National Maritime Foundation

Visakhapatnam Regional Chapter

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VISAKHAPATNAM REGIONAL CHAPTER

Advisory Board

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Strengthening Security Environment

India's emergence as a maritime power underscores the need to strengthen security environment. The term 'security' is not easy to define. It implies not only external and internal security concerns but also non-conventional security issues. Civil society, think tanks in particular, must help government in its quest for expanding strategic autonomy. Security strategy is too serious a matter to be left entirely to government and the importance of public participation in debates and discussions cannot be overstated.

Among the objectives of the National Maritime Foundation are to " *conduct studies and research in the area of maritime interests of India spanning across the entire spectrum of oceanic activity..... facilitate and provide for the publication of newsletters, research papers, books and journals on maritime affairs*." In consonance with the aims and objectives of NMF, the Visakhapatnam Regional Chapter has, since its inception three years ago, been organizing seminars and meetings on some of the areas identified and bringing out bimonthly Newsletter. Thanks to Shri Ajeya Kallam, Chairman of Visakhapatnam Port Trust who sanctioned a sum of Rs 2.8 lakhs, a research project was undertaken by anthropologist Professor P Vijayaprakash and his team on *Traditional Maritime Knowledge* of the fishermen communities of three north Andhra coastal districts of Srikakulam, Vizianagaram and Visakhapatnam, covering a stretch of 362 km, about 1/3 of the coastline of Andhra Pradesh, India's largest maritime state. The study revealed how the fishermen communities of 192 villages of the area have become an endangered community due to increasing mechanization and hazards of pollution. Their food security is in jeopardy, health is adversely affected and morale shattered—all in a span of less than two decades. Moved by the power point presentation of the report and the plight of the traditional fishermen communities Police Commissioner Shri J.Purnachandra swung into action. Rao took the help of Prof Vijayaprakash in locating some of the affected fishermen and with the help of Visakhapatnam Port Chairman Shri Ajeya Kallam, arranged for the training and employment of 30 young fishermen to become the torch bearers of maritime culture and pathfinders for alternative livelihoods. Another member of Vizag Regional Chapter Shri J.Sreenivas Raju CEO of Geomardy, has launched research programmes in collaboration with foreign experts and research organisations on unmanned deep sea submersible vehicles and related subjects.

Five of the seven countries with which India shares maritime boundaries are on the eastern seaboard. The need for beefing up ties with these nations, along with the other littoral states, has been recognised. The seminar organized last year, jointly by Eastern Naval Command and National Maritime Foundation, discussed the growing significance of India's *Look East Policy*. The 'reawakening of eastern seaboard' heralds the advent of a new era for the nation. The immediate task is to identify the challenges and opportunities that constitute 'crucial elements of the emerging security environment.'

The activities of the Visakhapatnam Regional Chapter had begun three years ago with a series of lecture programmes on the Visakhapatnam Port, Heritage and Culture of north Andhra, once a part of the Kalinga empire, the numerous Buddhist sites in the area, and the Hindustan Shipyard, the foundation stone of which was laid by Dr Rajendra Prasad in 1941 and the first ship of which was launched by Jawaharlal Nehru in 1948. Intellectually stimulating lectures and seminars followed thanks to the Eastern Naval Command and National Maritime Foundation. As Shashi Tharoor writes in his latest work *Pax Indica* " The brotherhood of man is a tired cliché; the neighbourhood of ocean is a refreshing new idea."

Visakhapatnam Regional Chapter
July, 2012

A. Prasanna Kumar
Editor

"NAVIES AND NATIONS"

Introduction

Vice-Admiral Anil Chopra AVSM
FOC-in-Chief, Eastern Naval Command

1. Professor Prasanna Kumar, Members of the Vizag Chapter of the NMF, ladies and gentlemen. I am indeed privileged to address this learned gathering of distinguished citizens of our very own City of Destiny.

2. I must not only thank the Professor and the NMF for inviting me to speak at this forum, but also apologise that I have not been able to do so earlier, on account of having being kept truly and fully occupied by the multifarious demands of my present assignment.

3. The organizers were kind enough to let me choose any topic for my talk, which is always a difficult choice! I have opted to speak on the subject of "Navies and Nations", because I believe it is important for Indians to be aware of the very significant linkages between National Power, National Prosperity, and the possession of a strong Navy. As history has lucidly recorded, and as indeed the contemporary strategic scenario emphatically indicates, the destinies of Nations and their Navies are inextricably linked.

4. History has shown that it has never been possible to be a significant global power, or even a major regional player, without a strong Navy, as I shall highlight, later in this talk. Even in today's, high-tech space-age, the lack of a powerful Navy confines a Nation, prosperous or otherwise, to its limited geographical location, unable to further its' interests or exert influence much beyond its borders. After all, more than its population, or even its economic success, it is the recent advent of a stronger Chinese Navy which is clearly causing unease across the World, from the US to East Asia to the IOR, India included.

5. Why is this so, especially when the affairs of mankind are all centered and decided on land? Why is this so, even despite the quantum jumps in aviation, space, and long range weapons and communications technologies?

6. It is because Navies possess unique attributes which enable them to disproportionately and decisively influence the outcome of conflicts on land. These unique attributes stem from the nature of the sea itself, and from the characteristics and nuances of Sea power.

7. The fortunes of Nations are linked to Navies also because only economically and technologically advanced nations can aspire to build a Strong Navy. In effect, a country has to have the potential, before having the luxury of choosing to acquire a Battle Fleet of any consequence. Nations such as Germany, and even France had the potential but elected to focus on continental military forces, and their consequent weakness at sea prevented them from acquiring great power status in the manner of Spain, Britain, the US and the USSR. Today, we are witness to the rapid growth of the PLA Navy by the sustained focus of the Chinese Government on acquiring maritime power, and the consequent great power status.

8. The concurrent and entwined rise and decline of nations and their Navies, is very evident over the last 500 years of human history, which has also witnessed, the birth and subsequent flourishing of Westphalian nation states.

9. When Spain and Portugal were the leading Naval powers in the 15 th/ 16 th centuries, they divided the known world between them. The defeat of the Spanish Armada in 1588 by England, and the consequent decline of Spanish naval capability also saw the end of Spain's great power status.

