



## CHANGES & THE NAVY - ROLE & RESPONSIBILITIES

- Admiral O.S. Dawson AVSM, PVSM (Retd)

**I**ndia is a large Maritime country and has a large population comparable to that of China. It has a 7,562 km length of coastline, over two million sq. km. of Exclusive Economic Zone (EEZ) and is surrounded on three sides by sea. It also occupies a central geostrategic position in the Indian Ocean and therefore, has to ensure that her national interests in the region are safe guarded. The development of her maritime infrastructure and activities, protection of her assets and resources would thus be in keeping with this objective.

Science & technology are also adding a new economic dimension to the ocean. The Indian Ocean

is not only an ocean of commerce and an ocean of transit but is also now a significant area for exploitation of its sea-bed resources. In a world of growing population, rising demands, increasing depletion of important energy resources on land, the food, fishery and mineral wealth in the oceans are assuming immense importance. The danger that the littoral nations of the Indian Ocean face is that the developed countries with their access to technological know how, may try to exploit and dominate the acquisition of these resources.

Biological invasions are dramatically changing coastal ecosystems throughout the world and their

effects are increasing. Invasions result when species establish new self - sustaining populations beyond their previous geographic ranges largely from the transfer of organisms by ships. Organisms associated with hulls of ships have been of significant concern. Ships maintain trim and stability with ballast water which is often taken from one port, bay or estuary rich in coastal marine life and discharged at subsequent ports. The increased numbers of ships, size and speed have contributed to the overall increase in transfer of species from ships. Today a single bulk carrier ship can transfer in excess of 50,000 metric tons of ballast water across an ocean basin in less than 10 days. The ecological and economic consequences of these invasions require immediate response with the best available technology, beginning with mid - ocean ballast water exchange. Similarly oil pollution, industrial waste and other toxins are infesting coastal areas, causing great harm to the ecology.

## Changes & the Navy

India's foreign policy will undoubtedly have to be one which protects and promotes its national and maritime interests. Human history chronicles that changes are vital for progress. Human perspectives change and what is very obvious today, did not appear so in the past. Some of these changes in perspectives create far reaching effects on national organisations, including the Navy. These changes will in turn determine the future role and responsibilities of the Navy in particular, in the next two decades.

The main changes relate to three areas, viz. Oceanic, Geopolitical and Technology. While the geopolitical flux has been continuously changing, affecting the Navy, changes due to the new - found importance of the oceans and the technology explosion have become very compelling factors for the future.

## Oceanic Perspectives

Recent years have witnessed a drastic change

in man's oceanic perspectives and many factors clearly point to a great oceanic renaissance. The hitherto land tethered man has started viewing our two - thirds of the earth's surface ; unique among the planets of our solar system. While the 20<sup>th</sup> century has opened tempting visions of outer space, its possibilities hold out no immediate promise to the exploding millions who inhabit the earth, and whose number is estimated to double by the first half of this century.

But oceans, the 'Inner Space', constitute our nearest, and yet our most mysterious frontier, a frontier which can offer benefits so vast and opportunities so diverse. Within the seas are proteins for the undernourished, water for arid lands, medicines for the sick, opportunities for recreation ; energy and minerals for the benefit of mankind. The seas are vital for our economy, to our defence and to our aesthetic sensibilities.

While we are forced to look to the oceans for its hidden resources of staggering magnitude, we have been able to touch only an infinitesimal part of its bounty, due to our incomplete knowledge of the oceans. We know more about the surface of the moon than the details of the ocean floor. Though 71% of the earth's surface is covered by water, only 2% of the submerged area has been satisfactorily charted. For decades, we have dealt with the surface of the oceans and its immediate vicinity, but we discover that the real land masses are under the seas.

The current salience of the seas has resulted from its vastly increased military potential, clearer perceptions about the fast depleting resources on land and the arrival of new technology capable of exploiting the ocean resources. For many countries the seas have been a marginal issue in international politics. Today, they have a focus, which as a by - product is threatening the old oceanic order.

