention they deserve from the governments, public, and its own people besides the international organisations and community. Predicting the change will not be easy since the horizon is not clear enough. This study shows such attention is hard to come by. The predictions against the trends of the past and ongoing may not show that the coast guard will be considered as a serious armed force of global importance by the governments around the world, barring a few who may understand it. That means the coast guards are not likely to get the deserving attention form the concerned quarters. In such an event there is not likely to be major change in the outlook of the world coast guards in the near and distant future. The tendency for them will be to continue as they are without a change of pace. There will be frequent shifts in their forms, organisational structures and hierarchy as in the past that may make them more and more uncertain in their objectives. It will cause uncertainty during settling time after a change. It is not likely the coast guards of the world will take the centre stage in handling issues as a primed up armed force ready to face the world's maritime threats in a charged environment. The role will be with the navies of the world and the military coalition

forces and allies under international resolutions even in the other-than-war situation. It may not make the coast guard a spent force, though. The coast guards of the world will continue in their traditional roles entrapped in method inertia—the inability to envelop change because of inherent roadblocks induced by the practices of the past.

Photo: Courtesy, Japan Coast Guard

Figure 5.1 The Coast Guard—A Unique Force with a Human Face

It will call for a miracle or short of it for the international and national governments to understand the importance of the coast guard in its clear perspective. If they understand and are proactive they have excellent opportunities for developing a new world for maritime policy decisions for combating the emerging maritime threats in a cost effective and cooperative manner in the new world. But the chances for such understanding are quite unlikely because the world doesn't sing in unison, though it can be hardly be said a discord.

Under these assumptions what the new world may not witness in the global perspective of the coast guards, at least in the immediate future, will be:

- The term coast guard adopted universally and uniformly the world over for all the existing and future maritime armed forces that perform the duties and functions of a coast guard.
- A maritime armed force formally termed as 'coast guard' for every nation and other geostrategic entities except landlocked states that may not have riverine or lake waters to protect.
- A common international charter for the world coast guards supported by the United Nations.
- Coast guards of the world becoming independent armed forces directly under the government with respect to their functions.

- A charter that is internationally uniform for the coast guards with entity-specific functions.
- Intentional cooperation among coast guards.
- Relayed enforcement of national and international laws in the waters of the world by the coast guards in close cooperation through joint operations and information exchange.
- Cooperative efforts by the world coast guards expanding from bilateral to regional to international avenues.
- Participation of coast guards in ocean peacekeeping and conflict resolution.
- Coast guards working together to solve crime at sea and transnational crimes.
- Coast guards replacing the navies in other-than-war situations.
- International guiding principles for coast guards through IMO.

The research leads to the fact that not having a coast guard, or not giving the desired attention to the one can be very costly, especially to a littoral geostrategic entity, in the long run.**.** What is more distressing is that it can also affect other entities seriously by domino effect or collateral association, because a coast guard in the neighbourhood can develop a vicarious endearment to others in international association.

NOTES

[1] S. Erlanger and K. Benhold, France Stresses Partners in New Security Strategy, *International Herald tribune*, Tokyo, June 18, 2008, p. 4.
[2] C. Gall, Afghanistan Tests Waters for Diplomacy with Taliban, *International Herald Tribune,* Tokyo, October 30, 2008, p.1 and 6. The inefficacy of war is being discussed even in the middle of the ongoing 'war on terror' in Afghanistan at the moment. The Afghan Government, coalition forces and NATO commanders are finding the war against Taliban is becoming Pyrrhic.
[3] S. Bateman, Coast Guards: New Forces for Regional Order and Security, Asia Pacific Issues, Analysis, No. 65, East-West centre, Honolulu, January 2003, p. 2.
[4] Ibid.
[5] Here it will be of interest to note that even otherwise marine fishing is perhaps the most dangerous occupation in the world according to statistics if war casualties among soldiers are discounted. The statistics have not taken into consideration the problems of fishers by alien government, insurgent or militant intervention at sea. This was explained earlier in this study.
[6] Ibid., p.6.
[7] This was emphasised during the User State Conference on Enhancement of Safety, Security, and Environmental Protection in the Straits of Malacca and Singapore on 15-17 February 2006 at the USCG Pacific Area Command at the Coast Guard Island, Alameda, California.
[8] Publication of the Ocean Policy Research Foundation, Tokyo, 2007, p. 9.
[9] Including the maritime enforcement agencies, like marine police, etc. that perform the functions of a coast guard,
[10] The coast guard is a trained and formally established armed force that could be of considerable advantage to a State for maintaining maritime security in 'other-than-war' situation.
[11] In Malaysia the coast guard is known as Malaysian Maritime Enforcement Agency (MMEA) or locally as Agency Penguatkuasaan Maritim Malaysia (APMM). It was formed on 15 February 2005, under the MMEA Act, 2004. The Agency attained operational status since 30 November 2005.

APPENDICES

Appendix A
(Chapter 1)

Members and Associate Members of International Maritime Organisation (November 2008)

31.	Côte d'Ivoire	1960
32.	Croatia	1992
33.	Cuba	1966
34.	Cyprus	1973
35.	Czech Republic	1993
36.	Democratic People's Republic of Korea	1986
37.	Democratic Republic of the Congo	1973
38.	Denmark	1959
39.	Djibouti	1979
40.	Dominica	1979
41.	Dominican Republic	1953
42.	Ecuador	1956
43.	Egypt	1958
44.	El Salvador	1981
45.	Equatorial Guinea	1972
46.	Eritrea	1993
47.	Estonia	1992
48.	Ethiopia	1975
49.	Fiji	1983
50.	Finland	1959
51.	France	1952
52.	Gabon	1976
53.	Gambia	1979
54.	Georgia	1993
55.	Germany	1959
56.	Ghana	1959
57.	Greece	1958
58.	Grenada	1998
59.	Guatemala	1983
60.	Guinea	1975
61.	Guinea-Bissau	1977
62.	Guyana	1980
63.	Haiti	1953