10. The subsequent British Empire was almost entirely leveraged on the Royal Navy, and Pax Britanica came about because Britainnia ruled the waves unchallenged from Trafalgar to the Second World War. The Royal Navy's post war decline and the simultaneous rise of the USN saw the US displacing Great Britain as the leading superpower. This status was challenged briefly by the USSR through the remarkable growth of the Soviet Navy under Admiral Gorshkov. The decline of the Russian Naval Power has today brought about the unipolar world dominated by the US. As I mentioned earlier, China's quest for power and prosperity is now hinged on rise of the Chinese Navy, which incidentally has been declared the senior service for the first time.

11. India too has the potential, the latent wealth and technologies to acquire influence well beyond its shores, by building of a world- class Navy. However this requires the collective will and aspirations of the people as a whole. Maritime understanding and a sea-going disposition in the general populace is vital to the development of naval power. And this is why; I have chosen to speak to you on this subject.

12. I shall broadly draw your attention to three facets indicated on the screen i.e the Sea and Sea Power, a Historical survey of Navies and Nations, and before I conclude, a Maritime perspective of India.

Sea and Seapower

13. Let me begin with the Sea itself, also known as the Great Commons, since it is public property, as it were, with no owner. This common heritage of mankind covers 70% of our planet.

14. 2/3rd of the world's population lives within 200 miles of the sea. A vivid night-time photograph of the earth makes this point. The centers of population and industry are well lit, and the lighting nearly matches the coastlines of the continents. This is often referred to as the littoral, and is the focus of most global conflict.

15. Over 150 of the 192 member states of the UN are coastal states. Since the 1970s, due to the UNCLOS, they have all extended their jurisdiction out to sea – as far as 200 nm by way of Exclusive Economic Zones. However, they don't own the seas, but only the living and the non-living resources of the sea in their Exclusive Economical Zones. Except for a narrow belt of 12 miles around the coast known as the territorial waters, no country has total jurisdiction over the seas. Even in the territorial waters, vessels of all nations have the freedom of navigation. In effect, three-quarters of the Earth's surface is the common property of all nations, without any owner. Therefore unlike air and land forces, naval forces can legally roam across the planet, at will.

16. All applications of sea power flow from the fact that the sea is the greatest of highways. It is much easier to move a ton of anything by water than by any other means. This applies not only to cargo for trade, but also to troops and ammunition, and their logistic supply. The seas affords the cheapest and safest means to transport bulk goods. Today the US finds it cheaper to ship semi-conductors from Malaysia or cars from Japan, than to carry the same items from one of its coasts to the other by road or rail.

17. In an increasingly globalised world, with exponential international trade and mutual dependencies, the role of shipping has expanded manifold. International shipping has become a complex web of inter-regional, regional and sub-regional maritime linkages, with ships owned by one state, registered in another, with a crew from a third, carrying cargo belonging to a fourth, but transporting it from a fifth towards a destination in a sixth country which may only get finalised during the ships' transit, due to the practice of spot-buying on the high seas.

18. As you all are aware, the seas are also a treasure trove of natural resources – both living and non-living. Fish provide the staple food for millions around the world, and are vital for human sustenance. The seabed also contains rich deposits of metals and minerals and is also abundant in oil and natural gas deposits. The finite nature of land resources continues to propel mankind to look to the seas for natural resources. New technology and increasing jurisdiction by way of delineation of the continental shelf by UNCLOS, will not only allow nations to explore deeper into the oceans, but also open new vistas of conflict. The South China Sea is a classic example of such a scramble for undersea and seabed resources amongst the competing nations of the littoral.

Sea Power

19. Turning to Sea Power. As a concept this means more than just military power at sea. It is the sum of a nation's capabilities to implement its interests in the ocean areas for the political, economic, and military gains in peace or war, in order to attain national objectives. The principal components of sea power are naval power, amongst other elements like ocean commerce, ocean industry and ocean science.

20. The sea can be either a barrier to attack, or a highway leading both to our enemies and to us. Naval power creates the barrier and naval power exploits the highway, but naval weakness makes the sea an invitation to attack along the highway. A deployed fleet tends to keep problems at arm's length.

21. Thus Mahan and other thinkers postulated that being a great power necessitates being a sea power, which then translates into commercial and military strength. Admiral Mahan had also espoused six conditions, as having a vital bearing on the sea power of a nation, such as - geographical position; physical conformation; extent of territory; population; national character; and the policy and nature of government institutions.

22. At the turn of the twentieth century, Sir Halford Mackinder, founder of geo-politics, postulated an opposing Heartland Theory. This argued that the introduction of railways had brought about a revolution and shifted the strategic balance in favour of continental powers like Russia and Germany who could now prosper without dependence on the seas. Time has however proved Mackinder's conclusions to be flawed.

23. Let us now take a look at some concepts that govern sea power. The operating areas of maritime

forces range from the open ocean areas, colloquially known as “blue waters” to the more confined and often shallower waters close to the coast also referred to as “brown waters”. The littoral is sometimes referred to as the “green waters”. Of considerable strategic significance are certain land features which divide bodies of water and act as bottle-necks or maritime choke points. Straits such as Suez, Aden, Hormuz, Malacca, Sunda and Tsushima are some of the choke points, which if blocked, have the potential to cause havoc with the world economy.

24. Let me mention here just a few of the many points of difference that exist between the maritime and the land environment:-

(a) The area encompassed by the maritime battlespace tends to be immense, as compared to that covered by a land battle, not only because ships are mobile but also because there are no boundaries and no terrain on the high seas. Surveillance and reconnaissance of the vast ocean therefore becomes critical.

(b) On land, victory comes with occupation of a contested area. At sea, long term occupation of any body of water is meaningless. Apart from the choke points, the sea shows no features of strategic significance. It is how you are over the sea which matters, i.e. for power projection, for surprise, for logistic support, for disrupting enemy’s trade and energy lifelines and so on.

(c) The maritime environment has also traditionally permitted the Naval Commander a much greater degree of independence and flexibility than his army or air force counterpart. This is attributable to vast operating distances, and the traditional isolation of naval forces.

