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MARITIME CAMPUS

A QUARTERLY MAGAZINE OF
BANGABANDHU SHEIKH MUJIBUR RAHMAN
MARITIME UNIVERSITY, BANGLADESH

**Bangabandhu's vision for a
secured Maritime Bangladesh**

**COVID-19 and the response of
BSMRMU to 'new normal'**

**A dream of Blue Economy in the world
of plastic nightmare**

**Basic familiarisation about the air pollution
caused by shipping industry**

Thucydides' trap and geopolitics in IOR

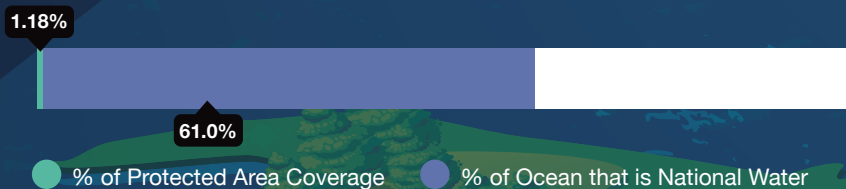
Marine Protected Areas

Over 70% of the surface of Earth is ocean, comprised of highly diverse ecosystems, and providing a wide range of marine ecosystem services that support human society, health and the economy.

The global coverage of Marine Protected Areas (MPAs) is 7.68%. The Global Ocean can be divided into areas within national jurisdiction (National Waters) and those in international waters (Areas Beyond National Jurisdiction (ABNJ)).

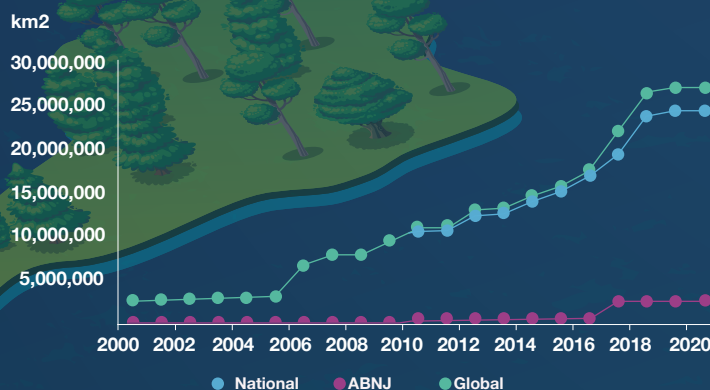
National waters represent 39% of the global ocean and at present, 17.86% of these waters are designated as protected areas. In contrast, only 1.18% of ABNJ, which makes up the remaining 61% of the global ocean, has been established as protected areas.

National water

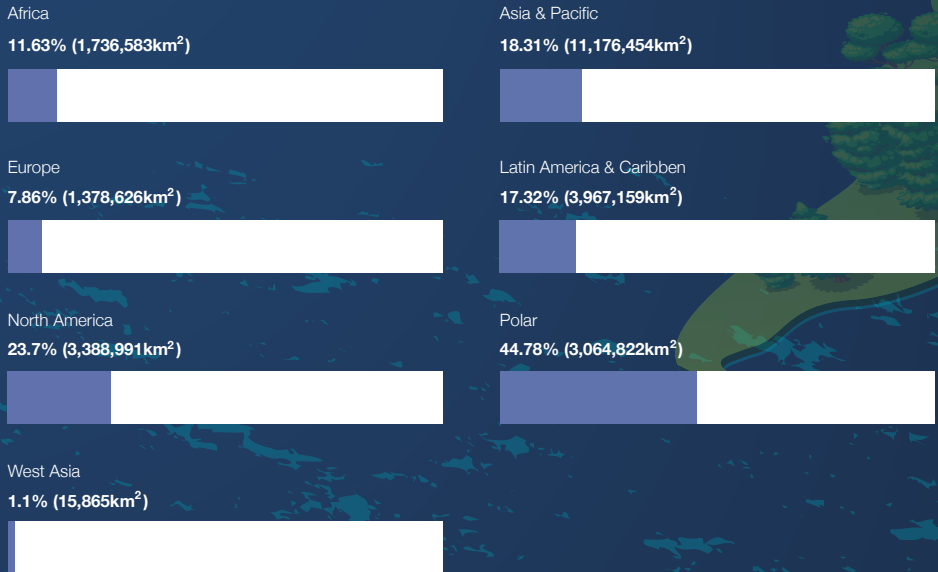


Growth in maritime protected area coverage

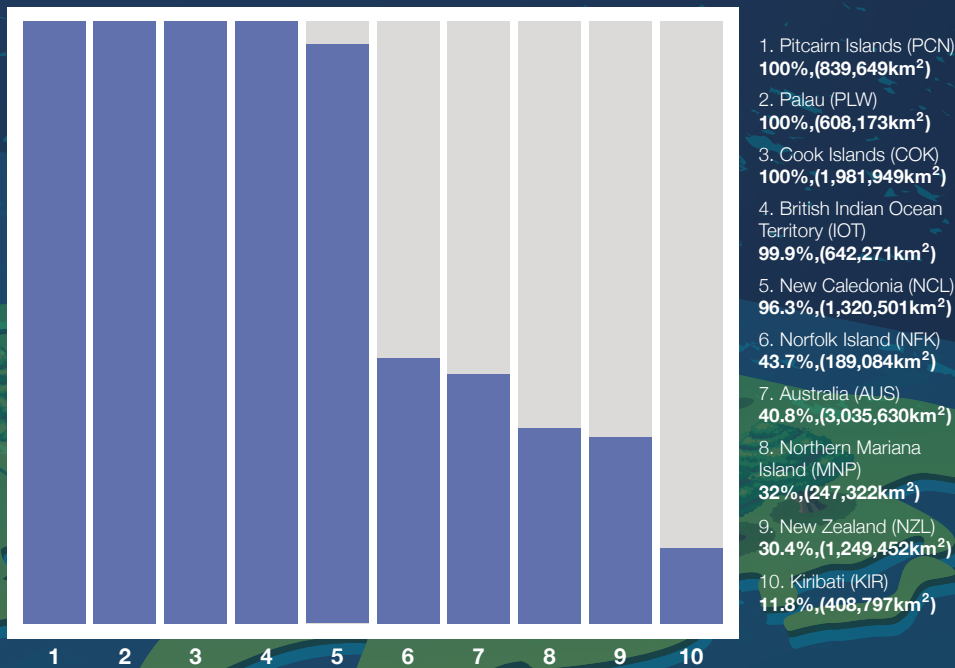
Over the last several years the number and spacial element of MPAs have increased rapidly



Growth in maritime protected area coverage



Top 10 size distribution of Marine Protected Areas in Asia and Pacific



Much of the recent growth in MPA coverage has been driven by the establishment of very large MPAs over 100,000 km². While these protected areas represent huge commitments to conservation, there is a need for international collaboration to ensure that MPAs achieve their desired conservation value.

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Editorial

Despite COVID-19 disruption, we must move forward.

As of 30 June 2020, more than 10 million people have been infected worldwide with COVID-19, and over 503 thousand have died. In Bangladesh, so far 145,483 people have been infected with the virus and 1,847 people have lost their lives till 30 June 2020. Consequences of the outbreak are impacting all aspects of our society broadly. Globally, 1.2 billion learners or 68% of the world's total enrolled students were affected due to the education institute closure in 144 countries. Bangabandhu Sheikh Mujibur Rahman Maritime University (BSMRMU), at the outset of COVID-19 outbreak, took several initiatives to conduct the academic activities online despite limitations. Informing the readers about COVID-19 impact on global maritime economy, our lead article describes the measures taken by BSMRMU to prevent the outbreak in its premises. Besides, initiatives of the government to slow down the viral transmission have been discussed.

The Father of the Nation, Bangabandhu Sheikh Mujibur Rahman advocated for a strong naval force to safeguard the maritime interest of Bangladesh. After independence, Bangladesh Navy started its journey with an ambitious vision to evolve into a credible three dimensional navy capable of maintaining an effective posture across the full spectrum of any conflict at sea and undertake constabulary and benign tasks to ensure good order at sea for carrying out national maritime economic activities. In this context, the article in our 'Academia' section has articulated the vision of Bangabandhu in building up a navy for our maritime security.

The nation is celebrating the birth centenary of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman. To commemorate his memory and contribution for the independence of Bangladesh, Maritime Campus has been publishing dedicated articles on him. This issue of the Maritime Campus has portrayed Bangabandhu as a liberator of Bengali people.

Blue Economy is a vision for the future to enhance our capability to maximise socio-economic sustainability, production, and anti-poverty mechanisms. If someone makes the best use of the sea, rapid development is only one step ahead. However, before doing any exploration and exploitation, we must have to learn how to preserve our marine resources and marine diversity. Such thoughts are reflected in our article in 'Horizon'.

Additionally, the 'Campus Canvas', 'Maritime Bangladesh' and 'Around the World' sections will keep you abreast of all the important maritime events and developments happening during the second quarter of 2020.

Finally, I would like to express my gratitude to the Chief Patron and Hon'ble Vice-Chancellor for his valuable guidance to bring this issue into light. I would also like to thank all the departments for the support they have rendered by providing information about the activities of their respective departments.

Finally, I appreciate the members of the Editorial Board for their relentless effort to publish this magazine within shortest possible time.

Thanking you

Captain A T G M Sarker, (TAS), psc, BN (retd)

Editor and Controller of Examinations

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LEAD STORY

COVID-19 and the response of BSMRMU to 'new normal'

COVID-19 is now a global health crisis, an information crisis and increasingly a wider socioeconomic crisis. Nobody knows when the situation will be normal or how long this 'new normal' will prevail since there is no vaccine available. We only know that we have to continue our livelihood and businesses despite the threat of such deadly virus. Therefore, BSMRMU has been trying its best to keep all the academic activities unaffected.



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HORIZON

A dream of Blue Economy in the world of plastic nightmare

The value of Blue Economy is estimated at USD 2.5 trillion, equivalent to the world's 7th largest economy. Within a short period of time, maritime industry will rise higher and become the source of prosperity for many nations. However, plastics in ocean are a big problem for both economy and diversity.

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CAMPUS DIARY

The Bay of Bengal expedition

The expedition was a four-day long engagement. The ship was from Bangladesh Navy, named BNS Shangu. It was a 60 metres long ship. The main objective of this cruise was collecting the in-situ Chlorophyll-a, besides we collected some other parameters.

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The Blue Economy is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health. The global economy, worth about five trillion USD, is currently depending on the Blue Economy.

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Basic familiarisation about the air pollution caused by shipping industry

NOx and SOx produce microscopic sulphate and nitrate aerosol's air born suspended particle which enters in to the human blood stream through the lung. These particles damage heart, lung, kidney and brain resulting premature death.

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Bangabandhu's vision for a secured Maritime Bangladesh

Bangabandhu's incorporation of shifting Navy Headquarters to the East Pakistan in the historic Six-point Movement in 1966 and enactment of the Territorial Waters and Maritime Zones Act, 1974 to demarcate the country's maritime boundary reflects the foresight of Bangabandhu Sheikh Mujibur Rahman. Moreover, he started his journey for a secured Maritime Bangladesh by commissioning of BNS Issa Khan, the largest naval training base, in 1974.

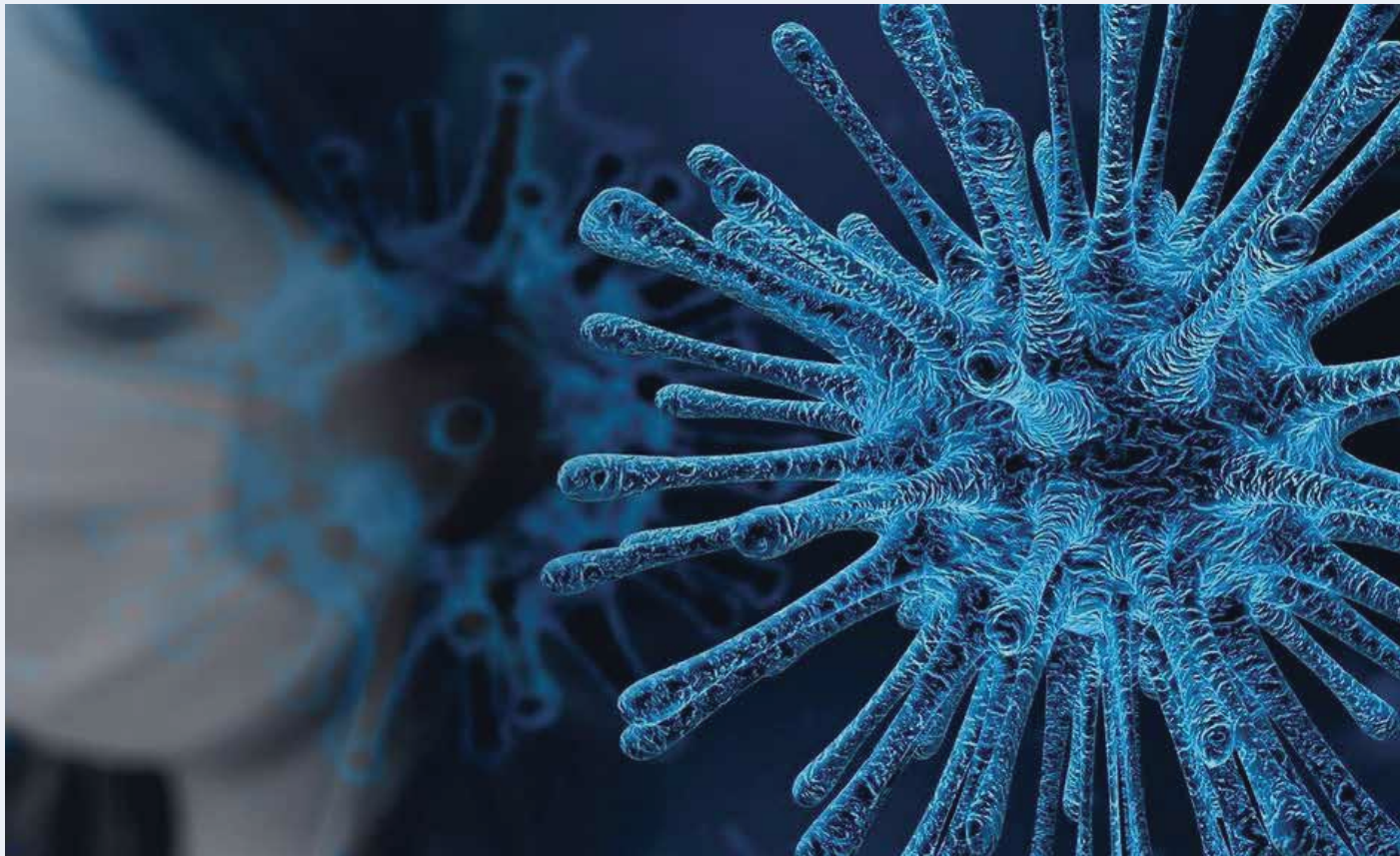
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PANORAMA

Thucydides' trap and geopolitics in Indian Ocean Region

Thucydides' trap was coined in 2012 by Harvard professor Graham Allison, who used it in a reference to the Peloponnesian War between Sparta and Athens in ancient Greece, which was chronicled by historian Thucydides. Thucydides observed that the war was caused by the rise of Athenian power and the fear caused in Sparta.