104.	Nepal	1979
105.	Netherlands	1949
106.	New Zealand	1960
107.	Nicaragua	1982
108.	Nigeria	1962
109.	Norway	1958
110.	Oman	1974
111.	Pakistan	1958
112.	Panama	1958
113.	Papua New Guinea	1976
114.	Paraguay	1993
115.	Peru	1968
116.	Philippines	1964
117.	Poland	1960
118.	Portugal	1976
119.	Qatar	1977
120.	Republic of Korea	1962
121.	Romania	1965
122.	Russian Federation	1958
123.	Saint Kitts and Nevis	2001
124.	Saint Lucia	1980
125.	Saint Vincent and the Grenadines	1981
126.	Samoa	1996
127.	San Marino	2002
128.	Sao Tome and Principe	1990
129.	Saudi Arabia	1969
130.	Senegal	1960
131.	Serbia (Republic of)	2000
132.	Seychelles	1978
133.	Sierra Leone	1973
134.	Singapore	1966
135.	Slovakia	1993
136.	Slovenia	1993
137.	Solomon Islands	1988
138.	Somalia	1978
139.	South Africa	1995
140.	Spain	1962
141.	Sri Lanka	1972
142.	Sudan	1974
143.	Suriname	1976

144.	Sweden	1959
145.	Switzerland	1955
146.	Syrian Arab Republic	1963
147.	Thailand	1973
148.	The former Yugoslav Republic of Macedonia	1993
149.	Timor-Leste	2005
150.	Togo	1983
151.	Tonga	2000
152.	Trinidad and Tobago	1965
153.	Tunisia	1963
154.	Turkey	1958
155.	Turkmenistan	1993
156.	Tuvalu	2004
157.	Ukraine	1994
158.	Union of Comoros	2001
159.	United Arab Emirates	1980
160.	United Kingdom of Great Britain and Northern Ireland	1949
161.	United Republic of Tanzania	1974
162.	United States of America	1950
163.	Uruguay	1968
164.	Vanuatu	1986
165.	Venezuela	1975
166.	Viet Nam	1984
167.	Yemen	1979
168.	Zimbabwe	2005
	Associate Members	
1.	Hong Kong, China	1967
2.	Macao, China	1990
3.	The Faroe Islands, Denmark	2002

Appendix B
(Chapter 1)

Members of United Nations but not Members of International Maritime Organisation (November 2008)

1	Afghanistan	*Landlocked*
2	Andorra	*Landlocked*
3	Armenia	*Landlocked*
4	Belarus	*Landlocked*
5	Bhutan	*Landlocked*
6	Botswana	*Landlocked*
7	Burkina Faso	*Landlocked*
8	Burundi	*Landlocked*
9	Central African Republic	*Landlocked*
10	Chad	*Landlocked*
11	Kirgizstan	*Landlocked*
12	Lao Peoples Democratic Republic	*Landlocked*
13	Lesotho	*Landlocked*
14	Liechtenstein	*Landlocked*
15	Mali	*Landlocked*
16	Micronesia, Federated States of	*Island*
17	Nauru	*Island*
18	Niger	*Landlocked*
19	Palau	*Island*
20	Rwanda	*Landlocked*
21	Swaziland	*Landlocked*
22	Tajikistan	*Landlocked*
23	Uganda	*Landlocked*
24	Uzbekistan	*Landlocked*
25	*Zambia*	*Landlocked*

Appendix C
(Chapter 2)

ENTITIES LISTED IN JANE'S FIGHTING SHIPS 2007-2008

1.	Albania
2.	Algeria
3.	Angola
4.	Anguilla
5.	Antigua and Barbuda
6.	Argentina
7.	Australia
8.	Azerbaijan
9.	Bahamas, The
10.	Bahrain
11.	Bangladesh
12.	Barbados
13.	Belgium
14.	Belize
15.	Benin
16.	Bermuda
17.	Bolivia
18.	Brazil
19.	Brunei
20.	Bulgaria
21.	Cambodia
22.	Cameroon
23.	Canada
24.	Cape Verde
25.	Cayman Islands
26.	Chile
27.	China
28.	Colombia
29.	Comoros
30.	Congo, Democratic Republic of the
31.	Congo, Republic of the
32.	Cook Islands

33.	Costa Rica
34.	Cote de' Ivoire
35.	Croatia
36.	Cuba
37.	Cyprus
38.	Denmark
39.	Djibouti
40.	Dominica
41.	Dominican Republic
42.	East Timor (*Timor Leste*)
43.	Ecuador
44.	Egypt
45.	El Salvador
46.	Equatorial Guinea
47.	Eritrea
48.	Estonia
49.	Falkland Islands (*Islas Malvinas*)
50.	Faroe Islands
51.	Fiji
52.	Finland
53.	France
54.	Gabon
55.	Gambia, The
56.	Georgia
57.	Germany
58.	Ghana
59.	Greece
60.	Grenada
61.	Guatemala
62.	Guinea
63.	Guinea-Bissau
64.	Guyana
65.	Honduras
66.	Hong Kong
67.	Hungary
68.	Iceland
69.	India

70.	Indonesia
71.	Iran
72.	Iraq
73.	Ireland
74.	Israel
75.	Italy
76.	Jamaica
77.	Japan
78.	Jordan
79.	Kazakhstan
80.	Kenya
81.	Kiribati
82.	Korea, North
83.	Korea, South
84.	Kuwait
85.	Latvia
86.	Libya
87.	Lithuania
88.	Macedonia
89.	Madagascar
90.	Malawi
91.	Malaysia
92.	Maldives
93.	Malta
94.	Marshall Islands
95.	Mauritania
96.	Mauritius
97.	Mexico
98.	Micronesia, Federated States of
99.	Montenegro
100.	Morocco
101.	Mozambique
102.	Myanmar
103.	Namibia
104.	NATO
105.	Netherlands
106.	New Zealand

107.	Nicaragua
108.	Nigeria
109.	Norway
110.	Oman
111.	Pakistan
112.	Palau
113.	Panama
114.	Papua New Guinea
115.	Paraguay
116.	Peru
117.	Philippines
118.	Poland
119.	Portugal
120.	Qatar
121.	Romania
122.	Russia
123.	Saint Kitts and Nevis
124.	Saint Lucia
125.	Saint Vincent and the Grenadines
126.	Samoa
127.	Saudi Arabia
128.	Senegal
129.	Serbia
130.	Seychelles
131.	Sierra Leone
132.	Singapore
133.	Slovenia
134.	Solomon Islands
135.	South Africa
136.	Spain
137.	Sri Lanka
138.	Sudan
139.	Suriname
140.	Sweden
141.	Switzerland
142.	Syria
143.	Taiwan