25. In the old days, a Navy Captain, far from home, without modern communications, could negotiate a treaty or even start a war on his own initiative. During the era when Britania ruled the waves, when a RN warship sailed from the British Isles to various corners of the world, the only orders to her Captain would be something like this – “sail with dispatch to the East Indies, and further His Majesty’s interest in such manner as you may deem fit”.

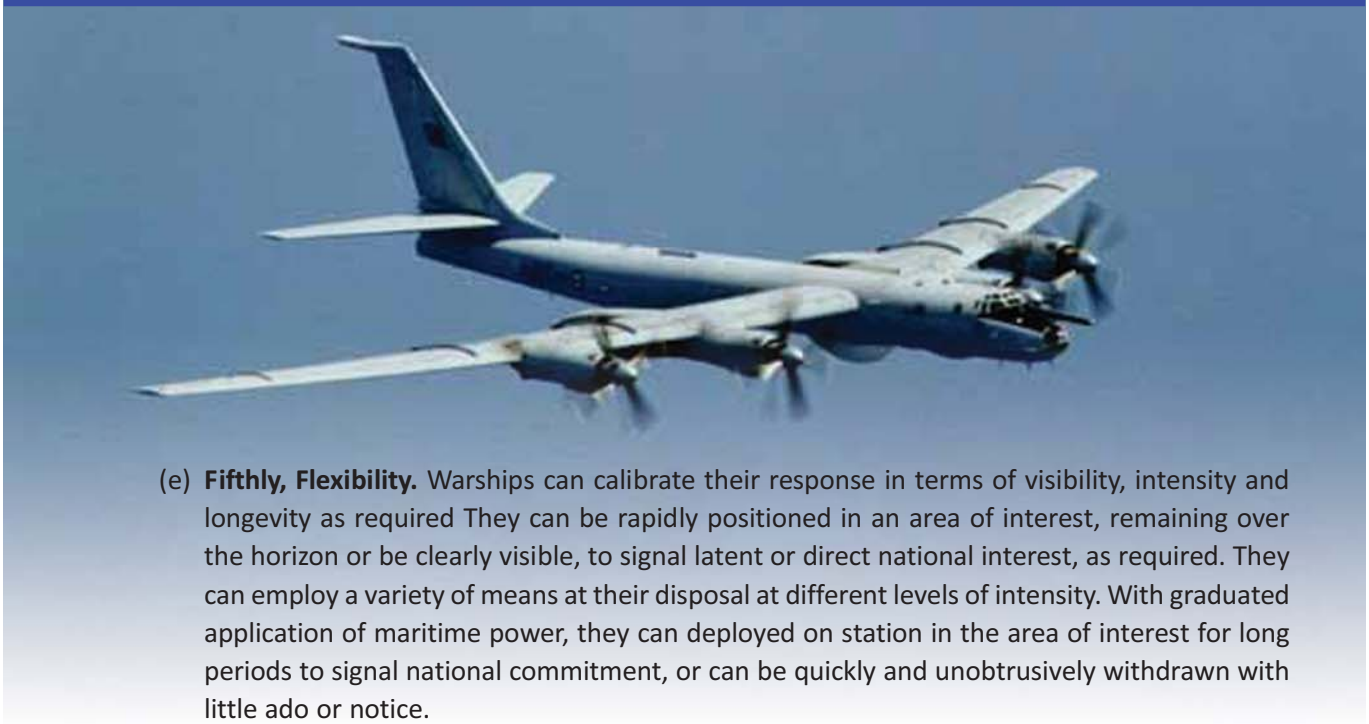
26. With that backdrop, I must emphasise that the nation at large, its thinkers and policymakers must be able to recognise the distinctive attributes of maritime power to see what makes the navy different. Let me dwell on a few of these unique characteristics of a Navy.

(a) **Firstly, Access.** As I had underlined earlier, International law provides free and legal access for ships right upto the territorial waters of nations, and also allows the right of what is called innocent passage for traversing these waters. Even completely landlocked states can become militarily accessible from the sea by use of long range missiles and deployment of expeditionary forces by helicopters, as we have seen in Afganistan.

(b) **Secondly, Mobility.** Maritime forces can move hundreds of miles a day over most of the world's surface, allowing them to respond from over the horizon, becoming selectively visible to friend or foe when required. This mobility allows a Carrier Battle Group to move over 600 nm in a day. One day a Battle Group can be off Oman/ Pakistan second day off the Gulf of Aden and the third off Colombo.

(c) **Thirdly, Sustenance.** Maritime forces have integral logistic support, including fuel, provisions, water, ammunition and stores. The time taken for Ships to be replenished is also minimal. This permits naval forces to sail at short notice, deploy to the area of interest using access and mobility, and remain there for extended periods.

(d) **Fourthly, Reach.** The attributes of access, mobility and sustenance, which I have just mentioned, together accord naval forces the ability to apply national maritime power at long distances from home base, and for extended periods. This sustained reach of naval forces enables a wide spectrum usage of maritime power in areas of national interest overseas, which would otherwise be beyond the sphere of the nations' influence using other components of national and military power. For example, whilst aircraft may be able to fly to long distances especially with air to air re-fuelling, they cannot sustain at the point of application of power.



(e) **Fifthly, Flexibility.** Warships can calibrate their response in terms of visibility, intensity and longevity as required They can be rapidly positioned in an area of interest, remaining over the horizon or be clearly visible, to signal latent or direct national interest, as required. They can employ a variety of means at their disposal at different levels of intensity. With graduated application of maritime power, they can deployed on station in the area of interest for long periods to signal national commitment, or can be quickly and unobtrusively withdrawn with little ado or notice.

(f) **And lastly, Versatility.** Warships can easily change their posture, undertake several tasks concurrently, and be rapidly available for re-tasking. Ships are always manned and provisioned to sail at short notice for operational commitments. Warships can therefore, send very strong or very subtle messages by appearing over the horizon, or again by disappearing over the horizon, without any stigma of retreat.

History

27. Let me now outline, how throughout history, nations that have recognized these attributes and potential of the Sea and Sea Power, have succeeded in becoming great powers with the attendent prosperity and progress for their people.