COVID-19 and the response of BSMRMU to ‘new normal’

Maritime Campus Desk

The COVID-19 pandemic, also known as the Coronavirus pandemic, is an on-going pandemic of Coronavirus Disease 2019 (COVID-19), caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). According to media reports, the outbreak was first identified in December 2019 in Wuhan, China. The World Health Organisation declared the outbreak a Public Health Emergency of International Concern on 30 January 2020 and a pandemic on 11 March. The COVID-19 pandemic has emerged as one of the worst global crises since World War II. As of 30 June 2020, more than 10 million people have been infected worldwide, and over 503,000 have passed away due to the disease. In Bangladesh, so far 145,483 people have been infected with the virus and 1,847 people have lost their lives till 30 June 2020. Consequences of the outbreak are impacting broadly all aspects of our society. Globally, 1.2 billion learners or 68% of the world's total enrolled learners were affected due to the postponement of all kinds of academic activities in 144 countries. Bangabandhu Sheikh Mujibur Rahman Maritime University (BSMRMU), at the outset of COVID-19 outbreak, took several initiatives to conduct the academic activities online inspite of having considerable limitations. This article describes the measures taken by BSMRMU to prevent the outbreak in its premises.

COVID -19 impact on the global maritime sector

It is true that many of the WHO recommended measures are in contradistinction to 'normal' routines. We should come together and support one another in the society; and we must learn to do so from a distance. Both the outbreak and the restrictions reveal the fragility of the global economy, sparking fears of impending economic crisis and recession. Social distancing, self-isolation and travel restrictions have led to workforce reductions across all economic sectors. Educational institutions have closed down, and the demand for commodities and manufactured products has generally decreased. In contrast, the need for medical supplies has significantly risen. The food industry is also facing increased demand due to panic-buying and stockpiling. Overall, world trade is expected to fall by between 13 % and 32 % in 2020 as the COVID-19 pandemic disrupts normal economic activity and life around the world. Business activity across the eurozone collapsed to a record low in March 2020, and US industrial production showed the biggest monthly decline since the end of World War II. An example of the unprecedented financial changes is the price of oil dropping below zero due to expiry of delivery contracts and limited storage capacity to receive them, for the first time in history in April 2020.

Since over 80 % of global trade by volume and more than 70 % of its value are being carried on-board ships and handled through seaports worldwide, maritime transport for trade and development is of paramount importance. Shipping can be viewed as a barometer for the global economic climate. The United Nations Conference on Trade and Development (UNCTAD) projected an annual average growth rate of 3.4 % for the period 2019 - 2024. However, this estimated growth will possibly need to be revised, as the coronavirus pandemic led to a 3 % drop in global trade values in the first quarter of 2020. The downturn is expected to accelerate in the second quarter, according to UNCTAD forecasts, which project a quarter-on-quarter decline of 27 %. National and local restrictions concerning ship operations were enforced, often leading to delayed port clearance. Limitations included crew embarking and disembarking, cargo discharge and loading, imposition of quarantine, and eventually refusal of port entry and refuelling. Other measures followed in other maritime sectors and port activities with the aim to ensure safety at terminals and

associated logistic facilities of stevedores and other personnel.

Similar to sea-borne trade, the maritime tourism industry was the first and most affected traffic segment, with cases of COVID-19 among cruise ships passengers and crew members reported all around the world, from Yokohama (Japan), to Corfu (Greece) and Sydney (Australia). In order to limit and slow down the spread of the infection, many seaports closed down, limiting—and sometimes banning—cruise traffic at their terminals.

The fishing and aquaculture sectors were also affected by containment measures, leading to, e.g., voluntary fishing cessation and suspension or reduction of fish farming, with evident effects on the supply chain of fish food products.

Besides, exploration and exploitation of maritime resources like offshore gas and oil, minerals, medicinal products from the sea have been disrupted. Interestingly, the relation between COVID-19 and the environment already attracted enormous attention within the scientific community. An exemplary environmental consequence of lockdowns is that pollution levels dropped significantly; for instance, greenhouse gas emissions, nitrogen dioxide, black carbon and water pollution decreased drastically. Therefore, with a huge negative economic impact worldwide, COVID-19 actually helped to reduce pollution.

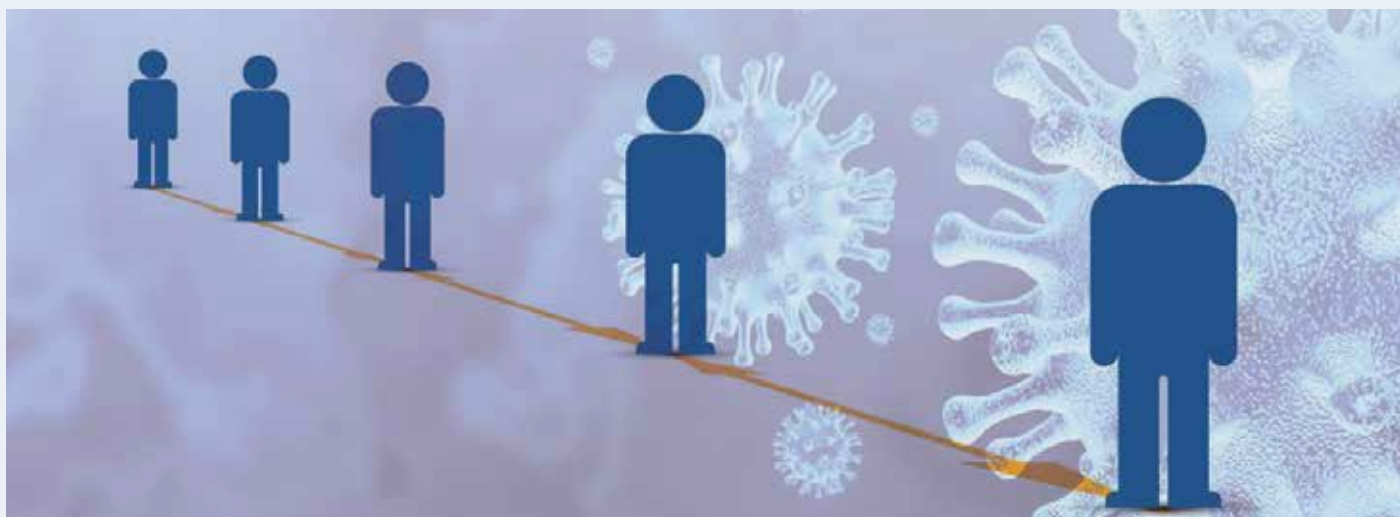
COVID-19 response of Bangladesh

The national response is being headed by the Hon'ble Prime Minister Sheikh Hasina herself in close conjunction with relevant public health agencies like the Ministry of Health and Family Welfare, Directorate General of Health Services (DGHS) and the IEDCR. Bangladesh is also working closely with the various international organisations in Bangladesh, including the World Health Organisation (WHO). Committees have been formed at city-corporation, municipality, district, upazila and union levels for coronavirus prevention.

Social and physical distancing is being enforced through a general holiday and COVID-19 awareness for the entire country till 14 May 2020. All government and private offices remained closed. Banking was limited to two hours per day only in few branches. Only groceries, pharmacies etc kept open.

All places of worship, including mosques, had been closed for public

To practice social or physical distancing, we have to stay at least 6 feet (about 2 arms' length) from other people



// Lead Story //

congregations by government order. People were asked to pray from their homes. All educational institutions had been closed, residential halls vacated, and examinations postponed. All public gatherings have been stopped. Earlier, the Prime Minister had directed that all celebration of Mujib Year will remain suspended in the current situation.

Areas with most cases of infected patients were subjected to complete lockdown. So far 3 divisions, 49 districts and 395 upazillas were locked down. People being quarantined at home, are under strict monitoring of the local law enforcers and administrative officials.

All domestic flights of Bangladesh and international flights were closed till 30 June 2020. All public transport, inter-city buses, commuter trains, inter-district trains, water launches and ferries were closed till June.

Besides, the Hon'ble Prime Minister Sheikh Hasina has declared a USD 11.25 billion package for various sectors of the economy of Bangladesh, including the support measures for different segments of the population of our society. The primary focus of this stimulus package is domestic and export-oriented manufacturing and services sectors, including small and medium-sized enterprises (SMEs) and extended social safety net facilities and support for agriculture. This support package is equivalent to 3.3% of our GDP.

On 16 March 2020, the government declared closures of all academic institutions, dormitories and coaching centres as well, considering the devastating spread of COVID-19. With the growing public concern the closure period got extended time and again. According to different news sources, there are around 36 million students in all categories of institutions and close to a million teachers as well as education personnel in Bangladesh. These prolonged closures are not only affecting the academic career of these students, it is also putting negative impact on mental health as well. Considering the present reality, there is a high possibility of session jams at the universities. Hence, the government of Hon'ble Prime Minister Sheikh Hasina asked all the public and private universities to continue their curriculum through online classes and start their academic activities online.

Response of BSMRMU

The COVID-19 has forced to conduct online learning and distance learning. For a successful distance learning delivery, the students need to regulate their own activities, teachers need to efficiently use the technology available, and the curriculum needs to align with teaching modes and valid assessments. These areas are of particular importance in relation to Maritime Education and Training and in respect of the Certification requirements for safety, security and environmental protection. On April 30, 2020, the government asked the public and private universities to continue their curriculum through online classes and start their academic activities online. Now, most of the private and public universities are conducting their online academic activities as per the UGC rules. The present situation also shows that it will increase the disparity between the students living in remote rural areas with their urban counterparts. Students living in the rural areas fear that they would be left out as they lack the access to high speed data connectivity along with other facilities. In order to keep the academic activities online for all, electronic gadgets were provided to the teachers and students. Furthermore, the university has provided laptops to the students on easy instalments, who have financial constraints. Meanwhile, students are provided with adequate internet data to facilitate their academic activities. Besides, the Medical Officer of BSMRMU has given directives to all on how to stay safe amid the pandemic. Here are some notable steps taken by the university to prevent the spread of COVID-19 in university premises:

- At the onset of the COVID-19 situation, two separate interactive sessions were organised by the Medical Centre for the staff and students of the university, where the initial idea was to provide information for better understandings of COVID-19 and how it spreads and how we can protect ourselves and others.
- Wearing a mask is made mandatory for every individual of the university.
- A disinfectant chamber has been installed at the entrance.
- All frequently touched surfaces such as elevator buttons, tabletops and doorknobs are routinely cleaned with soap water or disinfectants.

BSMRMU donated one day's salary of its employees to the Prime Minister's Relief and Welfare Fund to expedite government's steps taken to fight the coronavirus.



- It is also ensured that all employees have access to washing facilities in the workplace as hand washing with soap is one of the most effective defences against COVID-19.
- Body temperatures of individuals arriving the university are regularly checked by using hand-held thermal scanners and the university also discourages entry of employees or visitors with a temperature over 100.4° F.
- The university has been distributing one-time face mask, reusable face mask, hand sanitizer, hand gloves and PPE (Personal Protective Equipment) to our staffs time to time.
- Office Attendance had been reduced to 50% as well as office timing is also shrunk to prevent COVID-19 from spreading.
- BSMRMU has been organising most meetings and conferences online.

Besides, on 3rd and 4th April 2020, essential food items were distributed on behalf of BSMRMU amongst the poverty-stricken people of Pallabi area, who were affected by the shutdown to prevent the spread of COVID-19 pandemic. In the presence of local Member of Parliament and member of Parliamentary Standing Committee of Defence Affairs Alhaj Elias Uddin Mollah, MP and the Vice-Chancellor of BSMRMU, Rear Admiral M Khaled Iqbal, essential food items were distributed maintaining proper safety guidelines and social distancing advised by the government.

On 15 April 2020, BSMRMU donated one day's salary of its employees to the Prime Minister's Relief and Welfare Fund to expedite government's steps taken to fight the coronavirus. On behalf of all members of BSMRMU, the Vice-Chancellor Rear Admiral M Khaled Iqbal handed over the cheque to Dr Ahmad Kaikaus, Principal Secretary to the Hon'ble Prime Minister at Prime Minister's Office. Vice-Chancellor of BSMRMU also assured continuous support of the university towards all activities taken by Hon'ble Prime Minister in response to the situation caused by the outbreak COVID-19 and also apprised about various academic initiatives taken by BSMRMU in this on-going situation.

Conclusion

COVID-19 is now a global health crisis, an information crisis and a wider socioeconomic crisis. Nobody knows when the situation will be normal or how long this 'new normal' will prevail since there is no vaccine available. We only know that we have to continue our livelihood and businesses despite the threat of such deadly virus. Therefore, BSMRMU has been trying its best to keep all the academic activities unaffected. It is true that students are being deprived of the campus culture and traditional practices but the university is committed giving the students a congenial distant learning atmosphere amid such crisis. Furthermore, with the pragmatic guidance of Vice-Chancellor, the university has been limiting the impact of COVID-19 without any session jam. We hope that those days are not far when the university, with its cheerful students, will be back to normal.



A disinfectant chamber has been installed at the entrance and body temperatures is being checked with hand-held thermal scanners to discourage the entry of people with a temperature over 100.4° F.





A dream of Blue Economy in the world of plastic nightmare

Sk Tawsif Samin

Scientists say that our “Earth” should be called the “Water” since water covers about 71% of the planet’s surface. It is just not serene water mesmerising us with immense beauty but another name for possibilities. Major industries such as shipping, fishing, aquaculture, and coastal tourism depend upon ocean health. We strive for resources each and every day. The value of Blue Economy is estimated at USD 2.5 trillion, equivalent to the world’s 7th largest economy. Within a short period of time, maritime industry will rise higher and become the source of prosperity for many nations. However, plastics in ocean are a major problem for both economy and diversity.