Though the oceans have not degraded into a jungle, it is certainly not a relatively stable, empty, unused,



unpolluted and economically marginal two-thirds of the earth's surface. To the navies which use the oceans in its totality of dimensions for their operations, these changes in ocean perspectives are very significant.

### Law Of the Sea

Continuance of the global oceanic stability is fundamental to the well-being of all countries, as oceans have become critical to the development and economic progress of the world. It was, as an outcome of the protracted deliberations of over 15 years, that the convention of the law of the sea was adopted in April 1962.

The law of the Sea Treaty envisages a territorial zone of 12 nm. With the emergence of the new concept of Exclusive Economic Zone (EEZ) extending to 200 nm under the extended maritime jurisdiction, 110 straits of the world will come within territorial waters. 40% of the ocean area will be appropriated by coastal states and the EEZ would involve most of the vast majority of oil resources in continental margins.

One of the regimes in the protection of security interests of maritime powers is to formalise free passage of straits / archipelagos and the innocent passage in territorial waters. The second and more complex problem relates to the exploration of deep sea-bed resources, outside the economic zone. The technology for recovery and processing of the polymetallic nodules like Copper, Nickel, Cobalt, Zinc Antimony and Manganese are available, but are not yet economically viable. In addition, strategic metals such as Uranium and Thorium, required for nuclear power programmes and Titanium for space and missile industries are also found in this region. In January 1981, Indian scientists have collected minerals packed nodules in the western Indian Ocean and India had been accorded the 'Pioneer Investor Status' in sea-bed mining, thus entering a high technology and deep sea-bed activity area.

The treaty is of special importance to India. As

a maritime and developing nation, India is interested in its assets in the off shore economic zone, along its 7,562 km. long coast, around the island groups, as well as in the sea-bed wealth in the deep oceans. While the UN convention of the law of the sea (UNCLOS) more than adequately meet India's national maritime interests, it also necessitates a reappraisal of the scope of Naval power, to meet the enlarged obligations.

### EEZ

Under the treaty, India can claim the 12<sup>th</sup> largest EEZ and a continental shelf of over 2 million sq km, which is more than half the country's land area. While this EEZ constitutes a vast addition to its economic potentialities, it also creates a twilight zone of authority, as the EEZ is regarded as the high seas for other than economic purposes.

Even now, except all but fisheries, man controls none of the oceans usable resources. In India too, ocean development activities are in their infancy. When ocean developmental activities gain momentum in the world, most of the coastal nations, would not have enough sea-going constabular forces to protect them. The Bombay High alone, would necessitate a viable watch and ward system during peace and an effective shield during war. Similarly, other off-shore areas would need to be protected.

### Terrorism

Terrorism at sea is nothing new. Piracy was often a respected naval activity in the past. But piracy and terrorism at sea have recently acquired new dimensions of importance. While terrorism at sea has been a regular fear in recent years, it is fortunate that no serious incidents have come to light. Because of the inherent economic value and national attention, oil rigs present a particularly attractive target for terrorists at sea. There is growing possibility of increased piracy and Ship-Jacking. The protection of our interests in the off-shore economic zone, the vastness of the surveillance required, and blocking



of terrorism at sea are some of the perplexities arising out of the increasing utilisation of the oceans. Effective Naval responses have to be evolved to solve these.

## **Maritime Trade**

Navies are closely linked with a nation's economic progress. Given the geographical advantages and national will, maritime power is generated by an economic activity, that produces trade. When this commerce expands, a nation's contacts extend beyond its shores. The Navy can convert contacts into interests and consolidate interests into political influence and economic progress.

96% of the world's trade travel by sea lanes. World shipping has gone up by over 75%. Today over 5 billion tons each year, are carried in ships and trade expands by 5% each year. The energy squeeze has accentuated the sheer economy of sea-borne trade. As the main arteries of world commerce, the sanctity of the sea routes has to be protected.

India's growing merchant marine still carries only less than 50% of the Indian trade. Out of about 652 (6.92 million Gross tons) Indian merchant-ships, some 80-100 are on the high seas at any time. When conflicts arise at short notice these ships can get trapped. During hostilities these ships need direct protection by Naval forces. Protection of merchantmen during war, has always placed a severe burden on the Navy and new concepts for their self protection need to be evolved.