28. The ancient Greeks coined the term thallasocracy to describe a state whose power derives from its maritime supremacy. Ancient Crete is credited with being the first thallasocracy which dominated the shores of the Aegean Sea in the run up to the Christian era. Athens, Carthage and Rome were other pre-eminent thallasocracies of this epoch.

29. **Greece.** The Persian Wars were the first to feature large-scale naval operations including combined land-sea operations. In 490 BC, the Persians, under Xerxes, forced the Greeks to retreat, and Athens evacuated its population to the nearby Salamis Island. The ensuing Battle of Salamis was one of the decisive engagements of history. The Greeks, under Themistocles, trapped the Persians in a narrow channel causing the loss of 200 Persian ships, and paving the way for the Greeks to become the first great power of the then known world.

30. **Rome.** The Roman Republic had never been much of a seafaring nation, but it had to learn, and learn fast. In the Punic Wars with Carthage, Romans developed the technique of grappling and boarding enemy ships with soldiers. By the time of the Roman Civil War and the Battle of Actium in 31 BC, Rome had acquired naval mastery over the Mediterranean cementing its status as the then sole superpower.

31. **Islamic Caliphate.** With the decline of Rome, the Islamic Caliphate, or the Arab Empire, became the dominant naval power in the Mediterranean Sea from the 7th to 13th centuries, during what is known as the Islamic Golden Age.

32. **City States.** As Arab naval power in the Mediterranean began to wane, the Italian trading towns of Genoa, Pisa, and Venice stepped in to seize the opportunity, setting up commercial networks and building navies to protect them. The Genoese and Venetians fought four naval wars in the 13 th and the 14 th centuries. The last ended with a decisive victory for Venice, which gave them almost a century to enjoy Mediterranean trade domination before other European countries heralded the Age of Exploration and the subsequent European domination of the world.

33. Before I dwell on further European maritime successes, I would like to highlight Asia's maritime failures. China, Japan India and even the Turks, all missed the boat, literally and metamorphically, despite excellent maritime skills, because of the inability of their rulers and their populations to look seaward, and understand the advantages of Maritime power.

34. **China.** China's first permanent standing navy was established by the Song Dynasty in the 12th century. Equipped with the magnetic compass, the Chinese became proficient experts of navigation in their day, and dominated maritime trade throughout South East Asia in the 12th – 13 th centuries, well before the Portuguese and Spanish explorers took to the seas. In fact, the Chinese invaded Japan twice with enormous fleets in 1274 and again in 1281, though both attempts were unsuccessful.

35. In the 15th century, the Chinese Admiral Zheng He was assigned to assemble a massive fleet for several voyages abroad, sailing throughout the waters of the South East Pacific and the Indian Ocean. However The Chinese rulers turned inward despite Zeng He's pioneering efforts, and Chinese naval power did not bloom right upto the very recent present.

36. **Japan.** The Japanese also had commendable maritime skills. In the late 16th century, Shogun Hideyoshi gathered an enormous fleet to assault Korea, and then China. The plan of the conquest in China was negated by his death, and the Japanese military retreated from the Korean Peninsula. The Tokugawa Shogunate turned inwards and abandoned warships. The Japanese Navy remained stagnant until the Meiji restoration commencing 1863 and rose again at the turn of the 20 th century into a credible Navy which challenged the Allies in World War II. It however could never acquire great-power status, despite it's attempts to do so.

37. **Ottomans.** The Ottomans built a powerful navy, rivaling the Italian city-state of Venice during the Ottoman-Venetian Wars from 1499 to 1503. Although they were sorely defeated in the Battle of Lepanto of 1571 by the Christian Holy League, the Ottomans quickly rebuilt their naval strength,

and afterwards successfully defended the island of Cyprus so that it would stay in Ottoman hands. However they did not venture outside the Mediterranean, and became only a regional power.

38. **India.** And finally coming to India, we know that overseas trade and commercial activities across the Bay of Bengal were started by the Mauryas and continued in later days by succeeding kingdoms such as the Satavahanas and the South Indian kingdoms of Cholas, Pandyas, and Cheras in peninsular India. The Chola king Raja Rajendra realised the great importance of a powerful navy to protect the interests of his foreign trade. In 1025 AD, the Chola Navy crossed the Bay of Bengal and using the Nicobar Islands as a base, made forays against the Srivijaya Kingdom in Sumatra, which was then strangulating the trade between China and India through the Malacca Strait. The success of this Chola naval expedition was perhaps the last victory before the decline of the India's maritime prowers, and which ultimately resulted in our colonisation.

39. **Europe.** In the fifteen century, it was Europe which harnessed the attributes of the Sea and Sea Power, and saw the emergence of remarkable thallasocracies. Anchored in their European territories, several nations established colonial empires held together by naval supremacy. This was also the period that seafaring countries of Europe made breakthroughs in the fields of ship-construction and navigation, which enabled its sailors to undertake long-distance voyages. At the same time advances in gunnery and specialised fighting vessels provided them the means of overwhelming the opposition of the so-called 'other races'.

40. The establishment of the Portuguese Empire was soon followed by the Spanish, Dutch and eventually, the British, whose immense landed possessions were held together by the greatest navy of its time. Once the Spanish and Portuguese fleets had demonstrated the ease of conquest, and the economic benefits to be gained by such maritime forays, the race was on, with Dutch, French, and English adventurers joining in what became a scramble for trading links and political advantage.

41. The first European naval action in Asia took place just ten years after Vasco da Gama's epochal landing in India. In 1508, the Portuguese destroyed a combined Gujarati/Egyptian fleet at the Battle of Diu, leading to Portuguese domination of the Indian Ocean through the 16 th century.

42. In 1588, Philip II of Spain sent his Spanish Armada to subdue Elizabeth I of England, but with its retreat and defeat, began the rise to prominence of the Royal Navy.

43. From the middle of the 17th century competition between the expanding English and Dutch commercial fleets came to a head in the Anglo-Dutch Wars, the first wars to be conducted entirely at sea. Most memorable of these battles was the raid on the Medway, in which the Dutch even sailed up the river Thames, and destroyed most of the British fleet, establishing Dutch supremacy at sea for over half a century.