144.	Tanzania
145.	Thailand
146.	Togo
147.	Tonga
148.	Trinidad and Tobago
149.	Tunisia
150.	Turkey
151.	Turkmenistan
152.	Tuvalu
153.	Ukraine
154.	United Arab Emirates
155.	United Kingdom
156.	United States
157.	United States Minor Outlying Islands
158.	Uruguay
159.	Vanuatu
160.	Venezuela
161.	Vietnam
162.	Virgin Islands (UK)
163.	Yemen
164.	Zimbabwe

Appendix D
(Chapter 2)

MEMBERS OF NORTH ATLANTIC TREATY ORGANISATION (30 NOVEMBER 2008)

	Countries	Date of Joining	Comments
1.	Belgium	April 4, 1949	
2.	Bulgaria	March 29, 2004	
3.	Canada	April 4, 1949	
4.	Czech Rep	March 12,1999	
5.	Denmark	April 4, 1949	
6.	Estonia	March 29, 2004	
7.	France	April 4, 1949	In 1966 France withdrew from the integrated military command and pursued an independent military system.
8.	Germany	May 9, 1955	Joined as West Germany. Unification with East Germany on October 3, 1990
9.	Greece	February 18, 1952	Greece withdrew its forces from NATO's military command structure from 1974 to 1980 as a result of the Turkish invasion of Cyprus in 1974.
10.	Hungary	March 12,1999	
11.	Iceland	April 4, 1949	Iceland, the sole member that does not have its own standing army, joined on the condition that it would not be expected to establish one. However, its strategic geographic position in the Atlantic made it an invaluable member. It has a Coast Guard.
12.	Italy	April 4, 1949	
13.	Latvia	March 29, 2004	
14.	Lithuania	March 29, 2004	
15.	Luxembourg	April 4, 1949	
16.	Netherlands	April 4, 1949	
17.	Norway	April 4, 1949	
18.	Poland	March 12,1999	
19.	Portugal	April 4, 1949	
20.	Romania	March 29, 2004	
21.	Slovakia	March 29, 2004	
22.	Slovenia	March 29, 2004	
23.	Spain	May 30, 1982	
24.	Turkey	February 18, 1952	
25.	United Kingdom	April 4, 1949	
26.	United States	April 4, 1949	

Appendix E
(Chapter 2)

ENTITIES CONSDIERED AS PER CIA WORLD FACT BOOK 2007-2008

(WITH A NAVY OR COAST (BOARDER) GUARDS LISTING)

	Entity	Comments
1.	Afghanistan	--
2.	Akrotiri	--
3.	Albania	Navy and border guards
4.	Algeria	National navy
5.	American Samoa	--
6.	Andorra	Police
7.	Angola	Navy
8.	Anguilla	--
9.	Antarctica	--
10.	Antigua and Barbuda	Coast guard
11.	Arctic Ocean	--
12.	Argentina	Navy, coast guard
13.	Armenia	--
14.	Aruba	Coast guard
15.	Ashmore and Cartier Islands	--
16.	Atlantic Ocean	--
17.	Australia	Navy
18.	Austria	--
19.	Azerbaijan	Navy
20.	Bahamas, The	Coast guard
21.	Bahrain	Navy, coast guard
22.	Baker Island	--
23.	Bangladesh	Navy, coast guard
24.	Barbados	Coast guard
25.	Basses da India	--
26.	Belarus	Border guards
27.	Belgium	Navy
28.	Belize	Maritime defense force
29.	Benin	Navy
30.	Bermuda	Police

31.	Bhutan	--
32.	Bolivia	Navy
33.	Bosnia and Herzegovina	--
34.	Botswana	--
35.	Bouvet Island	--
36.	Brazil	Navy
37.	British Indian Ocean Territory	--
38.	British Virgin Islands	--
39.	Brunei	Navy, police
40.	Bulgaria	Navy
41.	Burkina Faso	--
42.	Burma (Myanmar)	Navy
43.	Burundi	Naval units
44.	Cambodia	Navy
45.	Cameroon	Navy
46.	Canada	Maritime Command
47.	Cape Verde	Coast guard
48.	Cayman Islands	Police
49.	Central African Republic	Naval forces
50.	Chad	--
51.	Chile	National navy, coast guard
52.	China	Peoples Liberation Army (PLA) Navy
53.	Christmas Island	--
54.	Clipperton Island	--
55.	Coco (Keeling) Islands	--
56.	Colombia	Navy, coast guard, police
57.	Comoros	Comoran Security Forces
58.	Congo, Democratic Republic of the	Navy
59.	Congo, Republic of the	Navy
60.	Cook Islands	--
61.	Coral Sea Islands	--
62.	Costa Rica	--
63.	Cote de' Ivoire	Navy
64.	Croatia	Naval forces
65.	Cuba	Revolutionary Navy
66.	Cyprus	Naval elements, security forces
67.	Czech Republic	--
68.	Denmark	Navy, home guard
69.	Dhekelia	--
70.	Djibouti	Navy

71.	Dominica	Coast guard
72.	Dominican Republic	Navy
73.	Ecuador	Navy
74.	Egypt	Navy
75.	El Salvador	Navy
76.	Equatorial Guinea	Navy
77.	Eritrea	Navy
78.	Estonia	Navy
79.	Ethiopia	--
80.	European Union	--
81.	Europa Island	--
82.	Falkland Islands (Islas Malvinas)	Navy
83.	Faroe Islands	Coast guard
84.	Fiji	Naval division
85.	Finland	Navy, sea guard
86.	France	Navy
87.	France, Metropolitan	--
88.	French Guiana	--
89.	French Polynesia	--
90.	French Southern and Antarctic Islands	--
91.	Gabon	Navy
92.	Gambia, The	Army marine unit
93.	Gaza Strip	--
94.	Georgia	Navy
95.	Germany	Navy
96.	Ghana	Navy
97.	Gibraltar	--
98.	Glorioso Islands	--
99.	Greece	Navy
100.	Greenland	--
101.	Grenada	Coast guard
102.	Guadeloupe	--
103.	Guam	--
104.	Guatemala	Navy
105.	Guernsey	--
106.	Guinea	Navy
107.	Guinea-Bissau	Revolutionary Navy
108.	Guyana	Coast Guard
109.	Haiti	Navy (demobilized)

