

## 'Environment Concerns in the Indian Ocean: Analysis on the Effects in Maritime Environment based on Commitment of the Bangladesh for the Last Decade'



**Rear Admiral M Abu Ashraf, BSP, ncc, psc**  
Commander Chattogram Naval Area, Bangladesh Navy

Thank you Hon'ble Chair for kind introduction.

Distinguished Chiefs of Navies, Maritime Agencies, Heads of the Delegates  
Ladies and Gentlemen, Assalamualikum and a very Good Morning.

At the outset, I would like to thank the Ministry of Defence Sri Lanka and the Sri Lankan Navy for inviting me to talk in this International Maritime Conference 2019. Hon'ble Chair, the regular participation of Bangladesh Navy in the Galle Dialogue reflects Bangladesh government's strong positive mindset for collective maritime prosperity. Our consistency in seeking maritime interdependency draws from the foreign policy dictum of our Father of the Nation Bangabandhu Sheikh Mujibur Rahman's foreign policy i.e. friendship to all and malice to none. Bangladesh government appreciates that the maritime domain holds vast opportunities to forge this friendship as none has the bandwidth to address the maritime challenges alone.

**Dear Audience,**

The Indian Ocean region, today,

faces a wide range of challenges related to environmental stresses and the impacts of climate change. The changes in the natural environment are happening in parallel with the geopolitical changes. This phenomenon concerns us more as environmental, and geopolitical threats have the potential to negatively interact and cause further deterioration of the security environment. When environmental impacts are combined with ethnic or other social grievances, they can contribute to increased migration, internal instability, greater competition for natural resources, and may foster terrorism or cross-border conflict.

Under this backdrop, I will present my thoughts on: "Environment Concerns in the Indian Ocean and Its Effects in Maritime Environment Based on Commitment of the Bangladesh for the Last Decade". To set the context proper, first I would focus on the environment concerns in the Indian Ocean followed by Bangladesh's particularly that of navy and coast guard's approach to these concerns. Finally, I would share my thoughts to move forward in the next decade.

## **Environment Concerns**

**Natural Hazards.** Ladies and Gentlemen, I would like to start with the natural hazards. The Indian Ocean region is already an epicentre for a range of natural hazards, including climatological (cyclones and droughts), geological and tectonic (earthquakes and tsunamis) and hydrological hazards (such as floods and tidal surges). The threats are compounded as we have the least capacity to respond. It is said that the people of the region, particularly those who live in Bay of Bengal littoral states, may be one of the most acutely at-risk populations. Tropical cyclones in the Bay of Bengal have routinely caused high death tolls in the region. Again, the earthquake and consequent tsunami that occurred in the Andaman Sea in December 2004 indicates the potential for catastrophic events in this region. The relatively high population density and rapid urbanization of the low-lying areas of the region, including in India, Bangladesh and parts of Indonesia magnifies this impact.

**Climate Change.** The natural environment is also being strongly affected by climate change. The coming era has probably been rightly termed as the 'Era of Disasters'. In coming years, climate change may act as impact multiplier, increasing vulnerabilities from natural hazards and aggravating human security. Evidently it is resulting in:

- Changes in regular monsoon/ rainfall patterns
- Ocean warming
- Rise in sea levels
- Declines in fish stocks.

**Ocean Warming.** Rising air temperature is affecting the physical nature of the oceans. As air temperatures rise, water becomes less dense and separates from a nutrient-filled cold layer below. This sets a chain effect ultimately resulting in:

- Changes in natural habitats and food supply affecting yearly

growth cycle and causing migration of organisms along the coast

- Changing ocean chemistry/ acidification is threatening marine life, such as corals and shellfish, which may become extinct later this century from the chemical effects.

**Rise in Sea Levels.** Bangladesh is particularly concerned with sea-level rises as it has been estimated that 1 metre sea-level rise could leave around 17% of Bangladesh's land area inundated affecting around 15 million people.

**Declines in Fish Stocks.** There is also the potential for a significant decline in fish stocks in the Indian Ocean due to:

- Overfishing by local and extra-regional fishers, acting both legally and illegally
- Changes in the marine environment, including changes due to acidification, marine heat waves, hypoxia, marine pollution, etc.

We know that many states in the Indian Ocean are highly reliant on fishing as a source of income, and as a major source of animal protein. In fact, fish contributes more than 50% of total animal protein consumed in Indonesia, Bangladesh and Sri Lanka. For such countries, the decline in fish stocks may contribute towards economic dislocation leading to social and political instability. We may recall that, the destruction of Somali fishing grounds by illegal fishers around a decade and a half ago contributed to spread of piracy. The IUU (Illegal, Unreported and Unregulated) fishing in the Indian Ocean is the highest in the world, and is likely to grow due to relative lack of enforcement arrangements. This is causing grave environmental damage by using prohibited gears, such as driftnets, that catches non-target species (like sharks, turtles or dolphins), or physically damages or destroys reefs, seamounts and other vulnerable marine ecosystems.