44. Like the Asians, Russia could never be an important power as most of the Russian Czars failed to use sea power properly. The exception was Peter the Great, who in 1700, hiring Dutch and English engineers built a Navy. With this fleet, the Russians successfully drove the Swedish away from the region in a series of Baltic Sea battles.

45. The 18th century developed into a period of seemingly continuous world wars, each larger than the last. At sea, the British and French were bitter rivals; the French aided the fledgling United States in the American Revolutionary War, but their strategic purpose was to capture territory in India and the West Indies--which they did not achieve.

46. The Napoleonic Wars included a series of legendary naval battles, culminating in the Battle of Trafalgar in 1805, in which Admiral Nelson broke the power of the French and Spanish fleets, but lost his own life in so doing.

47. Trafalgar ushered in the Pax Britannica of the 19th century, marked by general peace in the world's oceans, under the ensigns of the Royal Navy. But the period was one of intensive experimentation with new technology.

48. **Germany.** This was the era when Kaiser Wilhem II of Germany also embarked upon the creation of a Fleet to rival the British and the French. Bringing about organizational reforms under Admiral Tirpitz, the Imperial German Navy grew into the formidable High Seas and U Boat Fleets that challenged the supremacy of the British, though losing by a narrow margin.

49. The efforts and losses of World War I and World War II finally broke Britain's economic back and with it, the decline of the Royal Navy. When Britain lost its mastery at sea, albeit to a fraternal ally, the United States, the British Empire also crumbled.The strategic scenario since World War II had seen the United States become by far the largest naval power in the world. Throughout the rest of the 20th century the United States Navy maintained a tonnage greater than that of the next 17 largest navies combined.

50. **Russia.** At the advent of the Cold War, the Russians were a coastal defensive force. With Gorshkov at the helm for 25 years, in a matter of 20 to 30 years, the Soviet Navy spread its sails all across the world, in all three dimensions and achieved a near standoff with the USN. However, the collapse of the USSR and the decline of the Russian Navy, has given the contemporary world its unipolar status with the USN having undisputed mastery globally.

The Sea and India

51. Let us now look at India's maritime experience more closely and the recent and concurrent rise of India and it's Navy.

52. The earliest Indian literature, the Vedas – which date back to 1500 BC, speak frequently of sea voyages. Much of the materials found in the remains of the Indus Valley Civilisation of 3000 to

2500 BC, and many products discovered in Mohenjodaro came either from the shores of the Red Sea or the extreme south of India and "could only have been transported by sea". Indians were firmly alongside the Greeks and the Arabs as ancient seafarers. In fact, Indian sailors used a magnetic compass called the matsya yantra for accurate navigation, and having acquired the skills to build ocean going dhows of great strength and durability, ventured into the distant reaches of the Arabian Sea.

53. According to Pannikar, on account of geo-physical and meteorological causes, it was the Indian Ocean, and specifically the lands washed by the Arabian Sea, which first saw naval and oceanic sailing activity; and it is incorrect to assume that navigational traditions first emerged around the Mediterranean.

54. Long before seafaring developed in the "limited" Aegean waters, oceanic navigation had become common with the coastal people of peninsular India. Millennia before Columbus sailed the Atlantic and Magellan crossed the Pacific, the Indian Ocean had become a thoroughfare of commercial and cultural traffic between the west coast of India and Arabia, the Levant and South East Asia.

55. Similarly, the Bay of Bengal provided a highway for a succession of kingdoms in the southern and eastern Indian peninsula to embark on cultural, and commercial missions to lands beyond the Malacca Straits – as Far East as Japan. Starting with the Mauryan emperors, Indian maritime activism can be seen through the Andhra, Pallava, Pandava, Chalukya and Chola dynasties.

56. From this apogee, India's maritime prowess went into rapid decline, mainly because the Sultans and Emperors of Central Asian dynasties, which ruled in Delhi, knew more about saddles and stirrups than about sea power. The continental mindset of Indian rulers was also shaped by their experience of invasions which came from landward. However, such invasions and conquests led either to transient political changes or to the foundation of new dynasties, which in a very short time were assimilated by the resilient fabric of India's culture. While dominance over the Indian Ocean passed from the Portuguese to the British, the Mughals remained oblivious of the importance of sea-power to the empire. Consequently, India's maritime capabilities, and what existed of its naval power, could not prevent India's subjugation by the British.

57. The arrival of the 20-gun Portuguese frigate San Gabriele off Calicut in May 1498 marked the beginning of four centuries of control of our seas by European powers; and not all the daring valour and patriotic fervour of the Zamorins, or Angres could withstand it.

58. In fact, we cannot contest the historical surmise that India never lost her independence till she lost the command of the seas to the Portuguese in the first decade of the 16th century.

59. What about India today?

60. As far as our overall defence policy is concerned, we are essentially a status quo power and harbour no extra-territorial ambitions. However, we have island territories in the Bay of Bengal as well as the Arabian Sea. We also have friends in the Indian Ocean Region, whose security is our concern. Therefore, contingencies can be envisioned where we may be compelled to cross the seas to protect our own island territories, or even reach "out of area" to safeguard the interests of our friends.

61. As a booming economic power, our growth will be increasingly dependent on trade and on energy availability, and sooner or later on undersea resources. We therefore have substantive maritime

interests, and therefore need a strong Navy to further and protect these interests during peace time.

62. Post independence, despite the lack of a culture for strategic thinking in our country; the Indian Navy has made the nation proud. From a fledging arm in 1947, we are on the path towards a truly global Navy – what with more aircraft carriers, nuclear submarines and high performance aircraft , all of which are far beyond the drawing board stage and well into induction phase. The footprints of Indian warships can be seen across the globe, on a continuous basis.

63. For that I will praise my predecessors in white uniform, who have doggedly persevered despite the hurdles of procedures and if I may add, general ignorance on the national necessity of a strong and capable Navy.

64. While the long view of the Indian economy is good, it is imperative that the Navy continues to get the funding it requires to maintain and operate a Blue water Navy to further the interests of the nation.