## **Maritime Choke Points**

Maritime trade passes through a number of choke points and narrow sea areas, where it can become particularly vulnerable. It is interesting that geography has bestowed on the developing nations, possession or proximity of most of these areas.

In the eastern hemisphere, the vital straits from Gibraltar in the west to Sunda in the east, the eastern passages of the Indian Ocean and Island

Republics have the potential for control of the maritime trade in the area. The rising nationalism, sub-grouping of nations and religious fundamentalism are giving the geographical advantages of these countries new dimensions of Naval importance. Though individually the Navies of these countries do not count much, collectively they can muster an impressive array of every element of sea power capable of exercising a strangle hold on the sea-borne trade in the area.

## **Geographical Changes**

Geographical changes continue to occur, influenced by a variety of causes. However these geographical changes consequent to changed oceanic perspectives have been unprecedented in extent and effect. The destabilisation of the oceanic order can portend two main dangers.

It can introduce a dangerously new dimension in Naval warfare. Till now, Naval conflicts, however decisive, have been means to an end, with nothing achieved by occupation of an area of the sea. But, the advances in technology linked with the exploitation of sea-bed resources and military objective have begun to bestow great importance to occupation of sea areas. A new and revolutionary dimension in Naval warfare as was seen in the initial stage of the war in Iraq, when a US Carrier Battle Group operated from an area in the southern approaches to the Arabian Gulf.

The environment in which the Navies operate is totally different from that on land. The absence of national possessions and of resident population at sea, remove many complicating factors of warfare. The non-nationality of the ocean medium gives warships great advantage over other weapon systems. But the same unique features also spell danger, as they may offer tempting possibilities for the use of nuclear weapons at sea.

## **Indian Ocean Region**

The area most affected by geopolitical changes



has been the Indian Ocean. It has become the new 'Heart of the world' as an area with the greatest potential to produce major shifts in global power balance. This ocean, once regarded as the 'Third Worlds' back waters, has in the past two decades emerged as the most crucial area in the world. The new importance and interest has been the outcome of super cold war polemics and its residual effects, increasing interest in military and economic exploitation of the ocean. Any destabilization in future will make the region, the most volatile in the area. The range of strategic problems India is faced with is wide. The coercive diplomacy of the United States can cause a serious and direct threat. A more likely and immediate prospect is a threat posed by other regional powers acting as surrogates.

### **Technological Changes**

Navies are regarded as unique indicators of the scientific and economic development of a nation. The explosion of modern technology has irrevocably affected every aspect of naval activity - Command and Control, Design, Personnel Training, Leadership, R&D, Logistics, Repairs & Maintenance, Force Levels, Tactics and Strategy.

No change has been as revolutionary as change in technology and the character of Naval warfare has been altered more in the last 21 years than in the last 20 centuries. The consequences of technological advances, while significantly adding to the offensive capability, have also compelled us to seek increasingly complex Defensive Weapons, Electronic Warfare, Communications, Command and Control systems besides real time Intelligence supported by Satellites. One of the interesting aspects is that, technological advances have tended to increase the relative effectiveness of smaller Navies, both in offensive and defensive warfare vis-a-vis the more classical Navies.

### **Cost Factor**

The most significant effect of technological

sophistication which no Navy has been able to escape, is the cost factor. Often the high technology of Naval systems is the inescapable result of our adversaries capabilities, who to a great extent indirectly dictate our requirements. All these confront the Naval planners, with the most difficult choice between desired quality and essential quantity.

With the high costs, the number of affordable Naval units are reducing and with the increasing commitments, the problem of area coverage is becoming acute. Fewer units, in turn raise further problems compelling us to provide them with a wider range of modern weapons, in turn affecting the cost.

### **Obsolescence**

Sophisticated technology also brings with it the problem of obsolescence ; if it works, it is obsolete is becoming true, but an unavoidable feature of most weapon procurement. Pressure of modernisation is closely linked with the problem of obsolescence. More than complicating our tasks, sophisticated technology, which is unavoidable, also brings in higher responsibilities. The Navy has to come to grips with the essence of technology, whose impact is much deeper than providing weapons with greater destructive power. It is necessary for doctrines to keep pace with technology, so that ships and weapons do not become more modern than the concepts of the command wielding them.