Another recent occurrence is the development of hypoxic areas in the ocean, where oxygen levels are highly depleted and marine life can no longer be sustained. Two large hypoxic areas (so-called 'dead zones') have been identified in the Indian Ocean, including one in the Bay of Bengal that covers 60,000 square kilometres at depths between 100 and 400 metres.

**Shipping Accidents.** The Indian Ocean is one of the world's busiest oceanic highways with traffic clustered in the narrow choke-points. Over 100,000 ships cross the Indian Ocean every year. Importantly, oil tankers, including very large crude carriers account for some 29% of this traffic carrying around 80% of the world's seaborne trade in oil. So, accidents involving shipping can represent a significant threat in this region. The challenge is higher as it is also one of the world's least regulated regions and is frequented by many unsafe ships. Such unsafe vessels can present significant dangers through running aground or collision or by breaking apart in mid-ocean. We don't want an accident like the grounding of the supertanker Exxon Valdez in Alaska causing a massive oil spill. To enhance safer shipping, we have the Indian Ocean Memorandum of Understanding on Port State Control (Indian Ocean MOU-PSC). But, this arrangement seems to be less effective than other regional arrangements due to lack of enforcement capabilities.

**Marine Pollution.** The Indian Ocean is also reportedly the second most polluted ocean in the world. Mainly land-based source is responsible for this, but ship-sourced pollution is becoming a challenge due to substandard shipping practices. Marine debris is adversely impacting the biodiversity and also has negative impacts on the economies of some coastal and island states.

Many of the oil refineries in the Indian Ocean are located near to the coast. Recent attack on oil processing facilities in eastern Saudi Arabia reminds us the possible impacts on the marine environment should such attack

occurs near the coast.

To understand the concerns of Bangladesh and her approach towards mitigating the threats, let me give a quick glance on the maritime aspiration of Bangladesh. Being a maritime nation, Bangladesh's interests at sea can be seen on the screen, after the traditional self-preservation interests, promotion of blue economy, freedom of navigation, conservation of resources, promoting maritime cooperation and addressing transnational crimes are prominent.

**Commitments and Challenges** In line with the interests, Bangladesh Navy and Coast Guard have always given highest priority to address various environmental issues for promoting the common good. With a view to ensure environmental protection and conserve natural resources, we maintain round the clock physical presence and surveillance by ships and aircraft as part of our constabulary and benign missions.

a. **Curbing IUU Fishing.**

Domestically, Bangladesh achieved significant success in reducing the destructive fishing practices particularly near the estuaries. Enforcement of Marine Protected Areas, enforcing yearly 65 days fishing ban in the coastal waters and policing against IUU fishing helped us to grow marine fisheries by 10.08%. We have experienced that the policing efforts work best when coupled with economic incentives including alternative livelihood project during the fishing ban. We have also been successful in curbing illegal intrusion of foreign fishing fleet. In last ten years, we apprehended approximately 78 fishing trawlers from the regional countries in our waters and drove away further 702 foreign fishing trawlers in last year. We believe flag states of the fishing fleet can do more to stop trespassing. This is an area where cooperative ventures would be very effective. We also started

coordinated patrol with Indian Navy for this reason.

**b. Mitigating Shipping Accidents.**

Maritime safety, features high, among the benign commitments of our maritime agencies. In several occasions, our forces conducted SAR and salvage operations alone or in coordination with the neighbours to mitigate environmental impacts. SAR and salvage operations are best facilitated through some sort of MoU or arrangement between regional countries. Bangladesh and Indian Coast Guards signed a MoU in this respect in 2015, and this has facilitated coordinated operations in 2016 and 2019 across the boundary to save lives.

With the guidance and encouragement of our government, we have also endeavoured to develop common protocol under IONS for MSAR. As many of you will recall the maiden IONS exercise that Bangladesh hosted in 2017 i.e. IONS Multilateral Maritime Search and Rescue Exercise (IMMSAREX). The aim of the exercise was to make humble effort to realise the collective SAR through three different scenarios: shipping accident, finding missing fishing trawler, and searching aircraft ditched at sea. The exercise reflected our commitment for regional peace, security and shared maritime future.