65. Continuous presence by the Indian Navy is maintained in our primary area of interest by routine missions incorporating fleet and flotilla deployments, submarine patrols, and air reconnaissance, EEZ patrols, coastal and offshore security and anti-piracy patrols. Overseas deployments extend this credible presence throughout our operational area of responsibility. Routine and regular visibility of our units in areas of interest conveys a message of reassurance to our friends, and a subtle warning to potential adversaries.

66. Our ships and submarines proceed on deployments in a fully role worthy condition. Whenever, a ship or submarine sails out of the harbour, she is fully fuelled and topped up with water and rations for her full endurance, loaded with ammunition and missiles and has integral aviation assets, ensuring immense combat credibility.

67. As the IN footprint increases globally, many countries have expressed their interest to exercise to build up interoperability. The navies with whom we exercise regularly are UK, France, South Africa, US, Russia, Singapore, Sri Lanka, Japan and Malaysia.

68. It can be therefore be said that the modern Indian Navy offers India an opportunity to play a more major role in international affairs, and it must be again noted that India's recent rise is in tandem with the rise of the Indian Navy.

Conclusion

69. In conclusion, I trust that I have been able to establish a link between the destinies of Navies and Nations.

70. I would like to reiterate that Navies don't only defend the nation or attack enemies, but most importantly further interests and exert influence, most of it in peacetime; through coercive, supportive, diplomatic, constabulary and humanitarian methods in covert or overt fashion.

71. In effect, the Navy is a critical international instrument of statecraft and diplomacy, which can be sent anywhere at anytime for a whole variety of reasons, through the entire spectrum of conflict i.e. from peace to nuclear war.

72. I would however also reiterate that the Navy is a very expensive instrument, affordable only by nations with the required economic wherewithal. Any country can buy a few tanks and planes and acquire an Army or an Air Force, which are essentially cross border forces. However, Navies ships and submarines, are a different story – very hi-tech, very complex, very expensive and take very long to build. Only nations with long distance vision and a wise understanding of the essentially anarchic nature of the international order invest in Navies in a sustained fashion, despite the vagaries of day to day-to-day economic ups and downs.

73. I trust and am confident that India will continue to build a strong Navy in consonance with her rising status in the global community; and all of you, i.e. members of the general population have a very important role to play in moulding national consensus for the same.

74. Thank You and Jai Hind.

Lecture delivered at the NMF Visakhapatnam Regional Chapter on July 28, 2012

TRADITIONAL MARITIME KNOWLEDGE

IT'S POTENTIAL FOR RESEARCH AND CONSERVATION

(A VPT Sponsored NMF-VRC Research Project)

Abstract

A 2 km swathe of Bay of Bengal along north coastal Andhra Pradesh, covering the districts of Srikakulam,182 km, Vizianagaram 25 km , and Visakhapatnam 155 km is the habitat for Vadabalija, Jalari and Palli communities, who occupy 'the land' for habitation and 'the sea' for economic extraction (fish harvest), the former in government/ personal holding while the latter common or public property. Until recent times these communities did not show much of a change either in life styles or in living standards, the reasons seem to be use of traditional technologies and peasant mode of fishing. However, invasion of fishing technologies and modern marketing strategies of the present 'globalization period' are overriding the traditional fishing thereby the fishermen of the region are forced to giving up fishing or upgrading their fishing technologies. In such a context the NMF-VRC has proposed to undertake a macro-level, village based survey to bring out a status report on maritime communities of the north east coastal Andhra Pradesh (NECAP) and to identify the potential areas for further research and conservation of traditional cultures, in consonance with the aims and objectives of the NMF.

1. Settlement Pattern and Vulnerability: The fishermen of about 84.5 thousand households of the area under study are living in villages, which consist of huts numbering 8,255, tiled 2,970 and concrete houses 9,271. Most of these villages, 153 out of 191, fall under 10 meter contour very contiguous to the tidal margin thereby subjected to climatic and marine dynamics. It is often raised on public as well as scientific platforms that sea-level would rise if the same pace of global warming continues. In such a context most of the fishermen settlements are under threat as there would be land erosion or inundation due to sea level rise. The process is already on where several villages, 95 out of 191 do not have functional beach for fishing economy as they are subjected to land erosion. Fishermen settlements cannot move beyond their present position as they are spatially restricted by the private landholdings (agriculture farms, saltpans and plantations of cashew, coconut and casurina) and public constructions (SEZs, Coastal Corridors, ports etc.) under 'public cause'. In addition to these hardships the potable water resource is only through groundwater (open wells-475), tube wells (753) and storage tanks (132), which have been showing depletion. A few of these water holes are already either dried up or contaminated by brackish waters.

2. Development Infrastructure: Most of these villages are connected by land (roads), electricity (cables) and air (communication signals), but are poor in educational infrastructure as evidenced by the location of only 165 elementary and 68 high school but no colleges at all. In spite of these meagre facilities a considerable number of fishermen have been educated over the last few decades numbering 39,752, out of which post graduates are 92, graduates 1970, B.Ed 276, Intermediate class 4252, 10th Std. 12,404, ITI 159, engineering 373, medicine 37 and others 227. However, only a 5% i.e. 1996 in number, of these educated people could secure employment either in public or private sectors. Health care services are rendered mostly by trained health workers/ Anganwadis 212 and ANMs 151, which are attached to sub-centres 31 and Primary Health Centres 18. To mitigate the natural calamities like cyclones and tidal waves the government has constructed 54 cyclone relief centres in some of the villages in two spells. The first spell built circular structures are in dilapidated conditions while the subsequent rectangular buildings are used for development activities like schools, community halls, library etc.

3. The Land-Water Dichotomy: The fishermen communities of the study area have organized themselves into endogamous social groups such as Vadabalija (203 surnames), Jalari (25 surnames) and Palli (9 surnames) and have a clear cut division of labour between the genders, the male in harvesting protein from the sea waters while the female in marketing the same in various markets (villages, towns and cities). The study has identified a distinctive resource gender tie up, the land/women - sea/men dichotomy, which extended women's participation at greater levels in domestic as well as economic domains. This type of division of labour keeping the women dominant, if not, less sub-ordination when compared to their neighbouring peasant women. The men are mostly restricted to sea for harvest and the beach for repair the fishing paraphernalia.

