

Expansion of the Indian navy

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WITH 55,000 men and women, including 5,000 naval aviation personnel and 2,000 Marine Commandos (MARCOS), the Indian Navy is the world's fifth largest blue water navy. The Indian Navy currently operates more than 155 vessels, including the aircraft carrier INS Viraat. The names of all the commissioned ships in the Indian Navy start with INS, meaning 'Indian Naval Ship'. The fleet of the Indian Navy is a mix of indigenous built and Russian origin vessels and is expanding rapidly with new inductions almost every year. The Navy currently operates the Delhi and Rajput class destroyers. The frigates in service include the latest Talwar class, Godavari class, Leander class and Brahmaputra class. It is also adding the Kiev Class Aircraft carrier Admiral Gorshkov (INS Vikramaditya) from Russia just like the first US Navy ship Trenton transferred as the INS Jalashva after commissioning. INS Dunagiri, INS Magar and INS Trishul were involved in accidents at sea. One corvette, INS Prahar was sunk after colliding with a merchant vessel. The first involvement of the Navy in any conflict came with the success of Operation Vijay in the 1961 liberation of Goa. After Portuguese troops fired at commercial vessels and fishing boats passing near an island, the Government of India took the decision to militarily intervene to liberate Goa from Portuguese rule. The Indian ships provided fire support to navy and army landing troops. During the operation, the Portuguese frigate Alfonso de Albuquerque was also sunk by the fire power of INS Delhi. Since then it has been involved in some major operations and conducted two wars with Pakistan including a major naval blockade in the Bay of Bengal to expedite surrender of Pakistani forces.

The Indian Navy is organized

into three regional commands- HQ Eastern Naval Command, Visakhapatnam, HQ Western Naval Command, Mumbai and HQ Southern Naval Command, Kochin. Another strategic command, a joint Navy, Army and Air force command was set up in Andaman and Nicobar Islands in 2001. Recently the Indian Navy received a huge boost when INS Kadamba was commissioned at Karwar, 100 km down south from Goa. This is the third operational naval base after Mumbai and Vishakhapatnam and the first to be controlled exclusively by the Indian Navy. It is being described by naval analysts as the largest such base in the area. It is an \$8 billion dollar project which will have an exclusive naval port with full facilities. Another base is being planned near Vishakhapatnam at a cost of US\$ 350 million. The base, which will be located fifty km south of Vishakhapatnam in Rambilli Mandal, will have comprehensive anti-aircraft, anti-submarine and amphibious capability. This base alongwith the one In Andaman would like to control the maritime activities around the rim of the Bay of Bengal. According to defense experts, the naval base at Karwar will play a major role in securing the seas not only for India but also for countries like Japan, which rely heavily on shipping for imports and exports through maritime routes in the Arabian sea. The Indian Navy is also setting up a monitoring station in Madagascar to patrol the coast of Mozambique to monitor and prevent terrorist activities.

The Marine Commando Force (MCF) known as MARCOS, modeled after the US Navy SEALs and the Royal Marines, was created to handle reconnaissance, raids and counterterrorism in a maritime environment. The Indian Navy currently maintains a fleet of 16 diesel powered submarines. These are primarily of Russian and German origin. Scorpion submarines would begin to join the Indian

Navy from 2010-11 onwards. The Indian Navy may arm its Kilo class submarine fleet with the BrahMos cruise missiles if the test launching of BrahMos from the submarine is successful. India has been working since 1985 to develop an indigenously constructed nuclear-powered submarine, one that is based on the Soviet Charlie II-class design, detailed drawings of which are said to have been obtained from the Soviet Union in 1989. The secretive Advanced Technology Vessel (ATV) project to provide nuclear propulsion for Indian submarines has been one of the ill-managed projects of India. The 190 MW pressurized water reactor (PWR) is reported to be fitted into the submarine's hull. The Prototype Testing Centre (PTC) at the Indira Gandhi Centre for Atomic Research, Kalpakkam, will be used to test the submarine's turbines and propellers. A similar facility is operational at Vishakhapatnam to test the main turbines and gear box. According to defense sources, the ATV program is scheduled to be launched in 2007 and to be commissioned sometime around 2012. Each unit will cost about one billion U.S dollars.