When we start thinking about the sea, imagination takes us near to a blue world with the flow of a gentle breeze, chirping of dolphins and the loud sound of wave. However, this blue world is not only confined in a metaphorical kingdom, rather, it is the potential and new light of hope for the people around this globe. Oceans are the largest ecosystem of the planet and they are filled with both heritage and resources. From the very beginning of the human civilisation, people are used to getting their livelihoods from the sea. Still, people are strongly dependent on the sea for almost everything and the trend is increasing. The Organization for Economic Co-operation and Development has projected that by 2030, the ocean economy will double from 2010 levels, adding USD 3 trillion to the global economy. Fisheries and aquaculture make a livelihood for 10-12% of the

world population. 70% of the trade is done by the sea. Essential commodities like oil, gas, and other resources are worth mentioning. Ocean floor provides 30% of global oil and gas consumption.

When we talk about the economic significance of the sea in our life, it directly leads us toward the concept and implementation of Blue Economy. According to the World Bank, a sustainable Blue Economy refers to the proper and solid use of ocean resources for economic development of a nation. In one sentence we can say that Blue Economy means the best use of the ocean.

According to a media report, 1 of the 6 US citizens depends on a marine job. Bangladesh has a total sea area of approximately 2, 07,000 square kilometres having a long coastline of 710 km with 200

nautical miles of the Exclusive Economic Zone (EEZ). More than 20% of the fish production of Bangladesh comes from marine fishing and 90% of the trading is done by the sea.

The Bay of Bengal plays a prominent role in the socio-economic field of Bangladesh and neighbouring countries. Protein for the Coastal people comes mainly from marine fishing. Besides, our salt producers are heavily dependent on the Bay of Bengal. The maritime tourism industry plays a very significant role for a sustainable economy. For example, travel and tourism industry of the USA directly contribute the highest amount to global GDP, with a total of USD 580.7 billion. The offshore energy industry is more reliable than land-based energy sector. The industry offers opportunities for renewable energy installations. There are so many economic benefits of the ocean that may take thousands of pages to describe. Oceans are making us benefitted with its charm and resources. However, are we making the best use of our ocean resources? That is a very important question.

It is very common for human beings that they protect their loved ones from every possible threat. They would even sacrifice their dearest possessions to safeguard loved ones. However, when it comes to our ocean, we are exploiting it and killing our Blue Economy vision by plastics! Everyone knows what plastic is but very few people know about its dangerous impact on the ocean. Every year, somewhere between 4.8 and 12.7 million tons of plastics are dumped into the



The Countries Polluting The Oceans The Most

Annual metric tons of mismanaged plastic waste and total amount ending up in global waters*



* Generated in 2010 (selected countries)
Source: The Wall Street Journal



ocean. Plastics needs at least 700 years to get decomposed and they can bring devastating effects to marine life. There is an estimate that every year 100,000 sea mammals die because of plastic pollution in water and the number is increasing day by day. 5 trillion pieces of plastics are floating on the ocean surface, which is very much harmful to both humans and animals. Every day dead whales are washed ashore. In maximum cases, the causes of death are related to plastic inhalation. Fish and other marine animals are mistaking microplastic debris as their food, consuming them and as a result, they face very

pathetic death. It's not only destroying sea life but also human health. A study found that almost 9% decrease in birth rate of fish in the North Pacific Ocean alone.

According to a media report, 50% of the sea turtles have died because they swallowed plastics. Some research estimates that more than 11.1 billion plastic items are currently tangled on coral reefs and as a result, corals are dying rapidly. Scientists predict that within 2050, there will be more plastics in the sea than fishes. Unbelievable, but our actions are making this worst nightmare a reality though very steadily. Our entire food chain is being attacked by plastic. Marine animals will die if there is no food but plastics and we will be deprived of healthy living if oceans become lifeless. It is a simple consequence but yet the most imminent threat for our food chain and livelihood. According to Statista portal, Bangladesh dumped 0.79 million metric tons of plastic waste into the oceans. The portal has listed 10 of the most plastic dumping countries, in which China is the most ocean polluting nation, and then comes to Indonesia and Philippines respectively. These numbers are increasing every day exponentially, which means that we are endangering our existence.

It is not the total picture of plastic affecting the ocean environment and Blue Economy but enough to create a future image of our beloved world. Plastic pollution must be stopped; otherwise, we'll end up eating plastics instead of food. That's why the term sustainable Blue Economy gains such popularity. There is no wrong in using resources from nature but we must learn to preserve them. We must promote the Blue Economy as much as possible in order to create a sustainable future. As I stated earlier that aspects of the Blue Economy are much more fascinating than we think, therefore, a coordinated step with all stakeholders is required.

Many organisations are taking the great initiative to reduce plastic pollution in the ocean. Few mentionable are Fairy, Adidas and Greenpeace. Organisations like United Nations Environment Programme Finance Initiative (UNEPFI) and World Bank have been

signing of various agreements and terms with coastal nations to save our ocean and economy from plastic aggression. However, no one can stop this nightmare if we are not aware enough. People think if they dump plastic in the sewage or river; it will not come back to them. At the end of the day, you are eating that plastic you threw away believe it or not. No other plastic reducing operation is as effective as awareness. Still, there is time and we can take care of our ocean, save the marine diversity, which is being destroyed cruelly as well as gradually. Anyone can do it just making a promise, "For the sake of my life and Earth, from today I'll stop dumping plastic anywhere".

Blue Economy is a vision for the future to enhance our capability to maximise socio-economic sustainability, production, and anti-poverty mechanisms. Aquaculture and proper exploration of offshore resources can change the fate of a nation very quickly. If someone makes the best use of the sea, rapid development is only one step ahead. However, before doing any exploration and exploitation, we must have to learn how to preserve our marine resources and marine diversity. Blue Economy is the dream of the new century. We will stop this nightmare.

Sk Tawsif Samin

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Bangabandhu's vision for a secured Maritime Bangladesh

Captain A T G M Sarker

Though the long-cherished independence of Bangladesh came on 16 December 1971, it was destined long before with the birth of a child on 17 March 1920 in a quite unknown village of Tungipara under Gopalganj district.

Through patriotism, long struggle and unprecedented sacrifice, one day this child has grown into a man whose personality, dream and political charisma were about to touch the height of the Himalayas and the broadness of the Bay of Bengal; and ultimately became the center point of a nation's dream, hope and future destiny. This man is none but the father of the nation Bangabandhu Sheikh Mujibur Rahman.

From the early stage of his life, he was against all kinds of oppression and injustice. Throughout his entire life he fought for the welfare of common mass. After independence, his dream was to build up 'Sonar Bangla' - means 'the Golden Bengal' - a country free from poverty, ignorance, injustice, communal violence and political oppression.

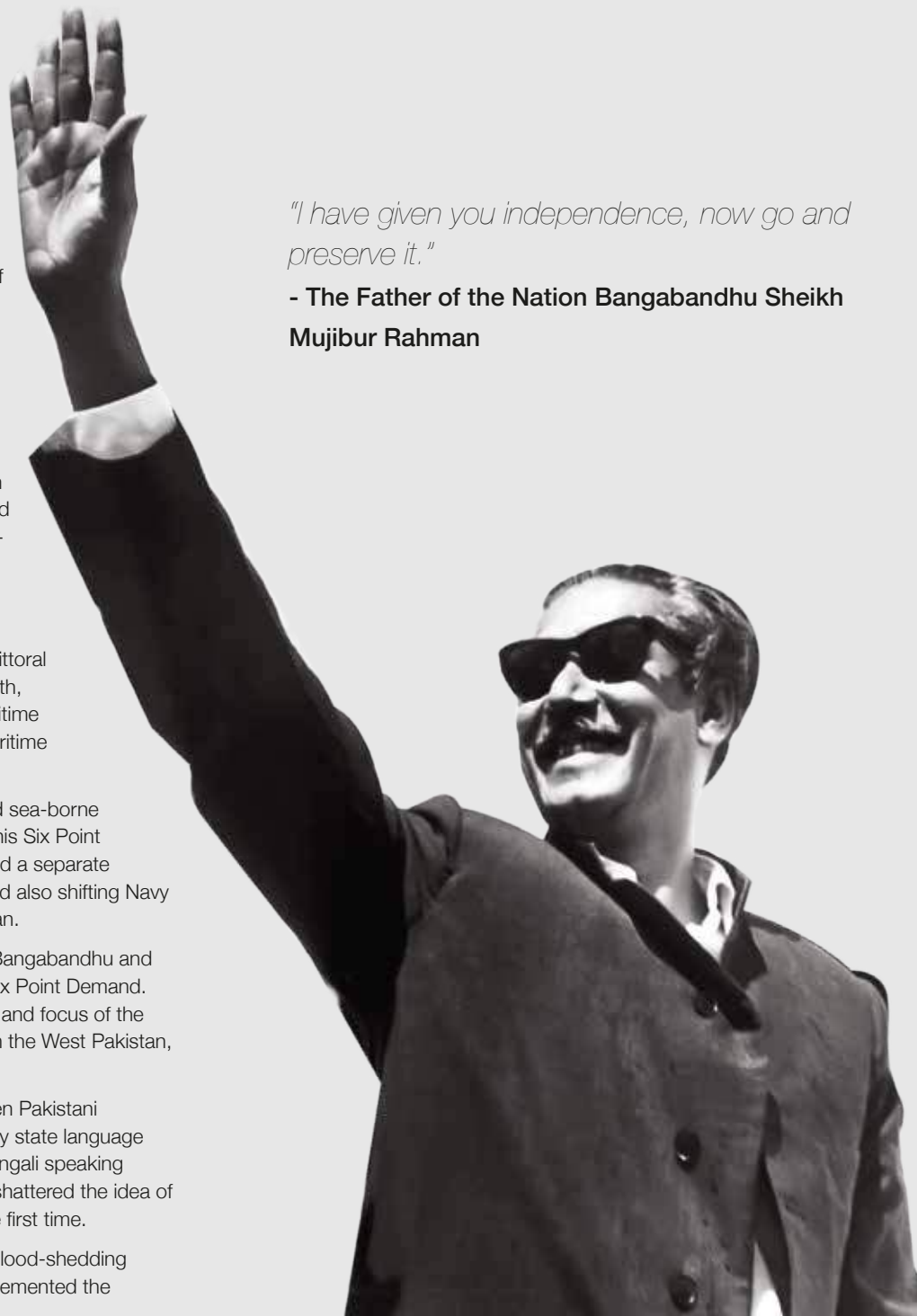
Foreseeing the depletion of land resources of Bangladesh in future and, her dependency, as a littoral state, on the sea for security and economic growth, Bangabandhu enacted "Territorial Water and Maritime Zone Act 1974" which was a milestone in the maritime history of Bangladesh.

In reality, Bangabandhu's concern for the sea and sea-borne affairs was clearly manifested when he declared his Six Point Movement in 1966. In the 6th point, he demanded a separate military or Para-military force for East Pakistan and also shifting Navy Headquarters to East Pakistan from West Pakistan.

Moreover, the Indo-Pak War of 1965 influenced Bangabandhu and shaped up his mind to incorporate this point in Six Point Demand. During the Indo-Pak war in 1965, all the concern and focus of the then ruling Government of Pakistan was solely on the West Pakistan, leaving the East Pakistan completely unsecured.

Since after the independence of Pakistan, the then Pakistani Government declared that Urdu would be the only state language of Pakistan. It was a bolt from the blue for the Bengali speaking population of East Pakistan and this declaration shattered the idea of united, equitable and democratic Pakistan for the first time.

Subsequently, comes 21st February 1952 - the blood-shedding agitation of Language Movement, which further cemented the



"I have given you independence, now go and preserve it."

- The Father of the Nation Bangabandhu Sheikh Mujibur Rahman



Commissioning of BNS ISSA KHAN, the longest base of Bangladesh Navy, by Bangabandhu

mistrust among the people of East Pakistan towards the rulers of West Pakistan and posed a question mark to the legacy of Pakistan. Basically, the happening of 21st February was a blow not only to the language but also to Bengali cultural heritage and literature.

The Indo-Pak War of 1965 showed the vulnerability of the Eastern wing compared to the West and the indifference of Pakistani rulers to the people of East Pakistan. The disparity between the Eastern and Western wings became an increasing concern. East Pakistan was facing a critical situation after being subjected to continuous discrimination on a regional basis, year after year. A statistical overview of economic discrimination is shown in the following table:

Year	Spending on West Pakistan (in crore rupees)	Amount spent on West as percentage (%) of total	Spending on East Pakistan (in crore rupees)	Amount spent on East as percentage (%) of total
% of total population		36.23		28.84
1950-55	1,129	68.31	524	31.69
1955-60	1,655	75.95	524	24.05
1960-65	3,355	70.5	1,404	29.5
1965-70	5,195	70.82	2,414	29.18
Total	11,334	71.16	4,593	28.84

Source: Reports of the Advisory Panels for the Fourth Five Year Plan 1970B75, Vol. I, published by the planning commission of Pakistan (quick reference: crore = 107, or 10 million)

The economists, the intelligentsia, and the politicians of East Pakistan started to raise questions about this discrimination. Bangabandhu gave it a voice through a bold proclamation at Lahore in 1966, which was the historic six-point movement. The famous 6-Point movement became the focal structural basis for the East Pakistanis upcoming struggle in the next 5 years. Through this plan, Bangabandhu openly demanded autonomy for East Pakistan in economic, governmental, para-military and cultural terms. It was the call for two-wings of East Pakistan to exist as a pure Confederation, and nothing more.

These were demands which ensured that Bangabandhu was enemy number one for the political establishment in West Pakistan and in a nut shell, these demands were a step forward to our ultimate goal – Independence. The six points are noted as being:

1. The Constitution should provide for a Federation of Pakistan in its true sense based on the Lahore Resolution, and the parliamentary form of government with the supremacy of a Legislature directly elected on the basis of universal adult franchise.
 2. The federal government should deal with only two issues: Defence and Foreign Affairs, and all other residual subjects should be vested in the federal states.
 3. Two separate, but freely convertible currencies for two wings should be introduced; or if this is not feasible, there should be one currency for the whole country, but effective constitutional provisions should be introduced to stop the flight of capital from East to West Pakistan. Furthermore, a separate Banking Reserve should be established and separate fiscal and monetary policy be introduced for East Pakistan.
 4. The power of taxation and revenue collection should be vested in the federating units and federal centre would have no such power. The federation would be entitled to a share of state taxes to meet its expenditures.
 5. There should be two separate accounts for the foreign exchange revenues of the two wings; the foreign exchange requirements of the federal government should be met by the two wings equally or in a ratio to be fixed; domestic products should move free of duty between the two wings, and the constitution should empower the units to establish trade relations with foreign countries.
 6. East Pakistan should have a separate military or paramilitary force, and Navy Headquarters should be in East Pakistan.
- The 6th point clearly indicates that Bangabandhu Sheikh Mujibur Rahman could realise the importance of the Naval force considering



Bangabandhu placing a wreath on the Shaheed Monument (engraved the names of martyrs of the Liberation War) at BNS ISSA KHAN

the geopolitical location of Bangladesh and called for establishment of the Navy Headquarters.