4. Boats and Fishing Gear: About 10,000 boats are in operation in the study area. Out of which about 9,000 are country boats, as sail drawn (6,300) and motorized (2,700), while the remaining 1,000 are added with recent technologies like fibreglass body and motorized diesel engines of different horsepower as outboard or inboard. Most of these boats are fabricated by fishermen, who have expertise, in spite of illiteracy. They do not have either modern instruments or the units to measure, but they just follow hand lengths (baralu=arm stretch, muralu=forearm). A clear evolution of boats from a log-tied floater

(theppa) to a trawler is seen, and they are all local made (tied, stitched, moulded and planked). There is no standardization of size but the ratios of keel, stem, stern, hull, must and rudder are maintained. A wide range of nets (about 19 varieties) from a single-fingered (the unit of measuring the mesh size) to four-fingered are in operation. They are used according to the context, season and type of fish as cast nets, gillnets, driftnets, trawl nets etc.

5. Traditional Knowledge: Fishermen of the study area have an excellent knowledge on sea currents, water colour, depth, seafloor, and seasons to estimate the possible areas at open sea to catch fish. If the birds are flying in groups over the sea on a particular locale, the fishermen suspect schools of fish and learn the type and quantum of fish by sensing the vibrations of water due to fish gills by dipping one end of the paddle into the water and the other end on to the ear are a few knowledge systems the fishermen observed and used over the years in fish harvest. The fishermen have the conventional units of measuring distance by baralu (arms stretch length-one bara is roughly 2 meters) and the depth of the sea by niluvulu (one nilivu is equivalent to six feet or about one fathom). The laying of type of nets depends on the knowledge of the depth, bottom of the sea and the water columns. The observance of celestial bodies with some hidden or intuitive knowledge of cosmology guides them to fish even during nights. It goes without saying that all fishermen have the knowledge and skill of swimming and a majority of them are great swimmers.

6. Shrines and Deities: The notable and sacred structures seen in the village are shrines erected for deities (mother goddesses). They are simple single roomed to about 5 roomed structures to enshrine the deity. The survey of the present study has recorded 1,164 shrines in 191 villages enshrining 127 nomenclature deities. The most popular deities having more than 20 shrines are Bangaramma (27), Bhoolokamma (51), Durgalamma (66), Erinamma (29), Gangalamma (22), Kottammoru (45), Mankinamma (33), Maridamma (36), Nookalamma (96), Peddammoru (47), Polammathalli (79), Pydithallamma (22), Sattemma (25), and Varisettammoru (28). In addition to these shrines several structures erected in commemoration of the departed unmarried girls called perantallu are also noticed. An interesting observation is that there are shrines for Bapanamma, Bhagavatulamma, Collectoramm, Gandhimata, etc., denoting a historic event related to the village. Such events go a long way in understanding personification of human beings into supernatural beings (mukkoti devatalu 30 million supernatural/spiritual beings). In spite of the fact that the fishermen of these villages are totally practitioners of 'little traditions' (deity worshipping) temples (205) of 'greater traditions' (God worshipping) are also seen, out of which a few belong to ancient period, but a majority are of recent origin as evidenced by temples of Sri Ram, Hanuman, Ganesh, Shiridi Sai, etc. About 95 churches of Christian faith belonging to different denominations are also seen in a few villages, but no mosque or maszid is found in the area. An intensive study of these sacred structures would throw a flood of light on local and regional history including maritime tradition and culture and overseas trade, besides the significance of plurality of deities, gods and religious sects.

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National Maritime Foundation-Visakhapatnam Regional Chapter
Visakhapatnam

Shri Purnachandra Rao's interaction with fishermen

Initiative of

Shri J. Purnachandra Rao I.P.S., Commissioner of Police

and member, Advisory Board of Vizag Chapter.

Moved by the study report on the living conditions of North Andhra districts by Dr.Vijay Prakash, of NMF - VRC Vizag's Coimmissioner of Police and Member of Advisory Board of Vizag Chapter Mr J.Purnachandra Rao IPS. visited the villages of Mutyalamapalem, Tikkavanipalem & other villages of Parwada Mandal of Visakhapatnam district and interacted with the fishermen on their problems of fishing and living conditions. In the words of Mr Purnachandra Rao:

"We visited CIFNET & CMFRI located on R.K.Beach of Visakhapatnam city. We felt there was a serious need of imparting training to fishermen youth in updating their skills of marine fishing. Dy.Director CIFNET came forward to take up the training and consequently we held discussions with the Director CFTRI, who came all the way from Cochin Professor of Indian Maritime University, experts of CMFRI, state fisheries official, entrepreneur Sri Srinivasa Raju, counseling expert Mr.M.S.Rao belonging to fishermen community and the core guide for taking up the initiative, Dr.Vijay Prakash. It was resolved in the meeting that a short duration (week-long) course for fishermen youth in training maritime fishing, use of GPS & modern communication system, exposure to a fishing vessel etc. had to be taken up to begin with and formulate strategies during the course of time. Even as these efforts are under way Shri Ajeya Kallam IAS Chairman Visakhapatnam Port Trust sponsored 8 fishermen youth for 2 year Diploma course in maritime fishing in CFTRI costing about Rs.3.5 lakhs.

Training fishermen youth may go a long way in ensuring that they stick to their profession instead of rushing out for taking up semi-skilled jobs such as security guards and at the same time the valuable gene pool of fishermen would continue to flourish in maritime environment, thereby strengthening maritime security and with their active and dominant presence, enhancing and National Defense on the East Coast."

Unmanned Maritime Systems for Oil & Gas and Naval Projects

Mr. J. Srinivasa Raju Mr. Vincent Dobbin Mr. Arthur Kleiner

NMF Visakhapatnam Regional Chapter in association with Geomardy and their alliance partners from US and UK hosted a meeting on Unmanned Maritime System and their services for Oil & Gas and Naval Projects.