110.	Heard Island and McDonald Islands	--
111.	Holy See (Vatican City)	--
112.	Honduras	Navy
113.	Hong Kong	Peoples Liberation Army Navy
114.	Howland Island	--
115.	Hungary	--
116.	Iceland	Coast guard
117.	India	Navy, coast guard
118.	Indian Ocean	--
119.	Indonesia	Navy
120.	Iran	Navy
121.	Iraq	Navy
122.	Ireland	Naval service
123.	Isle of Man	--
124.	Israel	Navy
125.	Italy	Navy
126.	Jamaica	Coast guard
127.	Jan Mayen	--
128.	Japan	Self Defence Force (Navy), coast guard
129.	Jarvis Island	--
130.	Jersey	--
131.	Johnston Atoll	--
132.	Jordan	Naval force
133.	Juan de Nova Island	--
134.	Kazakhstan	Naval force
135.	Kenya	Navy
136.	Kingman Reef	--
137.	Kiribati	Police
138.	Korea, North	Navy
139.	Korea, South	Navy, coast guard
140.	Kosovo	--
141.	Kuwait	Navy, coast guard
142.	Kyrgyzstan	--
143.	Laos	Riverine force
144.	Latvia	Navy
145.	Lebanon	Navy
146.	Lesotho	--
147.	Liberia	Navy
148.	Libya	Navy
149.	Liechtenstein	--

150.	Lithuania	Navy
151.	Luxembourg	--
152.	Macau	--
153.	Macedonia	--
154.	Madagascar	Navy
155.	Malawi	Naval detachment
156.	Malaysia	Navy, coast guard
157.	Maldives	National security service
158.	Mali	--
159.	Malta	Maritime squadron
160.	Marshall Islands	Police
161.	Martinique	Navy
162.	Mauritania	Navy
163.	Mauritius	Coast guard
164.	Mayotte	--
165.	Mexico	Navy
166.	Micronesia, Federated States of	--
167.	Midway Islands	--
168.	Moldova	--
169.	Monaco	--
170.	Mongolia	--
171.	Montenegro	--
172.	Montserrat	Police
173.	Morocco	Navy
174.	Mozambique	Navy
175.	Namibia	--
176.	Nauru	Police
177.	Navassa Island	--
178.	Nepal	--
179.	Netherlands	Navy
180.	Netherlands Antilles	--
181.	New Caledonia	--
182.	New Zealand	Navy
183.	Nicaragua	Navy
184.	Niger	--
185.	Nigeria	Navy
186.	Niue	Police
187.	Norfolk Island	--
188.	Northern Mariana Islands	--
189.	Norway	Navy, coast guard

190.	Oman	Navy. Police
191.	Pacific Ocean	--
192.	Pakistan	Navy
193.	Palau	--
194.	Palmyra Atoll	--
195.	Panama	National Maritime Service
196.	Papua New Guinea	Maritime operations element
197.	Parcel Islands	--
198.	Paraguay	Navy
199.	Peru	Navy, coast guard
200.	Philippines	Navy, coast guard
201.	Pitcairn Islands	--
202.	Poland	Navy
203.	Portugal	Navy
204.	Puerto Rico	Police
205.	Qatar	Navy
206.	Reunion	--
207.	Romania	Navy, border guards
208.	Russia	Navy
209.	Rwanda	Navy
210.	Saint Barthelemy	--
211.	Saint Helena	--
212.	Saint Kitts and Nevis	Coast guard
213.	Saint Lucia	Coast guard
214.	Saint Martin	--
215.	Saint Pierre and Miquelon	--
216.	Saint Vincent and the Grenadines	Coast guard
217.	Samoa	Police
218.	San Marino	--
219.	Sao Tome and Principe	Navy
220.	Saudi Arabia	Navy
221.	Senegal	Navy
222.	Serbia	Navy
223.	Seychelles	Coast guard
224.	Sierra Leone	--
225.	Singapore	Navy, Police
226.	Slovakia	--
227.	Slovenia	Navy
228.	Solomon Islands	Police
229.	Somalia	--

230.	South Africa	Navy
231.	South Georgia and the Islands	--
232.	Southern Ocean	--
233.	Spain	Navy
234.	Spratly Islands	--
235.	Sri Lanka	Navy
236.	Sudan	Navy
237.	Suriname	Navy
238.	Svalbard	--
239.	Swaziland	--
240.	Sweden	Navy
241.	Switzerland	Frontier guards
242.	Syria	Navy
243.	Taiwan	Navy, coast guard
244.	Tajikistan	--
245.	Tanzania	Navy, Police
246.	Thailand	Navy, Police
247.	Timor-Leste	--
248.	Togo	Navy
249.	Tokelau	--
250.	Tonga	Maritime force
251.	Trinidad and Tobago	Coast guard
252.	Tromelin Island	--
253.	Tunisia	Navy
254.	Turkey	Navy, coast guard
255.	Turkmenistan	Navy
256.	Turks and Caicos Islands	--
257.	Tuvalu	Police
258.	Uganda	Marine unit
259.	Ukraine	Navy, border troops
260.	United Arab Emirates	Navy, coast guard
261.	United Kingdom	Navy
262.	United States	Navy, coast guard
263.	United States Minor Outlying Islands	--
264.	Uruguay	Navy, coast guard
265.	Uzbekistan	--
266.	Vanuatu	Police
267.	Venezuela	Navy, coast guard
268.	Vietnam	Navy, coast guard

269.	Virgin Islands	--
270.	Virgin Islands (UK)	--
271.	Virgin Islands (US)	--
272.	Wake Island	--
273.	Wallis and Futuna	--
274.	West Bank	--
275.	Western Sahara	--
276.	Western Samoa	--
277.	World	--
278.	Yemen	Navy
279.	Zaire	--
280.	Zambia	--
281.	Zimbabwe	--