All of Bangabandhu's efforts had culminated into an extremely crucial moment in his life. It was the infamous Agartala Conspiracy Case. The Agartala Conspiracy Case embodied a sedition case launched by the Government of Pakistan in 1968 against Sheikh Mujibur Rahman. After a legal battle of one and a half years, the case was withdrawn in the face of public revolt in erstwhile East Pakistan. If Agartala had one unique impact in the political history of Bangladesh, it would be in its construction of Sheikh Mujibur Rahman from the leader of the Awami League to the sole leader of East Pakistan and Mujib became Bangabandhu. He was acknowledged as a populist figure, who represented the very norms of democracy which the military generals in Pakistan despised, and his post-Agartala status essentially signed the death warrant for the Ayyub-regime.

Beside Bangabandhu, a number of Bangali military officers were also accused of the Agartala Conspiracy Case. Lt Commander Moazzem Hossain, a Bangali officer of Pakistan Navy, was pioneer of them. On 9 December 1967, a team of Military Intelligence Branch arrested Lt Commander Moazzem Hossain under Defense of Pakistan Rule. In 1968, under the amended Code of Criminal Procedure the government formed a special tribunal and instituted a sedition case as State versus Sheikh Mujibur Rahman and others, which was the aforesaid Agartala Conspiracy Case. Out of 35 accused in the case, Lieutenant Commander Moazzem Hossain was the second on the list, just after Bangabandhu. Moazzem Hossain was accused of organizing the Bangali personnel of Pakistan Navy for an insurrection for making East Pakistan independent. He was accused of pursuing his venture from 1964. He was said

to have motivated many other East Pakistani officers in the army and air force to his cause. He was alleged to have held secret meetings with Bangabandhu and also with many civil service and armed forces members. However, In the face of vigorous and non-stop mass movement the government was compelled to withdraw Agartala Conspiracy Case on 22 February 1969. After his release, Moazzem Hossain joined his service and retired on 18 March 1970. He joined politics after retirement and traveled to different parts of East Pakistan to mobilize public opinion for the independence of Bangladesh. He was brutally killed by Pakistani Army in his home in Dhaka on 26 March 1971.

Like Lieutenant Commander Moazzem Hossain, a number of Bangali officers and sailors of the then Pakistan Navy contributed to the liberation war and sacrificed lives for the independence of Bangladesh. Another coordinated operation, conducted by naval commandos expedited the independence. At one stage of war when the pace of military operations in Bangladesh slacked off, the civilian morale was

adversely affected, which prompted East-Pakistan administrative authorities to claim that the situation had returned to "normal". In response to this declaration, the Mukti Bahini launched 2 operations: (1) Guerrilla attacks on targets in Dhaka by a crack commando group trained by Major A T M Haider and (2) the simultaneous mining and damaging of ships in Chattogram, Chandpur, Mongla and Narayanganj on 15 August by naval commandos, which became known in Bangladesh and international media as "Operation Jackpot".

"Operation Jackpot" was precipitated by events in Toulon, a coastal city of southern France. The operation was planned to take on Naval Special Service Group of the Pakistani Navy, after it had conducted several other operations. In 1971, there were 11 East Pakistan naval submarine crewmen receiving training there aboard a Pakistani

The then Chief of Naval Staff Rear Admiral M H Khan handing over a crest to Bangabandhu



submarine. One commissioned officer (Mosharraf Hassain) and 8 crewmen decided to take control of the submarine and to fight against Pakistan. Their plan was disclosed, however, causing them to flee from death threats made by Pakistan's Naval Intelligence. Out of the 9 crewmen, one made his way to London, the others managed to travel to the Indian Embassy in Geneva, Switzerland. From Geneva, embassy officials took them to New Delhi on 9 April, where they began a program of top secret naval training.

The operation was planned in the last week of July, under tight security. Information on river tides, weather and East Pakistani naval infrastructure and deployment was collected through the Mukti Bahini. Selected commandos were sent to forward bases in Tripura and West Bengal, where a final briefing was given to them. Assisted by Mukti Bahini one group of commandos was sent to Chattogram, one group to Chandpur and Narayanganj and another group was sent targeting Mongla. Each commando carried a pair of fins, a knife, a limpet mine, and swimming trunks. Some had compasses, 1 in 3 commandos had Sten guns and hand grenades, the group leaders carried a transistor radio. All the groups carried their own equipment to their targets and after entering Bangladesh between 3 and 9 August, reached their destinations by 12 August, using the local Mukti Bahini network of safe houses. A pair of songs was played in India Radio (Akashbani) at specific times to convey the intended signal for commencing the operations. The first song (Amar putul ajke prothom jabe shoshur bari) was played on 13 August, the second song (Ami tomay joto shuniyechilem gan tar bodole chaini kono dan) on 14 August. The result of this operation severely affected the morale of Pakistani Forces. The simultaneous attacks on Pakistan naval shipping assets on 16 August destroyed the myth of normalcy in East Pakistan when the news was flashed in the international media. Pakistan Army investigation concluded that no one had imagined Mukti Bahini capable of conducting such an operation. But to make this operation a success, a number Naval Commandos sacrificed their lives.

As mentioned earlier, Bangabandhu advocated for a strong naval force throughout for safeguarding maritime interest of Bangladesh. After independence, Bangladesh Navy started its journey from zero with an ambitious vision - "Bangladesh Navy shall evolve into a credible three dimensional navy capable of maintaining an effective posture across the full spectrum of any conflict at sea. Bangladesh Navy shall also be able to undertake constabulary and benign tasks to ensure good order at sea for carrying out national maritime economic

activities." In this continuation Bangabandhu had commissioned BNS Isha Khan, the largest naval training base, in 1974 to build a modern and strong naval force. He bought modern warships from Yugoslavia and India for forming a competent naval force alongside developing the war-ravaged country.

In course of time, under the dynamic and visionary leadership of Hon'ble Prime Minister Sheikh Hasina, over the last decade Bangladesh Navy has emerged as a multi-dimensional networked force which is ready to take on the challenges in the maritime domain in the Indian Ocean Region. The Navy continues to ensure maritime security for national prosperity under four basic roles - military, constabulary, benign and diplomatic. Under the military role, Bangladesh Navy is always prepared to deal with any exigency and threat to maritime security and undertakes frequent exercises to enhance its capabilities. Under the constabulary role, the Navy ensures the coastal and offshore security in our waters and in the Exclusive Economic Zone (EEZ). Under the benign role, Bangladesh Navy undertakes maritime and disaster relief operations and provides rapid response to contingencies. Under the Diplomatic Role, the Navy has expanded its operational foot print in the Indian Ocean and beyond, to engage with other navies of the world for interaction and exercises. The aim is to shape a favourable maritime environment and provide avenues for cooperation for mutual benefit. The engagement with the navies includes capacity building and capability enhancement initiatives and information exchange for comprehensive Maritime Domain Awareness and to harness the Blue Economy. Moreover, in the recent past, Bangladesh Navy started to build indigenous naval warships and is gradually turning into "builders' Navy" from a "buyers' Navy".

Today it has become vivid that our destiny has an unbreakable link with the sea and sea-borne activities. Bangabandhu's incorporation of shifting Navy Headquarters to the East Pakistan in his historic Six-point Movement in 1966 and enactment of the Territorial Waters and Maritime Zones Act, 1974 to demarcate the country's maritime boundary reflects the foresight of Bangabandhu Sheikh Mujibur Rahman. Last of all, we can say that Bangladesh did have many architects. But it had one chief architect, without whom the plan for a sovereign Bangladesh would never have been set in motion.

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Captain A T G M Sarker, (TAS), psc, BN (retd)
Controller of Examinations, BSMRMU





The Bay of Bengal expedition

Saif Khan Sunny

The Bay of Bengal expedition was a project funded by USG. This project was conducted by Professor Aftab Alam Khan and Masud-ul-Alam. I also got the opportunity to work with them. This cruise lasted four days long. The ship was from Bangladesh Navy, named BNS Shangu. It is a 60 metre long ship. Originally it was a petrol ship, but for a few days, this ship cooperated with us for our research. The main objective of this cruise was collecting the in-situ Chlorophyll-a, we also collected some other parameters.

Before coming here, we have to take a lot of preparation for this cruise. We left Dhaka very early in the morning by the microbus. We saw the Padma Bridge while crossing the ferry. Around 8 pm we arrived at Mongla and we stayed at the Bangladesh Coast Guard Rest House. Next morning, we left around 6 am with our luggage and instruments. We crossed several ships to board our ship. The ship's executive officer gave us a warm welcome and took us to the

wardroom for breakfast. He gave us a boarding card and explained what could and could not be done while onboard. At that time the captain also got acquainted with us. We couldn't sail at the expected time due to the fog. A large number of small cargos moved through the river Pashur, and accidents could occur if visibility clearance is not obtained. Each of us was told to wear a life jacket all the time.

We got a lot of difficulties to lower the CTD, because the ship was not built for research work. We had to use our own hands to bring the device down to 100 metres. This is where the speed of the ship was brought to zero at the time of lowering the CTD so that the ship began to float freely in the water, due to which once lowering with the rope, the instrument crossed the keel of the ship and went to the other side. So, we quickly lifted the device safely. Considering the direction of the wind, the direction of the current, the type of tide, etc., we tried to lower the device by changing the side of the

ship but we did not succeed. Everyone was very worried, we finally decided to take the device off the back of the ship. This time very good results came. Subsequently, we collected the samples of chlorophyll, nutrients, and plankton. The stations were every hour, so sometimes we had to run at 3 am, sometimes at 7 am in the morning, sometimes at noon or in the evening to collect data. Sometimes the stations are so close that it is not possible to go to the cabin, we had to lie on the deck. Meanwhile, the sea was a little rough one day and a little rain and working on the deck with the equipment became very challenging. The work continued under the blow of the wind. It started to get cold at night. Working in the saltwater of the sea, the appearance of the hand changed. While collecting the data, we saw flying fish. While collecting chlorophyll, a swarm of small jellyfish came up, and white seagulls flew in the chest of the blue water.

The most interesting thing is that there is a canteen on the ship which is open for one hour every day in the morning and the afternoon, but we spent our free time in the wardroom. The food on the ship is very nutritious and sufficient. We gossiped at the time of stand easy, evening breakfast and tea-coffee. There are arrangements for game stations and playing cards in a small space. Sometimes it has happened that during the tea-coffee time, the station has come, so we have to run to collect the data. If you want you could not get the network in a hurry, using the internet is a far cry. We got the last signal from Mongla to Hiron Point then we headed towards Swatch of No

Ground, and then started towards St. Martin. After getting closer, we found the network, although there was a network booster in the wardroom. Arriving at St. Martin we anchored in the eastern part, got time for an hour to visit St. Martin. A wooden boat came to take us down from the ship. To get into the boat we used a ladder. The ladder was tied with a wooden plank with ropes. Again a small boat was swinging so it was a little bit dangerous. That night was the ship's party night. That party was for us. Such a feast was preceded by a captivating cultural evening. We lay anchored there all night. There was no work, we just went for hook fishing late at night. The next day fishes were cooked for lunch. Earlier at night, I had the opportunity to see the sea from St. Martin's Island but this is the first time I saw the amazing beauty of the island from the sea. When the amazing light of the moon falls on the water, it feels like a golden field. We worked for two more days and then came ashore.

Saif Khan Sunny

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BSMRMU donates to Prime Minister's relief fund to contain COVID-19 outbreak



On 15 April 2020, Bangabandhu Sheikh Mujibur Rahman Maritime University (BSMRMU) donated one day's salary of its employees to the Prime Minister's Relief and Welfare Fund to expedite government's efforts taken to combat the coronavirus. On behalf of all members of BSMRMU, Vice-Chancellor Rear Admiral M Khaled Iqbal handed over the cheque to Dr Ahmad Kaikus, Principal Secretary to the Hon'ble Prime Minister at Prime Minister's Office. Vice-Chancellor of BSMRMU also assured continuous support of the university towards all activities taken by Hon'ble Prime Minister of the Government of the Peoples Republic of Bangladesh in response to the situation caused by the outbreak of COVID-19 and also apprised about various academic initiatives taken by BSMRMU in this COVID-19 pandemic.

Vice- Chancellor inaugurates Padma Bhaban



As the academic and administrative activities of BSMRMU are expanding gradually with the opening of several new departments and institutes, a 7th floor building, "Padma Bhaban", located at Pallabi in Mirpur, Dhaka has been rented as an annex of the existing campus. There are a modern hydrodynamics laboratory, a marine biotech laboratory, a modern marine fisheries laboratory, the Bay of Bengal research laboratory, class rooms, office rooms, a mini library, cafeteria and other facilities in this annex building. Hon'ble Vice-Chancellor Rear Admiral M Khaled Iqbal inaugurated the new annex building on 5 July 2020.

BSMRMU distributes food items among the destitute



On 3rd and 4th April 2020, essential food items were distributed on behalf of BSMRMU to the poverty-stricken people of Pallabi area, who were affected by the lockdown to prevent the spread of COVID-19 pandemic. In the presence of local Member of Parliament and member of Parliamentary Standing Committee of Defence Affairs Alhaj Elias Uddin Mollah, MP and Vice-Chancellor of BSMRMU Rear Admiral M Khaled Iqbal, food items were distributed maintaining proper safety guidelines and social distancing promulgated by the government.

10 things you didn't know about MARITIME INDUSTRY

1 Worldwide, between 2% to 10% of containers are physically inspected. U.S. ports typically inspect 5% of the 17 million containers they receive a year.

2 Right now, there are at least 20 million containers crossing the world.

3 Shipping is cheap. For example, it is cheaper for Scotland to send its cod 10,000 miles over to China to be filleted and returned to Scotland.

4 The 360 commercial U.S. ports receive international goods worth about \$2 trillion annually. The U.S. relies on shipping to bring in two-thirds of its oil supply.