**c. Mitigating Marine Pollution.**

Ladies and Gentlemen, in addition to domestic conservation efforts, Bangladesh is actively cooperating with India, Maldives, Pakistan and Sri Lanka to implement regional oil and chemical pollution contingency plan under South Asia Cooperative Environment Programme (SACEP).

**d. Sustainable Management and Protection of Marine and Coastal Ecosystems.**

We are also actively participating in the Bay of Bengal Large Marine Ecosystem (BOBLME) project together with India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka, and Thailand to protect marine environment, conserve marine ecosystem, preserve biodiversity and sustainable management of fisheries resources of the Bay of Bengal.

**e. Disaster Response.**

We remain ready to respond to any disaster in the coastal areas. On many occasions, we undertook HADR missions to regional countries.

**f. Safe Maritime Navigation.**

Bangladesh Navy is contributing to make the coastal navigation safer through nautical survey of our sea area, production of charts, dissemination of weather warnings, and publishing navigational warnings. Through effective inter-agency collaboration, we could significantly reduce shipping accidents and save fishing fleet from occasional rough weather at sea.

**g. Cooperative Commitments.**

Our active participation in cooperative maritime constructs in bilateral, regional and global level is the testament of our desire to protect and preserve the maritime commons through rules-based order. In the bilateral level, the staff talks with both India and Myanmar have served as confidence building measures, as well as promoted technological and tactical cooperation.

**h. Promoting Maritime Education and R&D.**

Bangladesh Navy has also contributed significantly in establishing and running Bangabandhu Sheikh

Mujibur Rahman Maritime University since 2013 and Bangladesh Institute of Maritime Research and Development (BIMRAD) since 2018. Both these organisations are supporting our government's keen initiative for promoting blue economy by educating people on maritime related subjects and raising maritime domain awareness.

### **Future Courses**

Ladies and Gentlemen, maritime goals and priorities of the Indian Ocean littorals are definitely diverse, but environment is such a trans-boundary issue, where only commitment and convergence of interests can ensure collective benefit for all mankind. In that note, we shall endeavour to foster greater capacity building. My specific recommendations would be:

#### **a. Building Dialogue and Operational Coordination among Maritime Security Agencies.**

Presently navies and coast guards of the region can conduct dialogue through IONS and the Heads of Asian Coast Guard Agencies Meeting respectively. But the higher level cooperative construct like the Indian Ocean Rim Association (IORA) does not involve the security agencies much. We need to expand these existing forums into actions by:

- (1) forming sectoral 'Expert Working Group' on environment to identify good practices and shortfalls.
- (2) fostering cooperation in maritime safety capacity building by integrating the national SAR centres.
- (3) fostering cooperation in Disaster Risk Reduction and Relief by building common protocol and pooling resources.
- (4) providing training in

Port State Control Enforcement to enhance capacity to mitigate environmental degradation, and promote maritime safety and security.

**b. Cooperative Responses to IUU Fishing.** We should promote bilateral or sub-regional cooperative arrangements (like BISMTEC) in relation to research, surveillance and enforcement to preserve marine living resources.

#### **c. Building Capabilities in Maritime Domain Awareness.**

Another key area of cooperation may be developing Maritime Domain Awareness as Indian Ocean generally lacks in effective surveillance capability. Regional information sharing mechanism like IFC (Information Fusion Centre) Singapore or MASE Madagascar may be beneficial for all the littorals in developing maritime situational awareness.

**d. Regional Oil Spill Preparedness and Response Capability.** Regional oil spill preparedness and response capability may be enhanced by broadening the South Asia Cooperative Environment Programme (SACEP) to include exercises.

#### **e. Cooperation in Marine Science and the Blue Economy.**

Many Indian Ocean states see blue economy as an important element in their future economic development. The blue economy is linked with environmental upkeep, and therefore, provides a valuable means for engagement in the maritime realm. Formal and informal collaboration between regional academic and R&D bodies can be promoted to meet the environment protection challenges of the 21<sup>st</sup> century.

## **Concluding Remarks**

Hon'ble Chair,

In a nutshell, no single littoral has the bandwidth and resources to address the environment concerns in the Indian Ocean alone because they are wide in spectrum, complex in nature and have no boundary to limit. Indian Ocean littorals share many things in common, so are their worries and woes. Therefore, a holistic and layered multilateral regional cooperation is the only way ahead.

At the end, I would like to thank again the Sri Lankan Ministry of Defence and Navy for holding this conference and inviting me to talk. I would like to conclude by reminding the anonymous quote "The good seaman weathers the storm he cannot avoid, and avoids the storm he cannot weather." We are all sailors and we will learn to weather the storm that the future holds for us.