Appendix F
(Chapter 4)

OCEAN LAW OF JAPAN

この海洋基本法（平成１９年７月２０日施行）の翻訳は、「法令用語日英標準対訳辞書（平成１９年３月版）に準拠して作成したものです。なお、この法令の翻訳は公定訳ではありません。法的効力を有するのは日本語の法令自体であり、翻訳はあくまでその理解を助けるための参考資料です。この翻訳の利用に伴て発生した問題について、一切の責任を負いかねますので、法律上の問題に関しては、官報に掲載された日本語の法令を参照してください。

This English translation of the Basic Act on Ocean Policy (Effective July 20, 2007) has been prepared in compliance with the Standard Bilingual Dictionary March 2007 edition .This is an unofficial translation. Only the original Japanese texts of laws and regulations have legal effect, and the translations are to be used solely as reference material to aid in the understanding of Japanese laws and regulations. The Government of Japan shall not be responsible for the accuracy, reliability or currency of the legislative material provided in this Website, or for any consequence resulting from use of the information in this Website. For all purposes of interpreting and applying law to any legal issue or dispute, users should consult the original Japanese texts published in the Official Gazette.

Basic Act on Ocean Policy (Act No. 33 of April 27, 2007)

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Chapter II Basic Plan on Ocean Policy (Art.16)
Chapter III Basic Measures (Art.17-28)
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Supplementary Provisions

Chapter I General Provisions

Article 1 (Purpose)

The purpose of this Act is, with regard to the oceans, to stipulate the basic principles, to clarify the responsibilities of the State, the local governments, business operators and the citizens as well as to formulate the basic plan with regard to the oceans and other basic matters with regard to the measures on the oceans, by establishing the Headquarters for Ocean Policy in order to promote measures with regard to the oceans comprehensively and systematically, through contributing to the sound development of the economy and society of our State and to improve the stability of the lives of citizenry as well as to contribute to the coexistence of the oceans and mankind, in consideration of the fact that the oceans, occupying broad portion of the globe, are indispensable factors

for maintaining the lives of the living beings including mankind, and the fact that it is important to realize a new oceanic State in harmonization of the peaceful and positive development and use of the oceans with the conservation of the marine environment, under the international cooperation, as our State surrounded by the oceans, based on the United Nations Convention on the Law of the Sea and other international agreements as well as on the international efforts on the realization of the sustainable development and use of the oceans.

Article 2 (Harmonization of the Development and Use of the Oceans with the Conservation of Marine Environment)

With regard to the oceans, in consideration of the fact that the development and use of the oceans are the basis of existence for the economy and society of our State, and that securing the marine biological diversity and conserving other better marine environment are the basis of the existence of mankind and also indispensable for prosperous and affluent lives of the citizenry, the positive development and use of the oceans shall be executed, aiming at allowing for the sustainable development and use of the oceans with conservation of marine environment in order to enjoy the benefit of the oceans in the future.

Article 3 (Securing the Safety and Security on the Oceans)

With regard to the oceans, in consideration of the fact that securing the safety and security on the oceans is important for our State surrounded by the oceans, efforts to secure the safety and security of the oceans shall be positively promoted.

Article 4 (Improvement of Scientific Knowledge of the Oceans)

In consideration of the fact that scientific knowledge of the oceans is indispensable for the proper development and use of the oceans and conservation of the marine environment, while many scientifically unsolved fields remain with regard to the oceans, the scientific knowledge of the oceans shall be improved.

Article 5 (Sound Development of Ocean Industries)

With regard to the industries bearing the development, use and conservation of the oceans (hereinafter referred to as “Ocean Industries”), in consideration of the fact that they are the basis for the sound development of the economy and society of our State and of stabilization and improvement of the lives of the citizenry, their sound development shall be promoted.

Article 6 (Comprehensive Governance of the Oceans)

Governance of the oceans shall be executed comprehensively and integrally with respect to the development, use and conservation of the oceans, in consideration of the fact that the matters with regard to ocean resources, marine environment, maritime traffic and the safety and security of the oceans interrelate closely with each other, and such matters shall be examined as a whole.

Article 7 (International Partnership with regard to the Oceans)

In consideration of the fact that the oceans are the common heritages of mankind, and that the economy and society of our State have been conducted in close international interdependent relationship, promotion of measures with regard to the oceans shall be executed under the international partnership, aiming at bearing the leading role for the formation and development of the international order.

Article 8 (Responsibilities of the State)

The State shall be responsible for comprehensively and systematically formulating and implementing measures with regard to the oceans, in conformity with the basic principle prescribed in Article 2 to the preceding article inclusive(hereinafter refer to as "basic principle").

Article 9 (Responsibilities of the Local Governments)

Based on an appropriate sharing role with the State, the Local Governments shall be responsible for formulating and implementing the measures that suit the natural and social conditions of their districts with regard to the oceans, in conformity with the basic principle.

Article 10 (Responsibilities of Business Operators)

The business operators of Ocean Industries shall endeavor to conduct their business, pursuant to the basic principles, and to cooperate with the State and the Local Governments in implementing measures with regard to the oceans.

Article 11 (Responsibilities of Citizens)

Citizens, in recognition of the benefit of the oceans, shall endeavor to cooperate with the State and the Local Governments in implementing measures with regard to the oceans.

Article 12 (Coordination and Cooperation among the Relevant Parties)

The State, the Local Governments, business operators of Ocean Industries and other relevant parties, including organizations executing activities with regard to the oceans, shall endeavor to cooperate in mutual communication, in order to realize the basic principles.

Article 13 (Events of the Ocean Day)

The State and the local governments shall endeavor, on the Ocean Day as stipulated in Article 2 of the National Holidays Act (Act No. 178 of 1948), to hold the events that enable the citizens to have better understanding and deeper interests of the oceans.

Article 14 (Legislative Measures, etc.)

The Government shall take necessary legislative, fiscal or financial measures, and other measures in order to implement measures with regard to the oceans.

Article 15 (Preparation of the Documents and Publicizing)

The Government shall prepare documents on the situation of the oceans and the implemented measures by the Government with regard to the oceans, and shall publicize them in an appropriate way as needed.