### **Human Factor**

There is a prevalent feeling that sophisticated technology has eroded the tradition and stress on morale over material, in war. I maintain that it is Man, his thought, emotions and will which are of decisive importance in high technology warfare. In judging Naval capabilities, we tend to compare national inventories of Naval hardware without considering the skill with which these impressive elements of steel and shell will be wielded. Any meaningful assessment of Naval capabilities must take into account the intangible and unquantifiable human factor.



## Design of a Navy

There is always the unending discussion, about the kind of Navy that a country needs. Some of the advantages that modern technology has bestowed in smaller Navies have reinforced this debate.

Adjustment of the Naval forces to the hard realities of national capabilities is a difficult problem faced by all Navies. Because of the long term nature of development and the size of the investment, a country has to be very clear sighted about the design of its Navy. One way of deciding on the kind of Navy, is in terms of geographical reach desired of it. Judged from the extent where its capability ceases to be effective. This will naturally depend on the relative power of the adversary, as well as on the developing geo-political trends in the region that may impinge on India's Maritime security. On this scale, the Navy will come under the classification - In Shore and Coastal, Contiguous, Ocean Going and Global.

Though investment in the Navy is a long term investment in the country's security, the hard realities of affordability has to be faced. The question, "How much is Enough" will always be a tantalising and difficult one for Naval planners.

Often, national security through Armed Forces, is compared with the life insurance. But, the Armed Forces are the only known insurance, where non-payment of the premium increases the risk, and there is relationship between the amount spent to the likely hood of threat materialising and the extent of the calamity.

## Characteristics Of The Navy

The geopolitical turbulence around India, the expanding horizons of the ocean futures and the revolutionary explosion in technology combine to make India's future Naval strategy complex. The Indian Navy's task will be, the effective protection of the vital sea lanes of communication, the economic wealth in the off-shore economic zone, the security

of the long coast-line, the far-flung island territories, and the deep ocean and sea-bed activity.

To be able to accomplish these tasks, the Indian Navy should have certain characteristics:

- Firstly. It should be 'Ocean Going' to the limits of our area of interest.
- Secondly It should have an effective Tri dimensional capability. Infact, the Navy is entering the fourth dimension i.e. the Ocean Sea- Bed.
- Thirdly The Navy should possess flexibility, which is the capability to operate across the whole spectrum of maritime tasks.
- Lastly All these should collectively assure vastly favorable attrition ratio, so that the progressive outcome if war is forced upon us, is in no doubt.

## Administration

To enable the Navy to Train, Man, Float, Move and Fight calls for a blend of professionalism, positive corporate self-image and internal cohesion backed by a sound administration. Modern technology has affected administrative processes in two main ways. The tools available to an administrator have become very powerful and the horizon of activities he is expected to administer has vastly widened.

The administrative tools have undergone a sea change. The humble type writer has yielded place to the veritable word processor. Telecommunications and computers have awesome capabilities waiting to be used in every aspect of administrative activity. Side by side, methods of operational research and forecasting techniques have been continuously evolving, and these can be imaginatively used in administration.

Technology has been galloping, but unless an administrator can keep pace with its vista of possibilities, he will be caught unawares and unready. This calls for simultaneous expansion of administrative



capabilities, if break-through in technology is to be optimally utilised. Administrative education should be geared to enable full use of modern simulation techniques, to study and analyse, a wide area and a variety of problems.

However, the same technological advancements have also widened the extent of administrative problem like resource limitations, technology absorption, interdependence of agencies, ecology, pollution and so on.

This would mean ultimately that administrative education has to become more change conscious, future oriented, and precedent breaking of unstructured and unfamiliar situations or in short on 'Change Management'

### **Coastal Zones/ Maritime Districts**

The off-shore assets of India are a valuable component of India's rich maritime heritage and resources which need to be protected.