5 Line up the containers belonging to Maersk alone, and they would stretch nearly halfway around the planet. Stack them up, and they'd reach to 7,530 Eiffel Towers. Unload their cargo onto trucks, and the traffic would stretch 60 miles.



out the STRY

6

According to an estimate, the largest 15 ships emit as much greenhouse gases as 760 million cars.

7

Two-thirds of ship crews have no means of communication off the ship. Only 12% have freely available Internet.

8

Females make up only 2% of seafarers.

9

Filipinos make up more than one third of all crews worldwide, with 250,000 at sea.

10

The biggest container ships can hold 745 million bananas in 15,000 containers. That's one for every European and North American.



Bangabandhu and the birth of Bangladesh

Maritime Campus Desk

The quarterly campus magazine of BSMRMU, the Maritime Campus, has taken an initiative to publish four articles in four issues on the Father of the Nation Bangabandhu Sheikh Mujibur Rahman and his political career on the occasion of his birth centenary celebration. This article is the third one of a four-part series. In the first issue, we tried to focus on his early life as a teenager, his political orientation and activities till the 1947 partition. In the second article, we discussed the political struggles as a young and unbending politician of the then East Pakistan and portrayed his articulation to set the political destiny for Bengalis. Here in this third article, there is the depiction of Bangabandhu as an uncompromised revolutionary leader, who gave birth to a new nation for the Bengalis after nine months of armed struggle.

On 5 February 1966, Sheikh Mujibur Rahman presented his historic six-point programme known as the 'Charter of freedom of the Bengali nation'. It drew the roadmap for the independence of Bangladesh under the garb of greater autonomy. The programme hit hard at the roots of Pakistani colonial rule over the Bengalis.

In the council meeting held from 18 March to 20 March 1966, Sheikh Mujibur Rahman was elected as the president of Awami League. He travelled far and wide in order to gain support for his 6-Point programme and was arrested 8 times during the campaign. After the final arrest by the regime on 8 May 1966, he was imprisoned for nearly three years.

On 3 January 1968, the Ayub government filed the Agartala Conspiracy Case against a number of Bengalis (Politicians, members of the Army, Navy and Air Force, Civil Servants etc.). Sheikh Mujibur





Bangabandhu delivered a historic speech before millions of people at the Race Course Maidan on 7 March 1971

Rahman was shown as arrested on 18 January 1968, while already in jail, and named as the prime accused. Along with him, 34 others were charged with forced secession of East Bengal with the assistance of India. As a result, a mass movement spread across the country demanding the release of all the accused including Sheikh Mujibur Rahman. On 19 June 1968, the trial of the accused began at Dhaka Kurmitola Cantonment with intense security and scrutiny.

The Agartala Conspiracy Case resulted in a nationwide student movement and mass uprising demanding the withdrawal of the case and the release of Sheikh Mujibur Rahman. Under pressure from the public, the Ayub Khan government was forced to withdraw the Agartala Conspiracy Case and released Sheikh Mujibur Rahman and others on 22 February 1969.

Sheikh Mujibur Rahman was given the title 'Bangabandhu' at a huge public gathering organised by the Central Student Action Committee at the Race Course Maidan (Suhrawardy Udyan) on 23 February 1969. At a meeting held on 5 December 1969 to observe the death anniversary of Shaheed Suhrawardy, Bangabandhu Sheikh Mujibur Rahman declared that East Pakistan would be called Bangladesh from then on.

Bangabandhu Sheikh Mujibur Rahman, the Awami League president, urged countrymen to elect Awami League candidates on the basis of their 6-point demand in the first general election of East Pakistan held on 7 December 1970 (National Assembly), and 17 December 1970 (Provincial Assembly), barring a few seats in the cyclone affected coastal areas in the south. He chose 'boat' as the party's symbol to represent Awami League and the nation's hope.

After a million people died in a catastrophic cyclone in the coastal areas on 12 November 1970, Bangabandhu suspended the election campaign and rushed to the affected areas. Awami League achieved an absolute majority in the general elections on 7 December 1970, won 167 (including 7 women reserved seats) out of the 169 seats of the National Assembly of East Pakistan and 298 seats (including 10 women reserved seats) of the 310 seats of the Provincial Assembly. Following General Yahya Khan's postponement of the National Assembly session on 1 March 1971, only two days before the session was due to take place, Bengalis from all walks of life took to the streets in massive demonstrations. From 1 March 1971 onward, Bangabandhu Sheikh Mujibur Rahman had been virtually running

East Pakistan as its de-facto head of government.

On 7 March 1971, in his historic speech before millions of people at the Race Course Maidan (Suhrawardy Udyan), Bangabandhu Sheikh Mujibur Rahman urged Bengalis to take all out preparation for the War of Liberation. From 16 March to 24 March, Pakistan President General Yahya Khan paid a visit to Dhaka and held a series of meetings with Bangabandhu but no resolution could be reached.

At midnight on 25 March 1971, the Pakistan army launched its heinous campaign of genocide against unarmed Bengalis. Bangabandhu proclaimed the Independence of

Bangladesh in the early hours of 26 March 1971. Right after the proclamation, he was arrested and taken to a Pakistani prison.

On 10 April 1971, the first government of the People's Republic of Bangladesh was formed and Bangabandhu Sheikh Mujibur Rahman was elected as the President by the constituent assembly. Syed Nazrul Islam was elected as Vice-President and acting president in the absence of Bangabandhu, while Tajuddin Ahmed was elected as the prime minister. The leaders took their oaths of office on 17 April 1971 at a famous mango garden (Amrakanan) of Baidyanathtala in Meherpur, now known as Mujibnagar.

After nine months of bloody war, Bangladesh was liberated with the surrender of the Pakistani occupation army on 16 December 1971. In August and September, the Pakistan Junta held a secret trial of Bangabandhu and sentenced him to death. People of the world were enraged and demanded the security of the President of Bangladesh.

On 27 December 1971, the government of Bangladesh sought immediate and unconditional release of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman.

Surrender of Pakistan and birth of Bangladesh



Prospects of the Blue Economy for Bangladesh

Md. Jobayer Mia

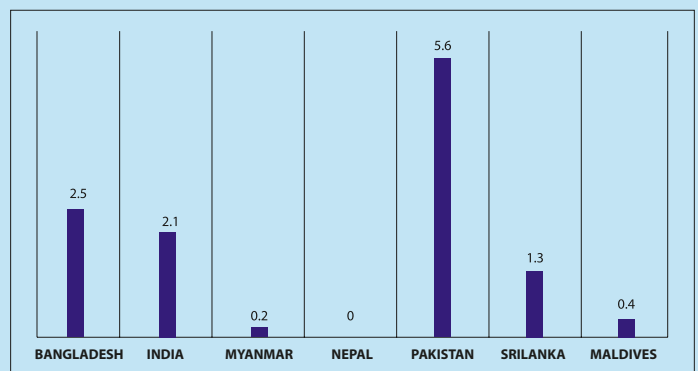
Blue Economy refers to the economy related to the ocean. According to world bank “The Blue Economy is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health.” The global economy, worth about five trillion US dollars, is currently depending on the Blue Economy. Bangabandhu Sheikh Mujibur Rahman is the architect of the maritime sector of Bangladesh. Under his supervision Bangladesh’s first maritime act known as Territorial Waters and Maritime Zones Act, 1974 was declared. This act was based on some particular themes. They are:

- Conservation Zone
- Contiguous Zone
- Continental Shelf
- Economic Zone, and
- Territorial Waters.

Through this policy, Bangagandhu described his mission and vision about maritime strategy. He had a sharp eye on the future. Back then, he felt that the maritime sector can enrich Bangladesh, and we must look after this sector. With the dedicated efforts and strong leadership of Prime Minister Sheikh Hasina, Bangladesh achieved a historic sea victory on March 14, 2012. Bangladesh achieved more than 1 lakh 17 thousand 613 square kilometres of sea area in the Bangladesh-Myanmar case. Then on July 6, 2014, out of the total 25,602 sq km of the disputed sea border between Bangladesh and India, Bangladesh won the right to 19,046 sq km. From figure 1, it can be seen that Bangladesh has the second-highest territorial area of water in South Asia.

After this tremendous accomplishment, our honourable Prime Minister Sheikh Hasina introduced us to the Blue Economy. Moreover, she has already declared the Delta Plan 2100 (BDP 2100) and the government approved it on September 04, 2018. The vision of the plan is to achieve ‘safe, climate-resilient, and prosperous Delta’

by 2100. And without achieving the goals of the Blue Economy, it is impossible to achieve the sustainability of the Delta plan 2100. According to the marine experts, due to the unique structure, various mineral resources, including oil and gas, are stored under the sea bed of the Bay of Bengal. Till now 26 offshore blocks have been identified,



Percentage of territorial water in maritime zones. (Source: OECD)

of which 11 have been identified as shallow and 15 as deep-sea blocks. Moreover, the seafloor contains a large amount of clay, the material used to make cement. There are also enormous possibilities to work in the fields of tourism, construction of artificial islands, enhancement of port cooperation, maritime transport, renewable energy, oceanographic development etc.

Experts hope that it will be possible to gain 12,000 crore taka per year if marine resources can be efficiently exploited and used. According to economists, about 10% of the total GDP can be accomplished by the proper growth of the Blue Economy. The exploitation and protection of marine resources is the subject of section 14 of the Sustainable Development Goals (SDGs). Therefore, to reach the SDGs by

2030, the sustainable use of marine resources must be ensured.

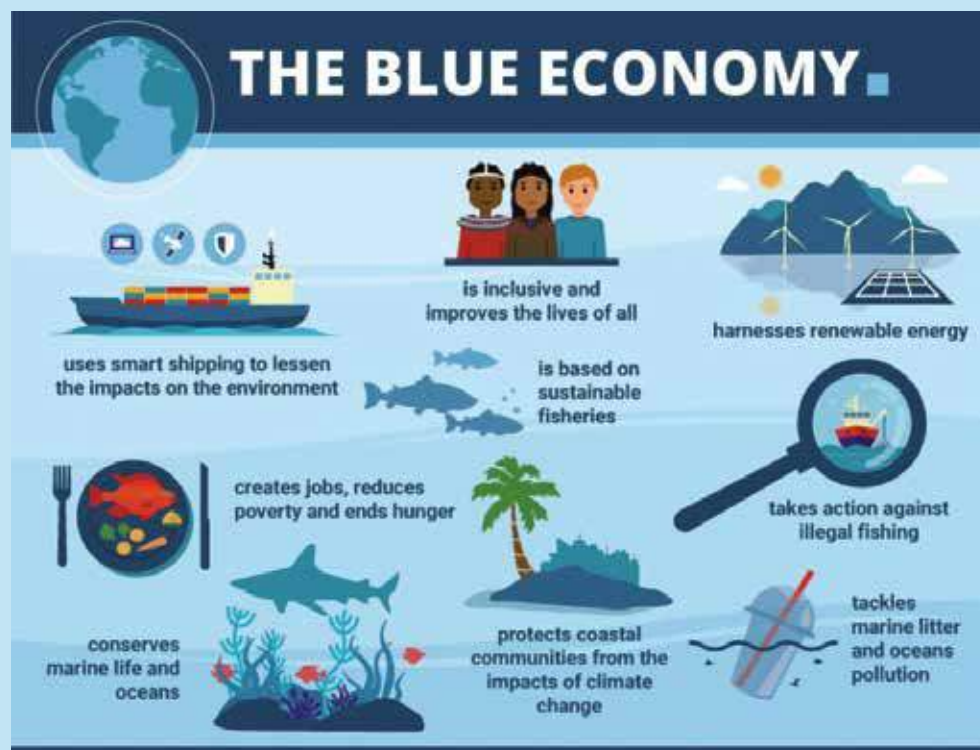
Bangladesh has a vast population, and the economy of this country is mainly dependent on the resources available in the land area. But to be a developed country and achieve sustainable development goals, there is no alternative of using the resources available in our sea. Bangladesh has enormous potential to be a developed nation if marine resources can be used efficiently. Some opportunities for Bangladesh's Blue Economy are addressed as follows:

1) Oil and Gas exploration: Bay of Bengal has numerous natural resources. Bangladesh Petroleum Exploration and Production Company Limited (BAPEX) is the only company in Bangladesh approved to carry out exploration and extraction of oil and gas. Apart from crude oil, there are also significant mineral deposits to be found under the sea. Oil and gas exploration is very much needed for the prosperity of Bangladesh.

2) Marine Renewable Energy: Renewable energy is the energy obtained from natural energy sources, which can be reused in a short period, and as a result, the energy source is not depleted. Marine waves, currents, wind, hydropower can be proven good sources of renewable energy for Bangladesh.

3) Maritime Professional: There is no alternative to developing maritime professionals to be developed in the marine sector. Our maritime professionals can have a significant influence on the Blue Economy. Bangabandhu Sheikh Mujibur Rahman Maritime University has been established by the government, which would have a great impact on the Blue Economy by creating trained maritime professionals.

4) Marine trade and Shipping: The maritime transportation system is one of the important factors for the Blue Economy of Bangladesh. Nearly 92% of global products are shipped by sea. So, constructing class vessels would have a major effect on the Blue Economy.



An illustration of the Blue Economy. (Source: SISIP)

5) Marine tourism: Marine tourism can have a great impact on the development of our country. Bangladesh has the largest sea beach in the world. Moreover, the country has over 700 rivers. So if these marine areas can be used for tourism, then Bangladesh can earn a huge profit, and many work opportunities can be created.

Bangladesh has many opportunities to be prosperous in terms of Blue Economy. But due to a lack of implementation and measures, skilled marine professionals, research activities, surveys in Bangladesh, numerous opportunities in this sector remain undiscovered. If the country can make proper use of the enormous marine resources, then Bangladesh could be one of the developed countries very soon.