Chapter II Basic Plan on Ocean Policy

Article 16

(1) The Government shall formulate a basic plan with regard to the oceans (hereinafter referred to as "Basic Plan on Ocean Policy"), in order to promote measures with regard to the oceans comprehensively and systematically.

(2) The Basic Plan on Ocean Policy shall prescribe the following matters:
   (i) The basic policy of measures with regard to the oceans
   (ii) The measures that the Government shall implement with regard to the oceans comprehensively and systematically
   (iii) In addition to what are listed in the preceding two items, any items necessary for promoting measures with regard to the oceans comprehensively and systematically

(3) The Prime Minister shall seek a cabinet decision on the draft of the Basic Plan on Ocean Policy.

(4) When the cabinet decision prescribed in the preceding paragraph has been made, Prime Minister shall publicize the Basic Plan on Ocean Policy without delay.

(5) Bearing in mind the changes on the situation with regard to the oceans, as well as based on an evaluation of the effect of measures with regard to the oceans, the Government shall review the Basic Plan on Ocean Policy almost every five years, and shall make necessary changes.

(6) The provisions of paragraph 3 and paragraph 4 shall apply mutates mutandis to make changes to the Basic Plan on Ocean Policy.

(7) The Government shall endeavor to take necessary measures for the smooth implementation of the Basic Plan on Ocean Policy by, for example, appropriating its budget each fiscal year, to the extent permitted by the State's finances, in order to secure funds necessary to ensure payment of the expenses required for the implementation of the plan.

Chapter III Basic Measures

Article 17 (Promotion of Development and Use of Ocean Resources)

The State shall take necessary measures on conservation and management of living aquatic resources, conservation and improvement of the growing environment for aquatic plants and animals, increase of the fishing ground productivity, promotion of the development and use of petroleum, inflammable natural gas, other mineral resource including manganese ores, cobalt ores existing on and under the sea floor, establishment of the system for the above mentioned missions and execution of others, in order to promote the positive development and use of the oceans, considering conservation of the marine environment and to allow for the sustainable development and use of the ocean resources in the future.

Article 18 (Conservation of Marine Environment, etc.)

(1) The State shall take necessary measures to conserve the marine environment including securing the biodiversity in the oceans with conservation and improvement

of the habitat, reduction of the pollution load caused by water flow into the oceans, prevention of the discharge of waste materials to the oceans, prompt prevention of the oil spill caused by accidents of the vessels and others, conservation of the seascape and others, in consideration of the fact that the oceans make a great impact on the conservation of the global environment such as the prevention of global warming and others.

(2) The State, from the view points of preventing adverse effect on the marine environment, based on the scientific knowledge, shall execute the measures prescribed in the preceding paragraph and make efforts to review them properly.

Article 19 (Promotion of Development of Exclusive Economic Zone, etc.)

The State, in consideration of the fact that it is important to strengthen the efforts with regard to the development, use and conservation and others of the Exclusive Economic Zone and other areas (the term "the Exclusive Economic Zone and other areas" shall means the Exclusive Economic Zone defined by Article 1, paragraph 1 of the Law on the Exclusive Economic Zone and the Continental Shelf (Law No.74 of 1996) and Continental Shelf defined by Article 2 of the Law. The same shall apply hereinafter)(hereinafter referred to as "Development and others of the Exclusive Economic Zone and other areas") shall take necessary measures in order to promote the Development and others of the Exclusive Economic Zone and other areas including the Development and others of the Exclusive Economic Zone and other areas according to the characteristics of its sea areas, prevention of the infringement on the sovereign rights of our State in the Exclusive Economic Zone and other areas and execution of others.

Article 20 (Securing Maritime Transport)

The State shall take necessary measures to secure the efficient and stable maritime transport, including securing of Japanese vessels, raising and securing seafarers, developing hub ports in the international maritime transport network and executing others.

Article 21 (Securing the Safety and Security of the Oceans)

(1) The State, in consideration of the fact that, for the economy and society of our State, surrounded by the oceans and dependent on import for major portion of the resources, it is essential to secure the development and use of the marine resources, the safety of the maritime transport and others as well as to maintain the order in the oceans, with regard to the oceans, shall take necessary measures to secure the peace and safety of our State as well as to secure the maritime safety and public order.

(2) The State shall take necessary measures with regard to the prevention of natural disaster, prevention of damage expansion in case of occurrence of natural disaster and recovery from disaster (hereinafter referred to as "Disaster Prevention"), in order to protect national land as well as life, body and property of the citizens from disasters such as tsunamis, storm surges and others.

Article 22 (Promotion of Ocean Survey)

(1) The State, in order to formulate and implement the measures with regard to the oceans properly, shall make efforts to execute the necessary survey including the grasp of the ocean situation, the prediction of the change of marine environment and other survey

to formulate and implement the measures with regard to the oceans (hereinafter referred to as "Ocean Survey"), as well as to establish systems for monitoring, observing, measuring and other activities necessary to the Ocean Survey.

(2) The State shall make efforts to provide the information obtained by Ocean Survey, in order to contribute to the formulation and implementation of measures by the Local Governments with regard to the oceans as well as to contribute to the activities by the business operators and others.

Article 23 (Promotion of Research and Development of Ocean Science and Technology, etc.)

The State, in order to promote the research and development and to disseminate the result with regard to the science and technology of the oceans (hereinafter referred to as "Ocean Science and Technology), shall take necessary measures including establishing the research systems, promoting research and development, nurturing researchers and technicians, strengthening coordination among such research institutions as the State, Incorporated Administrative Agency (referring to the Incorporated Administrative Agency set forth in the Act on General Rules for Incorporated Administrative Agency (Act No.103 of 1999), Article 2, paragraph 1; the same shall apply hereinafter), the prefecture, and Local Incorporated Administrative Agency (referring to the Local Incorporated Administrative Agency set forth in the Act on Local Incorporated Administrative Agency (Act No.118 of 2003), Article 2, paragraph 1; the same shall apply hereinafter), universities and private bodies, and executing others.