Mr. J. Srinivasa Raju CEO Geomardy is instrumental in bringing the state of the art technologies for the country's requirements in the fields of Defence and Oil & Gas industry, Mr. Vincent Dobbin, a retired Royal Navy officer of UK who had worked in various defense research programmes in electronics and weaponry systems, presently Business Development Manager at ASV Global UK a Global Fusion Company located in Hampshire and Mr. Arthur Kleiner, Director, Government Services, CC Technologies, U.S.A. were the honoured guests.

A power point presentation was made by Mr. J.Srinivasa Raju on the various services rendered by Geomardy, like Offshore Geo Technical, Geo Physical investigations and Integrated Naval Technologies with Unmanned Maritime Systems and their applications in the fields of port & Harbor, Defence , Oil & Gas, Environmental studies on the East Coast of India.

Mr. Vincent Dobbin made a presentation on Unmanned Systems like Fast Moving Target Drones (FMTD) and various products and their naval applications like naval gunnery practice ranges, C-Sweep Multi role Mine Counter Measure Vehicle, Unmanned catamarans, Unmanned semi sub and Unmanned coastal surveillance vehicles with 30 days persistent observation with electric and diesel electric power and no exposed propellers to avoid risk of entanglement for port & Harbor security.

Mr. Arthur Kleiner also made a presentation on services of CC Technologies around the world in the field of Oil & Gas Hydrographic charting, Deep sea drilling, positioning surveys, seismic studies, Ocean Research Studies, C-Nav worldwide Differential GPS, Coastal Marine Survey, Environmental Protection Studies, pre and post construction surveys and Autonomous Underwater Vehicles for deep sea surveys like Multibeam, Side scan, Subbottom and their application in the fields of Subsea Engineering Projects.

The programme was attended by officials from Defense research and development, naval authorities, officials from Internal Security, ports & harbor and academia. Prof.Prasanna Kumar, Regional Director of NMF Vizag Chapter presided.

NEWSPAPER REPORTS

'Destiny of a nation and navy is inextricably linked'

India is building a formidable naval force: Vice-Admiral Chopra

The Hindu

VISAKHAPATNAM: History proves that the navy has played an integral part in building a country's power and bettering its economic prosperity, said Vice-Admiral Anil Chopra while delivering a talk organised by National Maritime Foundation's Visakhapatnam Chapter in Visakhapatnam Public Library here on Saturday. Speaking on 'Navies and Nations', the Flag Officer Commanding-in-Chief of Eastern Naval Command said that the destiny of a nation and navy is inextricably linked. "A strong navy is necessary to allow the nation to showcase its power in the global arena and play

an active role in the regional level," he said. He pointed out that all economically developed nations do have the resources to build a strong navy and India is on the right track. However, he cautioned that building a strong navy could be expensive as a single destroyer might cost around 'Rs.9,000 crore and an aircraft carrier would cost to the tune of Rs.20,000 crore. Going back into maritime history, he said that all great powers- be it the ancient Greece or medieval Spain or Portugal or for that matter Britain had strong navies and they ruled the world. Referring to India's naval history, the Admiral pointed out that India was one among the foremost countries in the world to explore the might of navy. "The significance of maritime trade finds a place in the Vedas and many great kings from the Cholan or Pandian dynasties did maintain a strong and effective navy to safeguard their interests," he said. Indirectly referring to China's growing naval power, he said that India is also building a formidable naval force but the funding should not stop.

Admiral Chopra pointed out that post cold war, the naval power has shifted from bi-polar to uni-polar scenario with the crumbling of the Soviet states, and this is the right time to build our navy to play a more decisive and strategic role in the interest of the country. Summarising the role of navy, he said, "It should workfor total peace and at the same be ready for a nuclear war."

Earlier, introducing Admiral Chopra, the Director of Centre for Policy Studies, A. Prasanna Kumar said that eastern seaboard has gained prominence over the years and that the ENC has a major role to play for safeguarding its interests.

The closing remarks were given by Commodore Gomes'.

The Hindu Sunday, July 29, 2012

'Traditional fishermen - an endangered lot'

VISAKHAPATNAM: Traditional fishermen who inhabit the coast are the most endangered ones in the present scenario, said the former Head of the Department of Anthropology P. Vijay Prakash at a seminar here on Saturday. Giving a PowerPoint presentation on the research topic 'Traditional maritime knowledge; Its potential for research apd conservation', the professor pointedout that the fisherfolk were being compressed from all sides. On one side they were being encroached upon by the government-initiated projects under the public-private partnership such as Pharmacity and coastal corridor and on the other the sea was slowly creeping into their settlements.

The professor and his team undertook the research on behalf of National Maritime Foundation- Visakhapatnam Regional Chapter, which was sponsored by the Visakhapatnam Port Trust. The team covered about 190 villages along the coast of the three districts of Visakhapatnam, Vizianagaram and Srikakulam, and studied various activities such as culture, heritage, economics of fishing, marketing and traditional boat making. The professor in his presentation highlighted the plight of the traditional fishermen and suggested that something needs to be done on war footing to prevent them from becoming extinct. Apart from water and hygiene problems the fishermen were hit badly in the fish catch region. "Earlier the fishermen had about 125 varieties of fishes in the water.

'Increasing pollution'

Today, they barely have about 25, and the drop is due to rampant effluent pumping into the sea by pharma and petrochemical companies and pumping of diesel by the diesel operated boats," he said. Dr. Vijay Prakash said the total coastline of India was about 7,500 km and AP alone caters to 1,030 km, which is about 13 per cent. "A one-metre rise in the sea level due to global warming will inundate over 230 villages, in the three districts alone." He pointed out that 27 per cent of the fishing villages are located just five metres away from the sea. Releasing the research document, the Chairman of VPT Ajeya Kalam said, "Data is important for any research and development and the data collected by a professor from a university is always authentic and at time even better than the ones assimilated by government agencies." Earlier, the Director of Centre for Policy Studies, A. Prasanna Kumar gave a brief of the functioning of NMF and the idea behind the research project.

The Hindu, Saturday March 7, 2012

facets of maritime culture

One of the many breathtaking feats performed by our Navy men during exercies on Navy Day, December 4, 2011