Md. Jobayer Mia

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Basic familiarisation about the air pollution caused by shipping industry

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Air pollution is one of the major environmental concerns of the globe at this moment. It has tremendous impact on climate change and human health. Current global warming is directly linked with this emission. Shipping industry is one of the significant contributors to this air pollution. According to the current research report of clear seas (2019), the percentage of total global air pollution occurred by the shipping are:

SOx : 13%

NOx : 15%

CO2 : 2.2%

Air pollution from ship is occurred mainly by:

1. Sulphur oxides (SOx)
2. Nitrogen oxides (NOx)
3. Ozone depleting substance (CFC- chlorofluorocarbons)
4. Carbon dioxide (CO2)
5. Particulate matter (PM)
6. Methane Slip

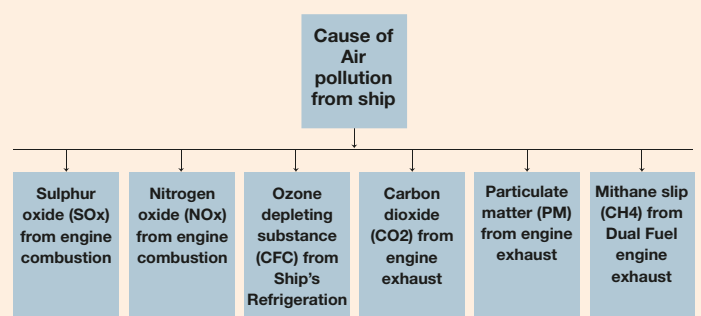
NOx and SOx emission

NOx and SOx produce microscopic sulphate and nitrate aerosol's air born suspended particle which enters in to the human blood stream through the lung. These particles damage heart, lung, kidney and brain resulting premature death. They are also great contributory

factors to the carcinogenic diseases in human body and can seriously affect the physical and mental growth of unborn baby in the mother womb.

According to Air Pollution & Climate Secretariat report (2019), only in Europe, about 50,000 people died in every year due to the air pollution from ships and about USD 70 billion per year is being spent to decrease its adverse effects. The rest of the world is also heavily affected with air pollution. SOx and NOx also causes acid rain which damages our agriculture and marine life.

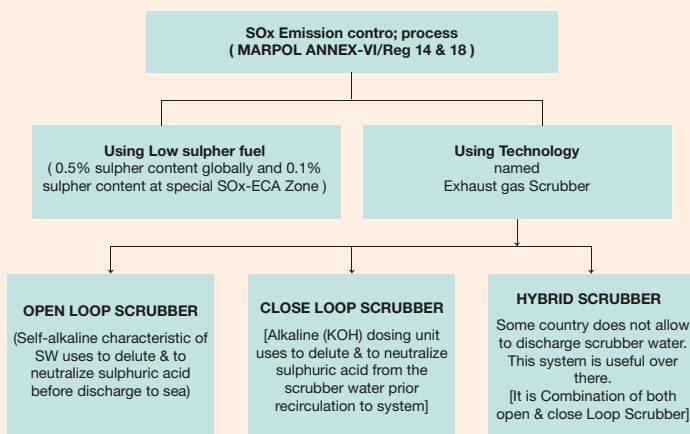
As a seafarer or industry practitioner, it is essential to have the basic knowledge on air pollution causing by ships. A brief flow chart has been developed to get basic familiarisation about the air pollution in the maritime industry by shipping.



Air pollution in the shipping industry

The IMO convention -MARPOL ANNEX -VI is regulating the air pollution caused by ships.

SOx emission from the ship is reduced by limiting the sulphur content at maximum 0.5% in the fuel from 1st January 2020. Scrubber technology is the alternative method instead of using low sulphur fuel. Open loop, Close loop and Hybrid type scrubber technology are commonly used to reduce the SOx emission. This process also minimises the Particulate Matter (PM) from the exhaust as it is washed with water in the scrubber tower.



The process to reduce SOx emission

NOx emission occurs in high combustion temperature. International Maritime organization (IMO) set up the requirement of NOx emission under MARPOL Annex-VI/ regulation 13. Currently, various technologies are being used to control and limit the NOx emission in order to comply with the MARPOL Annex-VI- regulation 13.

The major technologies to control NOx emission are:

1. Miller cycle – (Mainly applicable to the 4 stroke engine but it is also used in two stroke engine by exhaust valve controlling method)
2. Lean burn theory – Low pressure LNG dual fuel engine is using this method
3. DWI- Direct Water Injection in to the engine combustion space
4. Fuel-water emulsion system
5. SCR- Selective Catalytic Reduction system where urea is used to absorb NOx
6. EGR – Exhaust Gas Recirculation method.

Ozone depleting substance

Ozone depleting substance emission from the ship is the release of refrigeration gas which is CFC refrigerant. It damages the ozone layer in the atmosphere and causes a huge greenhouse effect in the environment. Under MARPOL annex VI, regulation 12, it is prohibited to use CFC refrigerant in ships. Currently, CFC free refrigerants are used in the shipboard refrigeration system and controlling the emission of Ozone depleting substance from ships.

CO2 emission and Methane Slip

CO2 emission and Methane Slip have huge global warming potential. Hence, it is also essential now to control these CO2 emission and Methane Slip from the shipping.

CO2 emission

Low fuel consumption produces low CO2 emission. To control and limit the CO2 emission, EEDI (Energy Efficiency Design Index) engines are used to maximise efficiency with minimum fuel consumption. Ship Energy Efficiency Management Plan (SEEMP) is also developed to minimise the fuel consumption with respect to the power efficiency. Also, IMO has introduced the CO2 emission control regulation under MARPOL ANNEX VI. From 1 January 2019, ships with 5,000 gross tonnages and above have to start collecting data on their fuel-oil consumption under the mandatory data collection reporting requirements. This will provide an analytical feature of CO2 production related to fuel consumption and engine efficiency over a period of time.

Methane slip

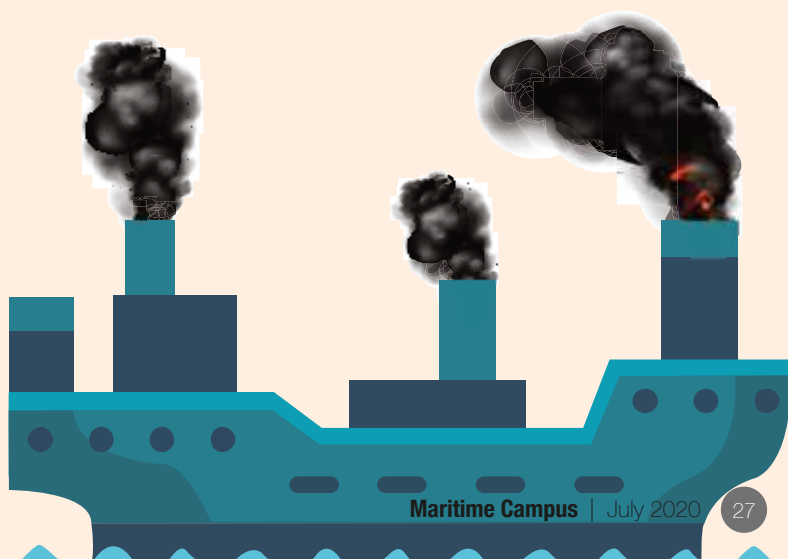
Methane slip is the release of un-burnt methane (CH4) molecule to the atmosphere from dual fuel engine combustion space. Its global warming potential is 25 times higher than the CO2.

Methane slips control method:

1. Re-design of the combustion chamber of Dual Fuel Engine (DFE)
2. Oxidation of un-burnt methane by using a catalyst in a DFE exhaust outlet
3. Careful timing of the pilot fuel injection and LNG injection in a DFE
4. Optimisation of engine power using appropriate data information for impute and engine output feed back

Now, it is our top most priority to stop all these hazardous emissions to the atmosphere from the shipping as well as from the shore. With our all efforts, we have to ensure a better place to live on this planet.

S.M Moshiur Rahman, MEng.
CEng, CMarEng, Fellow-IMarEST, UK



PM for strengthening Navy to protect sea areas



Prime Minister Sheikh Hasina has emphasised on the need of strengthening Bangladesh Navy to better protect the country's vast maritime area more effectively.

"It is essential to make our Navy stronger in order to protect the sea area," she said on 18 June 2020 while commissioning the BNS Sangram through video conference from her official residence

Ganobhaban. The Chief of Naval Staff Admiral Aurangzeb Chowdhury, on behalf of the Prime Minister, formally handed over the commissioning foremen of the ship to Captain Arifur Rahman at the BNS Issa Khan Naval Base in Chattogram.

The Prime Minister asked the Navy to protect the vast sea area that Bangladesh gained through peaceful settlement of disputes with two neighbouring countries, as Bangladesh hopes to utilise marine resources to boost the country's economy.

"We don't want to fight with anyone. We want peace. But we want to equip our forces with modern technology and knowledge while keeping pace with the times, so that we are ready to face any threat," she said.

Bangladesh to use launches as isolation centres amid COVID-19 crisis



State Minister for Shipping Khalid Mahmud Chowdhury announced the development on 4 April 2020 after a meeting with launch owners at Sadarghat on measures to prevent infections on water vessels.

Launch owners have agreed to the plans, said the state minister. He also added that the necessary steps will be taken in this regard after a meeting with the Ministry of Health and Family Welfare.

"Establishing isolation centres on launches will be particularly handy in treating people with the infection in the coastal areas as treatment for the coronavirus is yet to reach the region." The state minister later distributed 200 packets of food among the workers at the dock.

Government picks 17 priority projects for Chinese investment

The government has prioritised a total of 17 development projects worth USD 11.5 billion for Chinese investment.

The list includes three projects belonging to the power division - Power grid strengthening project worth USD 970 million, replacement of overloaded transformers for providing reliable electricity at a cost of USD 230.59 million and system loss reduction project worth USD 467.95 million.

Bangladesh Railway (BR) has four projects on the list which are: Joydevpur-Ishwardi double line project at a cost of USD 1045.59 million, conversion of Akhaura-Sylhet metre gauge line to double gauge line at a cost of USD 1272.9 million, construction of Joydevpur-Mymensingh-Jamalpur double gauge line worth USD 581.26 million and construction of new inland container depot near Dhirasram Railway Station at a cost of USD 200 million.

The list contains two projects from the road transport division. They are: Construction of Dhaka-Ashulia expressway at a cost of USD 1155.18 million and Sitakunda-Cox's Bazar marine drive expressway project worth USD 2856.56 million.

Two projects of the ICT ministry have also been put there on the priority list. These are: Establishing digital connectivity at a cost of USD 837 million and modernisation of rural and urban lives through ICT worth USD 500 million.

The local government ministry has two projects on the list that includes Rajshahi WASA water treatment plant project worth USD 276 million and water supply, sanitation and waste management project in municipalities at a cost of USD 150 million. The information ministry has a project on the priority list - establishment of six full-fledged TV stations at a cost of USD 125 million.

The other projects on the priority list include D280 million jute mills modernisation project under the jute ministry, and USD 221 million Chinese Economic Zone project in Chattogram.

It includes one project of the shipping ministry - expansion and modernisation of Mongla port facilities involving USD 353.52 million. The list was sent to the Chinese side to apprise them of the government's priority so that they are able to channel funding more judiciously.

India, Bangladesh sign pact to operationalise 5 more ports of call, 2 new routes



India and Bangladesh on 20 May 2020 signed an agreement to operationalise five new ports of call and two new protocol routes to boost the bilateral trade.

High Commissioner of India in Bangladesh, Riva Ganguly Das, and Bangladesh Shipping Secretary Mohammad Mezbah Uddin Chowdhury signed the 2nd Addendum to the Protocol on Inland Water Transit and Trade in Dhaka.

India and Bangladesh during Standing Committee on the Protocol and Shipping Secretary-level talks in October 2018 and December 2019 had decided to extend protocol routes, include new routes and increase ports of call.

Ports of call are intermediate stops for a ship on its scheduled journey for taking on supplies or fuel.

With the signing of the pact, the ports of call between India and Bangladesh has increased to 11 from six earlier while two more extended ports of call have been added. This initiative will allow export of stone chips and other Bhutanese and North East cargo to Bangladesh and easy access for the traders to the hinterland of Bangladesh, enhancing the local economy in Bangladesh and the lower Assam region of India.

Indian transit cargo is mainly coal, fly-ash and POL etc for power projects in NE region. The other potential cargo for movement is fertilisers, cement, food grains, agricultural products, containerised cargo etc. Both the nations have a long standing and time-tested Protocol on Transit and Trade through inland waterways, first signed in 1972 and last renewed in 2015 for five years with a provision for its automatic renewal for a further period of five years giving long term assurance to various stakeholders.

Saudi company to invest in Chattogram port's Bay Terminal

Red Sea Gateway Terminal (RSGT), one of the largest container terminal operators of Saudi Arabia, is keen on investing in the construction of Chattogram Port's Bay Terminal under the public-private partnership model.

The Saudi company has already submitted a proposal to the shipping ministry.

Chattogram Port is the largest in Bangladesh, handling more than 80% of the seaborne cargo coming in and out of the country. As a partner to RSGT for the development of Bay Terminal, the shipping ministry will provide land and bear the costs of dredging and water breaking for the project.

RSGT is known internationally for its world-class port terminal services. The company recently helped to build a new flagship container terminal at the Jeddah Islamic Port.

It is paramount for Bangladesh to expand its port facilities as the amount of import and export trade conducted by the country will only increase in the next decade. More Saudi investment could follow as the Bangladesh Investment Development Authority is trying to attract large amounts of foreign investment. Foreign investment will definitely help improve the port's infrastructure, which needs expansion to accommodate the country's growing export and import activities.



BD flag carrier container ship back in business at Chattogram port after long 10 years



After long 10 years a Bangladeshi flag carrier container ship anchored at the jetty of Chattogram port on 21 June 2020.

The Bangladeshi flag carrier container ship MV Sierra will start its maritime vogue on 23 June 2020 with export containers from Chattogram port. The Bangladeshi flag carrier container ship operation was stopped in 2010 at Chattogram port by stopping the operation of Bangladeshi flag carrier container ships of HRC Shipping Company.

The Bangladeshi flag carrier container ship will ply the Chattogram-Singapore-Kelang port route regularly. Karnaphuli Group procured two ships named MV Sarera and MV Sahera which are carrying Bangladeshi's flags. Director of Karnaphuli Group Hamdan Hossain Chowdhury said, "We have planned to start our maritime trade and business again by our new ships MV Sarera and MV Sahera which are carrying Bangladeshi flag to the world. Once upon a time, our country had a heritage of own ships. Now, we are starting the maritime business with Bangladeshi flag carrier container ships. I hope that we can expand our maritime trade and increase the number of ships in future."

A total of 84 foreign ships under the management of 22 feeder operators are operating at Chattogram port and foreign flag carrier container ships used to carry goods from Singapore, Malaysia, Sri Lanka and China.