Article 24 (Promotion of Ocean Industries and Strengthening the International Competitiveness)

The State, in order to promote the Ocean Industries and to strengthen the international competitiveness, shall take necessary measures with regard to the Ocean Industries, to promote the cutting-edge research and development, to upgrade the level of technology, to nurture and secure the human resources and to reinforce the management basis with the improvement of competitive conditions and others as well as to exploit new businesses and to execute others.

Article 25 (Integrated Management of the Coastal Zone)

(1) The State shall take necessary measures for the coastal sea areas and land areas, where recognized suitable for the measures to be implemented in a unified manner upon the natural and social conditions, to be managed properly, by the regulatory and other measures to the activities implemented in the integrated manner, in consideration of the fact that there are difficulties in keeping on enjoying the benefit brought by the resources, natural environment and others of the coastal sea areas in the future only by implementing the measures with respect to the coastal sea areas when issues in the coastal sea areas are originated by the activities on land.

(2) The State shall give enough consideration, when executing the measures prescribed in the preceding paragraph, to securing the protection of the seacoasts from hazards caused by tsunamis, storm surges, high waves and other movement of seawater or ground deformation, and to securing improvement and conservation of the coastal environment as well as to promoting proper use of the seacoasts by the public, in

consideration of such fact that seacoasts have severe natural condition with characteristic landscape, while supporting and raising a great variety of life.

Article 26 (Conservation of the Remote Islands, etc.)

The State, with regard to the remote islands, shall take necessary measures including conserving the seacoasts and others, securing the safety of navigation as well as establishing the facilities for the development and use of ocean resources, conserving natural environment in adjacent sea areas, maintaining infrastructure for the life of inhabitant and executing others, in consideration of such fact that the remote islands bear an important role in conserving our territorial sea and the Exclusive Economic Zone and other areas, and in securing the safety of navigation in the development and use of ocean resources as well as in conservation of the marine environment.

Article 27 (Securing International Coordination and Promotion of International Cooperation)

(1) The State shall take necessary measures to secure the international coordination with regard to the oceans including subjective involvement in the formation of international agreements and others with regard to the oceans as well as execution of others.

(2) The State shall take necessary measures, with regard to the oceans, to promote the international corporation related to ocean resources, marine environment, Ocean Survey, Ocean Science and Technology, crime control at sea, Disaster Prevention, maritime rescue and others, in order to accomplish the role positively in the international society.

Article 28 (Enhancement of Citizen's Understanding of the Oceans, etc.)

(1) The State shall take necessary measures, in order that citizens shall have a better understanding of and deeper interests in the oceans, to promote school education and social education with regard to the oceans, propagation and enlightenment of the United Nations Convention on the Law of the Sea and other international agreements as well as international efforts to realize the sustainable development and use of the oceans, and popularization of ocean recreation.

(2) The State shall take necessary measures to promote interdisciplinary education and research at universities and others, in order to nurture human resources with knowledge and capability required to meet the political issues appropriately with regard to the oceans.

Chapter IV Headquarters for Ocean Policy

Article 29 (Establishment)

In order to promote measures with regard to the oceans intensively and comprehensively, Headquarters for Ocean Policy (hereinafter referred to as “the Headquarters”) shall be established in the Cabinet.

Article 30 (Affairs under the Jurisdiction)

The Headquarters shall take charge of affairs listed in the following items:

(i) Matters with regard to drafting and to the promotion of execution of Basic Plan on Ocean Policy.
(ii) Matters with regard to synthesis coordination of measures of implementation by relevant administrative bodies based on Basic Plan on Ocean Policy.
(iii) In addition to the tasks referred to in the preceding two Paragraphs, matters with regard to planning and drafting of important measures with regard to the oceans as well as synthesis coordination.

Article 31 (Organization)
The Headquarters shall consist of the Director-General of the Headquarters for Ocean Policy, the Vice Director-Generals of the Headquarters for Ocean Policy, and Members of the Headquarters for Ocean Policy.

Article 32 (Director-General of the Headquarters for Ocean Policy)
(1) The Headquarters shall be headed by the Director-General of the Headquarters for Ocean Policy (hereinafter referred to as "Director-General"), the post which shall be served as Prime Minister.
(2) The Director-General shall be in charge of general coordination of the affairs of the Headquarters, and shall direct and supervise the relevant officials.

Article 33 (Vice Director-General of the Headquarters for Ocean Policy)
(1) The Vice Director-General of the Headquarters for Ocean Policy (hereinafter referred to as "Vice Director-General") shall be assigned in the Headquarters, and The Chief Cabinet Secretary and the Minister for Ocean Policy (the Minister of the State, in charge of assistance to the Prime Minister, with regard to intensive and comprehensive promotion of measures with regard to the oceans upon the direction of the Prime Minister) shall serve as the Vice Director-General.
(2) The Vice Director-Generals shall assist the duties of the Director-General.

Article 34 (Members of the Headquarters for Ocean Policy)
(1) Members of the Headquarters for Ocean Policy (hereinafter referred to as "Members") shall be assigned in the Headquarters.
(2) The Members shall be assigned with all Ministers of the State other than the Director-General and Vice Director-General.

Article 35 (Submission of Materials and Other Forms of Cooperation)
(1) The Headquarters may, if it considers it necessary for implementing affairs under the jurisdiction, demand submission of materials, statements of opinions, explanations and other required cooperation from the heads of the relevant administrative organs, Local Governments, Incorporated Administrative Agencies and Local Incorporated Administrative Agencies and the representatives of statutory juridical persons (Corporations which are directly established by Acts or juridical persons which are established according to their statute of establishment provided by special Act, under provision of Paragraph 15 of Article 4 of the Act for Establishment of the Ministry of Internal Affairs and Communications(Act No. 91 of 1999)).

(2) The Headquarters may also demand required cooperation from parties other than those prescribed in the preceding paragraph, if it considers it especially necessary for implementing affairs under the jurisdiction.

Article 36 (Affairs)

Affairs concerning the Headquarters shall be processed within the Cabinet Secretariat and administered by the Assistant Chief Cabinet Secretary under commission.

Article 37 (Competent Minister)

The competent Minister as set forth in the Cabinet Act (Act No. 5 of 1947) for the matters pertaining to the Headquarters shall be the Prime Minister.