The Indian Navy's nuclear deterrence capability is based on Sukanya class ships armed with the Dhanush ballistic missiles that has a range of 350 km. India plans to have as many as five nuclear submarines capable of carrying missiles with nuclear warheads. The Indian nuclear powered attack submarine design is said to have a 4,000-ton displacement and a single-shaft nuclear power plant of Indian origin. Once the vessel is completed, it may be equipped with Danush/Sagarika cruise missiles and advanced Indian made sonar systems. However, according to some analysts the most probable missile for the Indian submarine would be the BrahMos anti-ship cruise missile. But others point out that with a 300 km range, the BrahMos would not be adequately a strategic asset requir-



ing long reach. According to some very reliable defense sources India is leasing two Akula class submarines and is supposedly paying two billion dollars for the completion of the submarines. Three hundred Indian Navy personnel are being trained in Russia for the operation of these submarines. India has finalized a deal with Russia, in which at the end of the lease of these submarines, it has an option to buy them. According to reports, the submarine must be handed over to the Indian Navy. The Indian Navy established its first unmanned aerial vehicle (UAV)

squadron in January at Kochi, a coastal naval air station in south-west India. From there, the Israeli-built Heron UAVs patrol the Arabian Sea and Bay of Bengal. UAV bases are also being established in the Lakshadweep Islands in the Arabian Sea and at Port Blair in the Andaman Islands near the western approaches to the Strait of Malacca. The network of UAV bases is indicative of the growing importance to India of maritime security, a goal that today dominates its naval planning and operations. The Indian Navy is currently undergoing rapid

expansion and modernisation. Yantar, a plant in Kaliningrad, Russia, was awarded a US\$1.56 billion contract to build three additional 1135.6 frigates. The increased price is due to more sophisticated armaments such as BrahMos cruise missiles. The Navy has government approval for eight additional warships.

Sangraha is a joint electronic warfare, a family of electronic warfare suites, such as Ajanta and Ellora, for use on different naval platforms capable of intercepting, detecting, and classifying pulsed, carrier wave, pulse repetition frequency agile, fre-

quency agile and chirp radars. The systems employ a modular approach facilitating deployment on various platforms like helicopters, vehicles, and small ships. Certain specific platforms apart from ESM (electronic support measures) also have ECM (electronic countermeasure) capabilities. Advanced technologies like multiple-beam phased array jammers are employed in the system for simultaneous handling of multiple threats. To face the challenges in the 21st century, the Indian Navy is implementing a new strategy to move from a platform centric force to a network-centric force by linking all shore-based installations and ships via high-speed data networks and satellites. This will help in increased operational awareness. The network is referred to as the Navy Enterprise Wide Network (NEWN).

Last year, India began construction of a 37,500 tonne Vikrant class aircraft carrier at a cost of 4,000 crore and scheduled to operate 30 aircraft, including Naval LCA, MiG-29K, and Sea Harrier combat aircraft, as well as HAL Dhruv, Ka-31, and Sea King Mk42 helicopters. The carrier is being constructed by state-run Cochin Shipyard Limited and will be commissioned by 2012-13. Its air arm consists of Sea Harrier jets that operate from the aircraft carrier INS Viraat. Recently, the Harriers were modernized for Beyond Visual Range missile capability. The Kamov-31 provides the AEW cover for the fleet. In the anti-submarine role the Sea King, Ka-28 and the indigenously-built HAL Dhruv are used. The MARCOS use Sea King and HAL Dhruv helicopters while conducting operations. Reconnaissance operations are carried out by Tupolev 142, Ilushin 38, Dornier Do 228 and also by HAL Chetak helicopter. The UAV arm consists of around 30 UAVs like Heron and Searcher-IIs that are operated from ships and shore for better surveillance. There are reports on the joint development by India and