Transport, communication sector gets highest allocation



The allocation for the transport and communication sector in the development budget in the proposed national budget for 2020-21 fiscal was the highest for the 8th consecutive year. In the new fiscal, percentage-wise allocation for the sector in the development budget is 25.2%. The percentage however decreased this year as it was 26.1% in the outgoing fiscal. Finance minister AHM Mustafa Kamal placed the proposed national budget of Tk 5,68,000 crore with the annual development programme allocation of Tk 2,15,043 crore in National Parliament on 11 June 2020 for the upcoming fiscal.

In the budget, a proposal was placed to allocate Tk 54,238 crore for road transport and highways division, railways ministry, shipping ministry, civil aviation and tourism ministry, posts and telecommunication division and bridges division in the development budget, for which the allocation was Tk 55,210 crore in the last development budget.

In the budget speech the minister said that the government was implementing some projects for upgrading 1,140 kilometres important regional highways to standard wider and upgraded district highways. For improving waterways, as he added, capital dredging and other activities to increase navigability have been taken up on 53 routes of inland waterways.

Bangladesh gets USD 500 million ADB loan to manage COVID-19 impact



The Asian Development Bank (ADB) on 7 May 2020 approved an additional loan of USD 500 million to Bangladesh to manage the impact of COVID-19 on its economy and public health.

In a statement issued on 7 May 2020, ADB said that the loan will benefit 15 million poor and vulnerable people of Bangladesh. It said that around 1.5 million workers, mostly women, in export industries will receive salary support.

The assistance is part of the USD 20 billion extended assistance for

developing countries' response to the pandemic announced by ADB on 13 April 2020. Earlier, ADB had approved USD 100 million concessional loan for Bangladesh to support its immediate public health requirement arising out of COVID-19 outbreak.

Steps to be taken to build trust among tourists: Civil Aviation Secretary



Civil Aviation and Tourism Ministry Senior Secretary Mohibul Haque said that necessary steps would be taken to build trusts among tourists about health care and safety.

He was speaking as the chief guest at the Zoom Conference organised jointly by Bangladesh Tourism Board, Ministry of Civil Aviation and Tourism and Bhraman Travel Magazine.

He said the Bangladesh Tourism Board will formulate a guideline for all those involved in tourism and tourism business in the field of domestic and international tourism to ensure the health protection of tourists. All organisations involved in tourism, including hotels and motels, have to follow this guideline, he said. It will also be monitored whether these guidelines and hygiene are being followed properly in hotels, motels and tourist destinations, said Mohibul.

While discussing tourism at the conference, the speakers gave advice on various issues. Notably, the behaviour of tourists will change after Covid-19 situation. Tourism entrepreneurs need to adapt to the changing behaviour of tourists to sustain the development of tourism sector by utilising Bangladesh's internal tourism market. The use of technology by tourists in the tourism sector will increase and its proper use will have to be ensured for the development of tourism. New tourist destinations have to be found out and create diversification of tourism products. Emphasis should be placed on rural and marginal tourist destinations and care should be taken to ensure that the same tourist destination will not be overcrowded. Local people need to be involved in tourism to ensure 'tourist carrying capability' and save the environment. And the local people have to be transformed into skilled tourism manpower by training them.

Cargo handling increases in Chattogram port



Cargo handling activities have increased in Chattogram port as import of essential commodities targeting the Ramadan has increased to a great extent in the port.

The activities have increased in the port in March compared to February as COVID-19 situation has improved in China.

The authorities are continuing the port operation for 24 hours to keep the supply chain of import and export of goods at normal pace. Besides, necessary initiatives have been taken to screen corps of the ship from foreign countries, screen sailors who come from overseas, secure quarantine in the sea for 15 days, measure temperature and ensure hand wash by medical team while ships enter into the port.

According to Port Transport Department, Chattogram Port Authority has recorded 108,96468 tons of cargo handling in January, 939,8771 tons in February and 102,64402 tons in March, which is 9.21% more than February.

A total of 756,7844 tons of open cargo (bulk cargo) laden with grain, clinker, wheat, gram, edible and fuel oil, came in January, which was reduced to 677,5532 tons in February due to the COVID-19 impact. But, the bulk cargo handling has increased to 742,6460 tons in March due to improvement of the COVID-19 situation in China.

Government instructs shipping lines to waive container detention charges



The Department of Shipping on 17 May 2020 instructed foreign shipping lines and their local agents not to impose container detention charges on the import containers because of the COVID-19 pandemic.

It also asked them to return the charges that have already been collected. The decision came in a meeting with stakeholders chaired by Syed Ariful Islam, director general of the Department of Shipping.

Representatives of the Bangladesh Containers Shipping Association, the Bangladesh Garments Manufacturers and Exporters Association, the Federation of Bangladesh Chambers of Commerce and Industry, foreign shipping lines and local shipping agents attended the meeting.

Detention charges include the money that merchants pay for the use of container within the terminal beyond the free period and the fee that merchants pay for the use of container outside of the terminal or depot beyond the free period.

Usually, containers can stay from five to 21 days without incurring any charges depending on the contracts with shipping companies. After that, USD 5 to USD 120 are charged for a container per day in detention charges. Importers had been demanding the waiver on the container detention charges since they had to pay a huge amount for holding the import containers beyond the agreed period as they could not be taken out of the port during the lockdown.

Bangladesh to import cleaner marine fuel from July



BANGLADESH PETROLEUM CORPORATION

Bangladesh will start importing cleaner marine fuel with 0.5 per cent sulphur from July instead of 180 CST high sulphur fuel oil with 3.5 per cent sulphur as per the International Maritime Organization (IMO) guideline for cleaner environment.

State-run Bangladesh Petroleum Corporation (BPC) has already floated tender to import around 75,000 tons of cleaner marine fuel during July-December, 2020.

Shipment of the marine fuel should be on cost and freight (CFR) basis in Chattogram.

This is Bangladesh's first tender to import marine fuel with 0.5 per cent sulphur from international suppliers.

BPC has moved to import this fuel in line with the decision of the cabinet committee on economic affairs.

The environment and forests ministry has long been instructing the state corporation to import cleaner gasoil and marine fuel for safer environment

COVID-19 accelerates shift to online maritime education



The coronavirus pandemic impacted on all educational institutions, forcing cancellations, closures and inventive alternatives - notably the expansion of online learning and distance learning options. Some of those changes will likely stay even after COVID-19 is contained.

The outbreak of COVID-19 coronavirus has forced us all to implement distance learning and, as a result, the maritime training sector has taken a big step forward digital evolution. Online training is often more flexible. It often combines a mix of online tutorials, self-work and one-to-one teaching, supported by verification processes.

With distance learning, there is no requirement for the teacher to be in the same country as the student, so the available labour pool of teaching staff could include qualified mariners from anywhere (subject to local licensing requirements). This will open up the training market to new competition. There should be no difference between a seafarer who qualifies online for their job and one who receives training in person.

Even the U.S. Coast Guard has adapted its mariner credentialing policies to incorporate remote options. In April, the USCG's National Maritime Center added electronic testing options for license renewal exams. In a self-proctored at-home test, the mariner completes the answer sheet for each module and returns it to NMC via e-mail, allowing license renewals to proceed even while exam centres are closed.

New customised cyber insurance product for shipowners

Willis Towers Watson, a global advisory, broking and solutions company, has unveiled a new type of cyber insurance product for shipowners that re-designs standard cyber policies to better navigate the risks for ship operators in the digital era.

The solution, CyNav, addresses cyber threats in the broadest sense, including losses that occur from cyber-related business interruptions, even when the cyber events originate from third party IT service providers. CyNav's primary focus is to support the continuity of maritime businesses and help shipowners resume normal operations as soon as possible after a cyber incident.

The product reaches the industry just as the disruptive potential of malware cyber-attacks on the shipping industry recaptures the headlines.

Barely a week goes by without new cyber events affecting the maritime sector. Many are minor and unreported, but the major cases have caused consequential commercial losses in the hundreds of millions of dollars. CyNav offers a genuinely pioneering marine-specific cyber solution.

With the industry's course set towards 'smart' shipping, all links in the global maritime supply chain – ashore and at sea – are becoming more connected. Greater exposure to cyber risk is an inevitable side effect.

Previous events have proven that an attack does not have to be targeted at a specific company to disrupt its business. Organisations can be the unintended victims of cyber events, so risk-transfer solutions need to recognise that a company simply can end up as collateral damage.



Canada Maritime universities establish emergency funds for students during COVID-19 crisis



As COVID-19 continues to spread, a number of universities across the Maritimes have set up a student relief fund to help students address financial burdens caused by the pandemic. On April 1, Mount Saint Vincent University (MSVU) in Halifax announced the establishment of a fund to provide emergency bursaries to help affected students cover costs of housing, food, tuition, technology, mental health services and transportation.

According to the university, the fund will also be used to set up bursaries and awards for the fall term so that students can return to the classroom and new students can come to MSVU. On the other hand, Dalhousie University has provided emergency bursary funding to over 400 students who are facing unexpected and unmanageable costs as a result of the COVID-19 pandemic. In New Brunswick, the same effort has been made by Université de Moncton and the University of New Brunswick to help their students. The Université de Moncton announced the creation of an emergency fund to assist students affected by the COVID-19 pandemic at all three of its campuses.

Maritime Museum offers online programmes during COVID-19 pandemic



The Wisconsin Maritime Museum of the United States is offering free activities and programs for all ages during their closure due to the coronavirus pandemic shutdown.

The Museum's free online programs offer virtual field trips, downloadable lesson plans and activities, live streamed programs, and research materials.

The Museum also creates content in both English and Spanish. "Many students now learning at home are English-speakers, but their parents might be native Spanish speakers," says Director of Education & Programmes Abigail Diaz. "We want the whole family to be able to learn together."

Organisers say the online resource portal is growing daily, and the education department is happy to hear from the public what additions they would like to see.

India celebrates National Maritime Day



In India, the National Maritime Day is celebrated every year day to raise the awareness in supporting intercontinental commerce and the global economy as the most well-organized, safe and sound, environmentally responsive approach of transporting goods from one corner of the world to another.

The National Maritime Day was first celebrated on April 5, 1964. The saga of India shipping first started on April 5, 1919, when the SS Loyalty, the first ship of The Scindia Steam Navigation Company Ltd sailed from Mumbai to the United Kingdom (London).

On 5 April 2020, India observed its 57th edition of the National Maritime Day. On this day an award called "Varuna" is conferred to those who made an outstanding contribution to the Indian maritime sector. The theme of the National Maritime Day 2019 was "Indian Ocean-An Ocean of opportunity".

According to the Directorate General of Shipping, 'India now has 43 shipping companies owning 1,401 ships with a total 12.69 million gross tonnage' as of December 2018.

The EU Blue Economy Report 2020 is published



On 11 June 2020, the European Commission published "The EU Blue Economy Report 2020", providing an overview of the performance of the EU economic

sectors related to oceans and the coastal environment. With a turnover of EURO 750 billion in 2018, the EU blue economy is in good health. There were also 5 million people working in the blue economy sector in 2018, representing a significant increase of 11.6% compared to the year before. Although sectors such as coastal and marine tourism, as well as fisheries and aquaculture are severely affected by the coronavirus pandemic, the blue economy as a whole presents a huge potential in terms of its contribution to a green recovery.

European Commissioner for Environment, Oceans and Fisheries Virginijus Sinkevičius said: "Maritime renewable energy, food from the sea, sustainable coastal and maritime tourism, the blue bio-economy and many other activities constituting the 'Blue Economy' will help us come out of this crisis stronger, healthier, more resilient and more sustainable.

We are doing everything we can to cushion the impact of the lockdown, protect the jobs in the blue economy and the wellbeing of our coastal communities, while retaining our environmental ambitions."

While the marine environment is typically associated with traditional activities such as fishing or transport, it houses an increasing number of emerging, innovative sectors including marine renewable energy. The EU is on track to produce up to 35% of its electricity from offshore sources by 2050.

With a decrease of 29% of CO² per unit of gross value added between 2009 and 2017, fisheries and aquaculture growth is firmly decoupled from greenhouse gas production. Moreover, the report stresses the correlation between sustainable fishing and positive economic performance.

Greening is also ongoing in other sectors. Fuelled by the International Maritime Organisation's 2020 sulphur cap, maritime transport is looking increasingly towards less carbon-intensive energy sources. In addition, a network of 'green ports' is reducing the ecological footprint of these economically important hubs between the ocean and the mainland.

The report also looks at the economic value of several ecosystem services provided by the ocean, including habitats for marine life, carbon sequestration, and processes that influence climate change and biodiversity.

UN chief calls for seafarers to be designated 'key workers'



Due to COVID-related travel restrictions, hundreds of thousands of the world's two million seafarers have been "stranded at sea for months", said the UN chief on 12 June 2020, calling for them to be categorised as "key workers", during the pandemic.

The ongoing crisis is having a direct impact on the shipping industry, which transports more than 80% of traded goods – including vital medical supplies, food and other basic necessities - critical for the COVID-19 response and recovery.

"The world could not function without the efforts of seafarers, yet their contributions go largely unheralded" said UN Secretary-General Mr António Guterres. "They deserve far greater support at any time, but especially now". In a bid to ensure that changeovers can safely take place, the Secretary-General called on all countries to "formally designate seafarers and other marine personnel as 'key workers'".

Mahapola Maritime Academy and Rakna Lanka sign MoU to boost maritime education



A Memorandum of Understanding (MoU) has been signed between the training wing of the Sri Lanka Ports Authority, Mahapola Ports & Maritime Academy and Rakna Arakshaka Lanka Ltd to improve the maritime

education in Sri Lanka. The event was chaired by General Daya Ratnayake, Chairman of the Sri Lanka Ports Authority. Sri Lanka Ports Authority officials including Vice Chairman – Managing Director Mr W. S. Weeraman and officials of Rakna Lanka Ltd. witnessed the event.

According to a decision taken by the Board of Directors of the Sri Lanka Ports Authority some time ago, the Mahapola Ports & Maritime Academy and other institutes have implemented several cooperation projects to improve the maritime education. The MoU is yet another step towards that. Around 12 MoUs have been signed between the Mahapola Ports & Maritime Academy and various stakeholders to improve the maritime education in the country.

Tritan Software to deploy Telehealth across the maritime industry to assist with COVID-19



Tritan Software, world's renowned provider of health and safety technology platforms in the maritime industry, announced the launch of SeaConsult, a new telehealth solution that will be provided at no cost to all clients during the COVID-19 pandemic period. SeaConsult will allow onboard staff to securely conduct virtual cabin visits with onboard crew and guests for all suspected cases directly via a laptop or mobile device. The ability to perform contactless visits and checks via telehealth, in accordance with the Centre for Disease Control and Prevention (CDC) of USA and World Health Organization (WHO) recommendations, will help prevent the transmission of communicable diseases onboard while ensuring the safety of crew and passengers. SeaConsult will also provide the ability for staff onboard to seek consult directly with shoreside specialists when additional medical assistance is needed.