From within the seven Maritime States Gujarat, Maharashtra, Karnataka, Kerala, Tamil Nadu, Orissa and West Bengal, on the East & West coasts and the Lakshadweep and Andaman & Nicobar Islands, there is need for an inter- group and inter issue collective space, to articulate the specifics and create a common platform, to look at the coasts in a larger context and from a number of points of view, its cause-and-effect determinants in perspective, in order to create a comprehensive working scenario of existing situations, potential changes and change factors along the Indian coasts.

The coasts and the seas of every nation are fast becoming a places of intense contention and activity, including war. India is no exception.

Coastal Zones or Maritime Districts would need to be grouped and formed and administered appropriately in consultation with the State Authorities, the Navy and Coast Guard. Ministries of Defence, Home, Shipping, Petroleum and Natural

Gas, Environment and Food processing, Tourism, Industries, Department of Ocean Development, Light House department and NGOs.

Some of the topics for discussion could include Security, Ship Breaking, Marine Pollution, Sea Level Rise and Global Warming, Marine Fisheries, Coastal Tourism and Off-Shore Sailing, Disaster Management, Drugs and Arms Trafficking, Waste Management, Coastal Environment, Coastal Zone/ Maritime District Management, Administration, understanding the CRZ and its implications as well as legal action.

The Navy already has a Flag Officer off shore Defence Advisory Group (FODAG) which is responsible for the security of the Bombay high. Similarly the Flag Officer Maharashtra Area (FOMA) is responsible for the security of the coastal areas of Maharashtra and particularly, the approaches to Mumbai.

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The following sea ward limits would be useful to know:-

- Territorial Waters - 12 nm
- Inshore Waters - Up to 50 nm
- Off-Shore Waters - 50- 100 nm
- Deep Sea Waters - Beyond 100 nm
- EEZ Waters - up to 200 nm



## ABOUT THE AUTHOR

Born in Burma, Admiral Oscar Stanley Dawson had shifted to India in March 1942, when the Japanese occupied Burma. He was commissioned in the Royal Indian Naval Volunteer Reserve (RINVR) on 07 January 1943 and was subsequently absorbed in the regular cadre of the Royal Indian Navy (RIN). He participated in World War-II in the Arakan Operations (Burma), on convoy escort duty in the Bay of Bengal and the Arabian Sea and in mine-sweeping operations soon after the war.

Trained as a specialist in Navigation & Direction in the United Kingdom, Admiral Dawson has held various afloat and ashore appointments. He served as the Naval ADC to President Dr. Rajendra Prasad, from 1953-54 and since 02 March 1981 is the Honorary Naval ADC to the President.

Subsequent to his graduation from the Defence Services Staff College in 1957, Admiral Dawson served as the Navigating Officer of the aircraft carrier, *INS Vikrant* and also as the Fleet Navigating Officer. Later, he held appointments of Officer-in-Charge, Navigation & Direction School and that of the Director, Tactical School and Chief Staff Officer at Cochin.

Graduating from the National Defence College, in New Delhi in 1973, Admiral Dawson has to his credit 19 years of sea service which included important sea commands of *INS Talwar* and *INS Nilgiri*. He served as the Flag Officer Commanding, Eastern Fleet, from February 1978 to March 1979. His important shore appointments include *INS Circars* - the Commanding Officer of the Boys' Training Establishment and the Director of Naval Operations (DNO) at Naval HQ during the 1971 Indo-Pakistan Conflict, for which he was awarded the Ati Vishisht Seva Medal (AVSM).

He was awarded the Param Vishisht Seva Medal (PVSM) for distinguished service of exceptional order on Republic Day 1981. He served as Flag Officer Commanding-in-Chief of the Southern Naval Command before assuming the office of Chief of Naval Staff (CNS).

Admiral Oscar Stanley Dawson assumed charge of the Indian Navy, as the 12th Chief of Naval Staff on 28 February 1982. During the latter half of his tenure as CNS, Admiral Dawson was also Chairman of the Chiefs of Staff Committee (COSC). He retired from the Navy on 30 November 1984, after more than 41 years of glorious Naval service. He was appointed as the High Commissioner of India to New Zealand in August 1985 and returned to Bangalore in September 1987, on completion of his tenure there.