Article 38 (Delegation to Cabinet Orders)

In addition to what is provided for in this Act, necessary matters concerning the Headquarters shall be prescribed by a Cabinet Order.

Supplementary Provisions

(Effective Date)

(1) This Act shall come into effect as from the date specified by a Cabinet Order within a period not exceeding three months from the day of promulgation.

(Review)

(2) With regard to the Headquarters, comprehensive review shall be executed in five years after entering into force of this Act, and necessary measures shall be taken based on the results of the review.

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Born August 15, 1946 in *Trikaripur*, a beautiful village in the northern part of Kerala in India, where his ancestors lived, Prabhakaran Paleri moved to the nearby port town of Kozhikode (Calicut) with his parents, C.V. Raghavan Nair and Paleri Padmavathy Amma, where he completed his basic education. He graduated in mechanical engineering from the prestigious Regional Engineering College, now renamed the National Institute of Technology in Kozhikode in 1968 with nuclear engineering as elective. Immediately he joined the Indian Navy as a commissioned officer in the executive branch. In 1977 he joined the newly formed Customs Marine Organisation on deputation and worked for his development. At that time the Indian Coast Guard was in the making, and he was also involved in providing assistance to build and operate it. In 1981, he was permanently absorbed in the newly formed Indian Coast Guard with the partial merger of the Customs Marine Organisation. Thereafter he continued his constructive association with the coast guard and rose to the rank of the director general before retiring on August 31, 2006. He was awarded thrice by the government of India in his career.

During the period of his career he also pursued academic and research interests on strategic subjects. He obtained master's degree in business administration with financial management as elective and a thesis on development of shipping, from the University of Madras; fellowship in shipping management from the Narotham Morarjee Institute of Shipping in Mumbai, master's degree in national security strategy from the National Defense University, Washington, D.C., and an interdisciplinary Ph.D. degree in business management and strategic studies from the University of Madras. In addition, he underwent various short courses in allied subjects that included navigation and direction,

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He has researched and published various papers in strategic journals and also authored two books titled *Role of the Coast Guard in the Maritime Security of India* (Knowledge World, Mumbai, 2002) and *National Security: Imperatives and Challenges* (Tata McGraw-Hill Publishing Limited, New Delhi, 2007) respectively. His general research interests are in the overall concept of national security and human well-being with focused interests on the maritime dimensions of unlawful activities, terrorism, peacekeeping, conflict resolution, environment, and international affairs.

He is widely travelled. He had represented India in various international meetings and conferences. Notable among them are the UN Seminar on Fire Arms, Code of Fisheries Regulations (FISHCODE) of the Food and Agricultural Organisation, Regional Agreement for Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP), User State Conference on Malacca and Singapore Straits, meetings of the Marine Environmental Protection Committee (MEPC) at IMO, etc. He intend to pursue his activities as a strategic researcher and author.

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Dr. Prabhakaran Paleri *

要旨

本論は、世界の沿岸警備隊（海上保安庁）組織及び活動情報を収集し、地政学的な視座の下に沿岸陸域を包含する広義の海洋における現行沿岸警備隊組織が顕在的及び潜在的に抱える問題を分析、検討し、将来のあるべき組織様態を示唆したものである。

192 ケ国にのぼる国連参加国の内、150 ケ国は海洋に面した国であり、42 ケ国は言わば陸に閉ざされた国である。しかし、陸域にある 42 ケ国においても、9 ケ国は領土内の湖水、河川を管轄するための沿岸警備隊同様の保安組織を有し活動していることは予想外に知られていない。これらの内陸の同様組織を含め、非戦時下における海洋社会の安全懸念の完全な払拭は不可能としても、沿岸警備隊が海上活動の安全に相応の貢献をしていることは事実ではあるが、いずれの沿岸警備隊もその組織機能を十分に発揮しているとは言えない。各組織の活動分析から、活動に必須となる機材及び人的整備の貧弱さ、政府の沿岸警備隊の機能価値の認識不足、行政執行上の制約などが本来組織機能を発揮し得ない要因となっていることが明白である。また、この他、沿岸警備隊の存在そのものによって海上における非合法的活動への抑制力の無理解、海難防止の機能欠陥の指摘、捜索、救助活動分野への研究投資の不足、海難発生時等非常時の国際間の連携の拙さ及び無さ、各組織の地域的及び国際的な連合・連携の必要性認識の弱さ、海賊対策への全般組織としての遅れ、暴徒及び戦闘員の交戦能力の強化、不法な海洋汚染の実態、活動要請地域からの要望への冷淡な対応、海洋に接する国家でありながら国家組織として沿岸警備隊を保有していない国の存在、随所で見られる組織機能の誤解、など多くの問題があり、沿岸警備隊がその組織機能を十分に果たし得るためには、各課題について真摯な審議と早期の実行、整備が必要である。

沿岸警備隊組織必要論の根源には、海洋における危険あるいは損害発生を招来する予兆として意味付けられる脅威の分析の如何がある。ここでは、脅威を、外的・内的、顕在的・潜在的、直接的・間接的区分を３軸とする座標系（Threat Matrix Cube）内にあるものと捉え、これらの組み合わせとしての８要素を基に脅威分析を行い、これらの脅威に対処すべき組織体制、行動力の現状及び問題点を指摘した。

沿岸警備隊の非戦闘時における重要性が各国及び国際社会で真に認識されるまでには、さらなる年月を重ねることとなろうが、少なくとも然るべき近未来において、将来社会が必要とする組織将来像は、海上における警備武装パワーとしての沿岸警備隊（Coast Guard）の国際社会認知の上に、国連が承認する国際共通の統一憲章を持ち、国際協力活動を前提としつつも個々の状況要件を満たす独立した武装組織となるべきであろう。

沿岸警備隊の実活動は、近隣国家間協力から次第に協力域を広げ、最終的には広く国際若しくは国連の枠組み中に取り込まれ、海洋における諸活動の安全と平和の確立、違法及び非合法活動の防止、紛争解決に大きな力となる。総括すれば、沿岸警備隊は非戦闘時において既存の海軍に替わる国際的な枠組みを有する組織となり、その行動規範・理念は IMO において審議され制定されるべきである。

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