Israel of the Barak-II missile system, an improved, longer range version of the Barak-I air defense missile. The Barak-I is used on most of the main ships of the Indian Navy. India has a number of foreign made cruise missile systems, including the Klub (SS-N-27). Another successful program has been the adaptation of the Yakhont anti-ship missile system into the BrahMos. The BrahMos has been tailored to Indian needs and uses a large proportion of Indian-designed components and technology, including its fire control systems, transporter erector launchers, and its onboard navigational attack systems.

The Government of India is spending more than \$10 billion annually to purchase ships making India the leading military buyer and is already the most powerful navy in the region. India is also the only Asian navy to regularly operate aircraft carriers other than Thailand. With the recent and ongoing upgrades and inductions, independent analysts believe that the Indian blue-water navy may soon start playing its hegemonistic role in collaboration with the US Navy operating in the area as well from its base in Diego Garcia. India has long been asking US to remove the base from the Diego Garcia and now what a turn round of Indian mind set. Other littoral navies are also getting very apprehensive about the rapid expansion of the navy as of today none can threaten the might of the Indian navy. In Bangladesh, it is not known whether our planners or for that matter the Bangladesh Navy are at all thinking about the looming threats originating from the sea in securing a safe maritime routes for our trade and commerce. We must not think of matching the strength of that Navy but we must know about the threat that exist and must remember about the havoc it played during the 1971 naval blockade and atleast have a long term plan commensurating our financial capabilities.

GENESIS OF A NEW BEGINNING?

Emerging partnership between Pakistan and Afghanistan:

MAJOR. GENERAL (RETD) JAMSHED AYAZ KHAN

THE latest meeting of President Musharraf with President Karzai, courtesy of the Turkish President and Prime Minister, seems to have gone well as both have vowed to fight terrorism "together". They also agreed to boost confidence-building measures aimed at easing tension between the two countries. President Musharraf called the meeting with President Karzai "a new beginning"-one certainly hopes it is. As the destiny of Pakistan and Afghanistan are intertwined, it is only by joint efforts that they can move towards stability and prosperity. But it all depends on how these words are put into practice as "the taste of the pudding is in its eating".

Being a landlocked country, Afghanistan has been dependent on Pakistan and as per all international laws it is the duty of Pakistan to provide access to the sea and transit rights to Afghanistan for imports and exports. Pakistan needs to streamline this type of assistance to ensure Afghanistan's needs are met fully.

First of all it is important for Afghanistan to understand the cause of instability in Afghanistan rather than blame Pakistan for everything that does or does not happen in Afghanistan. The Senlis Council which has its offices in London, Ottawa, Kabul, Brussels, Paris and field offices in Helmund and Kandahar has a lot to say on the problems of Afghanistan. It has an extensive programme currently underway in Afghanistan focusing on "global policy development in conjunction with field research to investigate the relationship between counter-narcotics, military and development policies and their consequences on Afghanistan's reconstruction efforts."

In a detailed study, "Afghanistan Five Years Later- The Return of Taliban" Senlis Council summarizes it succinctly by listing the results of the Coalition action in these five years:

- Collapsing security and return of Taliban
- Failure to address extreme poverty, fueling support for Taliban
- US and UK counternarcotics strategies have accelerated and compounded all of Afghanistan's problems.
- Afghan central government legitimacy and effectiveness undermined by US led international community's approach in Afghanistan.
- Nation building sequencing in wrong order. Priorities have never been in line with the will of Afghan population.

Military expenditure outpaces development and reconstruction by 900%.

Thus, when the whole effort of the international community is based on an incorrect priority, the Coalition is seen as an invading force. Afghans do not see any real development taking place in Afghanistan, especially in southern Afghanistan. Nor do they hear about Afghan-Coalition dialogues or about urgency of development. The central authority is missing as President Karzai has no power to listen to the complaints of the masses, nor has he the resources

Afghans recruited from Afghanistan; they are driven by poverty, poor education and general enchantment with their place in society. They are not ideologically motivated and could disengage from the insurgency if appropriate incentives are offered. Center of gravity falls in and around the province of Kandahar, Helmand, Uruzgon and Farah". Blaming Pakistan and saying "Pakistan is not doing enough" is not the answer to the instability in Afghanistan. Since the problems lie in Afghanistan, efforts

certain areas would bring development for others to see and follow. d. Pakistan's role is critical to end instability in Afghanistan. Pakistan and Afghanistan must "deny sanctuary, training and financing the terrorists and elements involved in each other's countries." Intelligence sharing and coordinated operation remain the key to military operations.

e. Afghanistan must immediately stop the blame game. Coordinate all activities with Pakistan in the true spirit of Coalition. Afghanistan-NATO-ISAF



have to be made inside Afghanistan. Basically it means :

- Neutralizing a major part of Afghanistan through dialogue, discussion and negotiation. But for this tolerance, patience and major incentive should be the golden rules.
- Carrying out development work in all areas as per the priorities given by the population of Afghanistan. These should be welfare oriented and should start becoming visible in 2007. These need to be monitored in Kabul.
- Letting military actions be given a backseat. A cease-fire could be announced and be negotiated in each area separately. Periods of peace in

and US have to comprehend the real issues which need to be dealt with in a comprehensive manner, working out a time frame and objective for each phase. This grand plan has to include political dialogue, development, pacification programme, counter-narcotics plan and plan for withdrawal from Afghanistan.

f. Afghanistan needs to be ruled by Afghans and the traditional Jirga system could be the answer.

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Global warming and Bangladesh

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ONCE the earth was a heated planet. This was billions of years ago. Since then it has cooled gradually and become congenial to life. But now we can easily conclude by analyzing the prevalent variable temperature of the world that it is becoming warm again. Till the 18th century the rate of increase in temperature was quite slow. But shortly after the Industrial Revolution, the increase in global temperature started rapidly. Until the 18th century there was no immense threat to environment. But the Industrial Revolution, which started in the 1780s after invention of the steam engine, led the earth into unsurpassable danger through gradual air and water pollution. Many of us are still unaware of the disaster we are heading towards because of all the pollution. Three quarter of the surface of the earth is water, most of which is in the form of ice in the polar areas. As the earth is getting warmer day by day, the ice, which was in this form for millions of years, is thawing and as a result the sea level is rising gradually. This is a major cause of concern for Bangladesh because its physiography is almost flat and the average height of land is only 30 feet from the sea level. Environment experts predict that if global warming continues, most of the coastal areas of Bangladesh would be inundated within a few years.

In addition, seawater would penetrate the country's fertile land and ruin thousands of hectares of cultivable land in the coastal areas. Our land will no longer be able to produce any crop as it will be repeatedly washed by salty water. There would be no existence of the Sunderbans (the world's largest mangrove forest and a well recognized site of world heritage), which would bring a great ecological imbalance. The most crucial fact that is likely to appear is food and habitat crisis in our country due to global warming.

The fact is we are going to be the worst effected by the impending environmental disaster, for which developed countries are mostly responsible as they produce the bulk of greenhouse gases. The developed industrialized countries emit the largest quantity of those gases which play a vital role in increasing the temperature of the atmosphere. We will suffer most for actions that we were hardly responsible for.

During the last century, the amount of carbon dioxide in the atmosphere has increased dramatically because people started to burn vast amounts of fossil fuels: coal and petroleum and its derivatives since the early years of the last century. Burning these fossil fuels, as well as other activities such as clearing land for agriculture or urban settlements, release gases including carbon

dioxide, methane, and nitrous oxide that trap heat in the atmosphere. Currently 44% of greenhouse gases come from burning fossil fuels and another 25% come from the deliberate burning of tropical rain forests, most of which are located in Brazil and Indonesia. We may not stop burning fossil fuels but we can at least reduce the usage of fossil fuels and certainly our whole-hearted effort can stop the burning of tropical rain forests which is also responsible for global warming. As these gases build up in the atmosphere, they trap more heat near the earth's surface, causing earth's climate to become warmer than it would naturally be. Environment scientists predict that unless drastic actions are taken, global temperature will continue to rise by 1.4 to 5.8° C by the year 2100. The consequences of such increase in temperature may be devastating. These warmer temperatures could melt parts of polar ice caps and most mountain glaciers, causing a rise in the sea level of up to 1 meter within a century, which would completely inundate a number of low-lying island nations and flood many coastal cities. Many environment experts opine that Bangladesh is more vulnerable to such an environmental disaster. Therefore, whenever the term 'global warming' comes up, experts mention the name of Bangladesh as it is going to be affected first and the most. Many plant and animal species will probably be driven into extinction; agriculture will be severely disrupted in many regions; hurricanes and droughts would be more frequent.

Bangladesh is a country of 144,000 square km and the population of Bangladesh is now nearly 160 million. Bangladesh is still an agriculture-based economy; nonetheless, per capita cultivable land in Bangladesh is as low as 0.29 acres. If the prediction of those experts becomes true then a tremendous international crisis will arise throughout South Asia. People who are now living in the coastal areas will be forced to move towards the northern part of Bangladesh, mostly to Dhaka, Rajshahi, Shylhet and to other urban areas. Then Bangladesh would fall in a formidable domestic crisis. Because the floating and peripheral people of this country will be in tremendous accommodation crisis and as Bangladesh is an agriculture-based economy, it would likely face tremendous food shortages. The demographic pressure will cause people to move to areas with less pressure even beyond national boundary. Experts are also very much concerned about the upcoming border crisis of South Asia which will affect the vast population of Bangladesh most and for the rising sea level as well. It is now an alarming situation for Bangladesh with the geometric increase of population and the apprehension for the upcoming loss of

cultivable land.

The United Nations Environment Program (UNEP) has been working since 1972 to save the earth from environmental disasters. In December 1997 at the Third Conference of the United Nations Framework Convention on Climate Change in Kyoto, Japan, more than 160 nations formally adopted the Kyoto Protocol. Negotiators have met regularly since 1995 to enforce the treaty for industrialized countries and developing countries that are struggling to become industrialized, as they are the most greenhouse gas emitters. The concerned world community hopes that United States would renounce the position of her stubbornness and endorse the Kyoto protocol immediately.

5th June is recognized as the 'World Environment Day' by all the member countries of the UN and is being celebrated worldwide since long. The G-8 meeting this year was held from 6 to 8 June in Germany. It is heartening that the G-8 members agreed to undertake concurrent effort to reduce their own bulk of emission of greenhouse gases. The G-8 members can play a catalytic role to effectively reduce emission of greenhouse gases as they are the producers of the bulk of those deadly gases. Their uniform and concerted efforts would certainly work to repel our global warming phobia and reduce the production of greenhouse gases.

The government of Bangladesh must apprise the world leaders about the impending disaster. The developed industrialized countries, notably G-8 countries are producing deadly greenhouse gases to make their economy more robust. The concept of Globalization is also deteriorating the condition. The competitive open market economy is also adding fuel to produce more greenhouse gases. So the players who are playing key roles in the world politics have to think about morality. It will be unanimously conceded that only their initiative can prevent the whole world from the inevitable disaster. Along with them, each and every one of about 6.5 billion people of this world has to play his/her part in protecting the environment. The United Nations and other international environmental organizations have to play a more intensive role to protect countries like Bangladesh from the effects of global warming.

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