More than 95% of the cruise industry has already adopted Tritan's SeaCare® Health Platform. SeaConsult will be directly integrated into this existing system, allowing for immediate deployment across an entire industry. "As the leader in the industry, we believe it is our obligation to assist our clients and our communities during this challenging period," stated Andrew L. Carricarte, President and CEO of Tritan Software. "This latest advancement brings a much-needed and immediate capability to an entire industry. We have been collaborating extensively and working tirelessly with them and various regulatory authorities to ensure that the safety of all crew and passengers is paramount." Tritan will be leveraging its patented technology, SeaSync®, to ensure that the virtual telehealth tool will operate effectively within the industry's limited connectivity environment at sea.

SeaCare®, a GDPR- and HIPAA-compliant platform, currently provides a comprehensive suite of modules for every aspect of maritime care and health management. This includes numerous public health and communicable disease management tools such as automated close-contact tracing, quarantine management, epicurve trending, outbreak prevention notifications and the integration of critical compliance requirements to the numerous global authorities such as the CDC, US Coast Guard, ECDC, Health Canada, Chinese Ministry of Health, Anvisa and various others entities.

Philly Shipyard of Philadelphia selected to build NSMV



TOTE Services has selected Philly Shipyard Inc. of Philadelphia to build the newest class of training ship, the National Security Multi-Mission Vessel (NSMV), the Maritime Administration (MARAD) announced on 8 April 2020.

The shipyard will construct up to five new ships to provide maritime training for America's future mariners and to support humanitarian assistance and disaster relief in times of need.

"This new world-class vessel, constructed at an American shipyard, is part of our much-needed program to replace the aging training vessels currently operated by state maritime academies," Transportation Secretary Elaine L. Chao said.

Last May, TOTE contracted with MARAD as the vessel construction manager to deliver one to five NSMVs. This occurred after Congress required that the NSMVs be procured using commercial design and build practices. Following construction and delivery of the ships to TOTE, the vessels will be transferred to MARAD for their mission of training future licensed mariners at state maritime academies and responding to humanitarian and natural disasters.

"Investing in maritime education creates more American jobs," Maritime Administrator Mark H. Buzby said. The NSMV will feature numerous instructional spaces and a full training bridge and have space for up to 600 cadets to train in an at-sea academic environment.

Institute of Chartered Shipbrokers launches training initiative for persons with disabilities



The Institute of Chartered Shipbrokers Singapore Branch (ICS-SG) has announced a new training initiative to provide maritime education to persons with disabilities.

The training initiative is supported by SG Enable, an agency dedicated to enabling persons with disabilities.

The course involves training the attendees on the basic understanding of shipping, and thereafter ICS will coordinate and assist in finding job placements for them in the maritime industry.

ICS-SG shared that the results of a poll carried out a few months back indicated a positive response from the Singapore Shipping Association (SSA) member companies.

Captain Subhangshu Dutt, chairman of the ICS branch said, "Getting this initiative going in the midst of the COVID-19 crisis is an achievement. Even greater sense of satisfaction would be to see the candidates with disabilities getting placements and eventually anchored in a career in shipping."

The first course is expected to commence by the end of June and higher level courses would be available progressively.

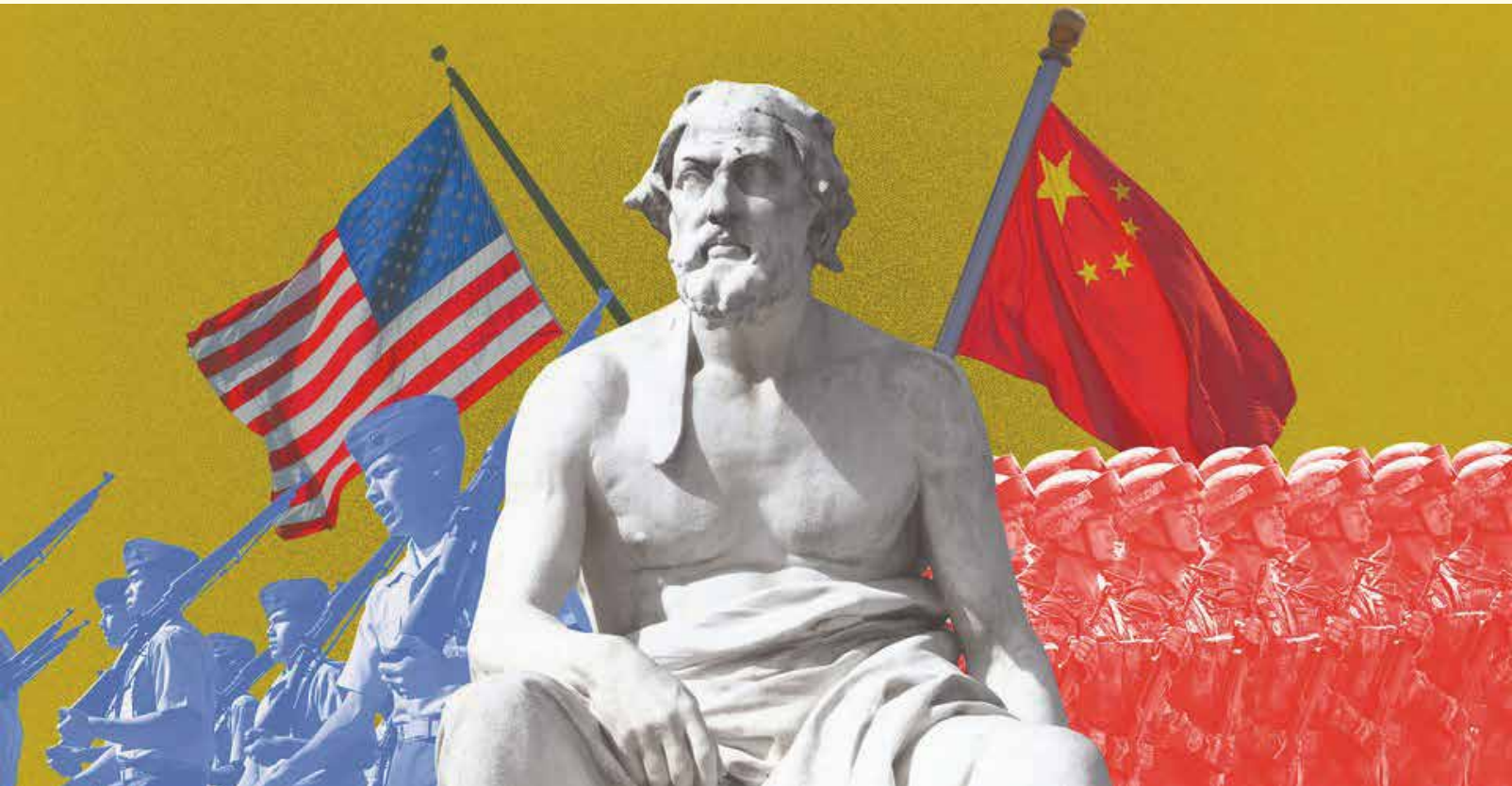
Ocean Odyssey

Watery habitats

Temperature, ocean depth, and distance from the shore determine the types of plants and animals living in an area of the ocean. These regions are called habitats.

Coral reefs are one type of habitat. When tiny animals called polyps die, their skeletons harden so other polyps can live on top of them. Then those polyps die, and more move in. After thousands of years, this becomes a complex structure called a coral reef that provides food and shelter for many kinds of ocean animals. In fact, corals reefs have been called the rain forests of the sea because of the wide variety of animals found there. Animals such as seahorses, clownfish, and sea turtles all live on coral reefs. And corals themselves are animals! They grab food from the water using tiny tentacle-like arms.

Kelp forests found along the coastlines of the Pacific and Antarctic Oceans also provide food and shelter for marine life. These large, brown, rubbery plants have hollow, globe-shaped growths on the leaves called pneumatocysts that help the plants rise to the surface. Sea lions, whales, shore birds, and other ocean animals make meals of the smaller critters that hide in the leaves. Other ocean habitats aren't actually in the ocean, such as estuaries. Estuaries are areas where rivers and oceans meet and have a mix of saltwater and freshwater. Oysters, crabs, and many birds like great herons and egrets live in estuaries.



Thucydides' trap and geopolitics in Indian Ocean Region

Faysal Mahmud

When an established power feels threatened by new rising power, war is almost inevitably the result. This phenomenon has been described as "Thucydides' Trap". The term was coined in 2012 by Harvard professor Graham Allison, who used it in a reference to the Peloponnesian War between Sparta and Athens in ancient Greece, which was chronicled by historian Thucydides. Thucydides observed that the war was caused by the rise of Athenian power and the fear caused in Sparta. He concluded that the rise of Athens and the fear that this instilled in Sparta made the war inevitable.
























Such type of situation always raises tension in local, regional as well as international politics as domination through power projection is the ultimate objective. Super powers in the world always try to hold their super power position and control all the fellow countries of the world and prove their domination either by soft, hard or smart power. These three types of power projection varies from country to country considering the strength of that state. Thucydides' Trap can be seen between USA and China in terms of activities related to Indian Ocean as the most important sea line of communication.

Thucydides' Trap

An alliance is a form of extracting benefits from the partner countries or to protect two or more countries from the invasion of a super power. Formation of NATO is the examples of such alliances between the USA and NATO. Previously, US looked into China as a regional power of Asia and considered it as a country which will continue informal alliance with USA and will act as per the desire and direction of USA. However, gradually China developed its economy to such extent from where it has become a threat for the global dominance of

the USA. At present, China is an economic power of the world and has been developing its military strength as well. As per the report of US department of state, China will cross USA in certain areas of military technology by 2050. Also, a trade war between USA and China of the last year indicated the same direction of Thucydides' Trap. USA finds China as a threat to their domination in the world and tries to contain the increasing strength of China both militarily and economically. Besides, both countries are trying to dominate Indian Ocean through different tactics of policy for all the coastal countries

Thucydides' trap brought many wars between ruling and rising powers

	Period		Ruling Power	Rising Power		Result
1	First half of 16th century		France	Hapsburgs		War
2	16th–17th centuries		Hapsburgs	Ottoman Empire		War
3	17th century		Hapsburgs	Sweden		War
4	17th century		Dutch Republic	England		War
5	Late 17th–early 18th centuries		France	Great Britain		War
6	Late 18th–early 19th centuries		United Kingdom	France		War
7	Mid-19th century		United Kingdom, France	Russia		War
8	19th century		France	Germany		War
9	Late 19th–early 20th centuries		Russia, China	Japan		War
10	Early 20th century		United Kingdom	United States		No war
11	Early 20th century		Russia, U.K., France	Germany		War
12	Mid-20th century		Soviet Union, U.K., France	Germany		War
13	Mid-20th century		United States	Japan		War
14	1970s–1980s		Soviet Union	Japan		No war
15	1940s–1980s		United States	Soviet Union		No war
16	1990s–present		United Kingdom, France	Germany		No war

of the region in the name of development in the Indian Ocean region. History tells us that such tension will ultimately cause war between them but the form of war may appear different.

Significance of Indian Ocean

The growing importance of Indian Ocean has attracted all the

Oil shipping lanes and so call string of pearls of China centring the Bay of Bengal



economic super powers of the world to think diplomatically and come up with some strategies to dominate the region and extract benefits from it. At present, most significant role of Indian Ocean is the vital Sea Lines of Communication (SLOC) having so many choke points to address international trade and commerce. In recent years, the coastal countries of Indian Ocean has shown a rapid growth of GDP and economic development that also attracted regional and extra-regional super powers to reshape their policies in terms of trade in the region. China was ambitious from the past to establish soft and hard power projection in this region as this sea line of communication is a major focal point for its economy. China planned for String of Pearls, Belt and Road Initiative, and Maritime Silk Road to participate in the activities of Indian Ocean. It has already established many naval bases, deep sea ports and other infrastructures in many coastal countries of Indian Ocean. Besides, China is dominating South China Sea as its own sea area. All these activities of China draw the attention of other super powers of the world like USA to Indian Ocean.

BRI and Indo-Pacific Strategy

In 2009, China began unilaterally enforcing maritime governance rights in disputed sea areas and demanding a handover of disputed

land featured in the East and South China Seas. As if to demonstrate the futility of curbing China's ambitions, in early 2012 China sent a large fleet of fishing vessels supported by coast guard and naval vessels to forcibly occupy Scarborough Shoal/Huangyandao in the South China Sea. This success was followed by a similar but less fruitful campaign directed against Japanese administered islands in the East China Sea in the summer of 2012. Since 2010 the Chinese were thinking that the South China Sea and other disputed territories should be included in its "core interests", and by 2015 the National Security Law passed by the National People's Congress finally made it official.

China next announced the Belt and Road Initiative (BRI) in fall 2013 at a central work forum on diplomacy towards the periphery. Chinese financing and Chinese state-owned enterprises (SOEs) would construct corridors of land and maritime economic connectivity radiating out from China to every corner of Eurasia and the surrounding regions of Africa and Oceania. Its strategic aims were to cultivate new overseas markets and critical import sources to sustain China's continuing rise through a Chinese-orchestrated BRI connectivity network. Along with BRI, China announced a concept of regional governance called the community of common (or shared) destiny to be constituted from a BRI community of states to be linked with China's economic orbit. All these activities became a threat to USA's supremacy in the world.

At present China is moving forward with its ambitions and strategies to dominate South China Sea as well as in Indian Ocean. Co-operation and huge investment in Myanmar to get access to Indian Ocean, investments in Sri-Lanka, Pakistan, Bangladesh and other coastal countries of Indian Ocean is clearly showing the intention of China in fulfilling the projects like- Belt and Road Initiative, String of Pearls, Maritime Silk Road etc. All these activities and projects, debt trap, and diplomacy of China are great threat for the USA. As a result, the USA is trying to contain Chinese expansion in Indian Ocean by introducing another strategy namely Indo-Pacific Strategy in competition with Chinese BRI by forming an informal alliances with India, Japan and Australia and advocating the strategy as a model for regional development in Indian and Pacific Ocean region. Indo-Pacific strategy is a geopolitical construct of combining Indian Ocean and Pacific Ocean as a single strategic space but the inherent intension of USA is to restrict the growth of China as Chinese rise became threat

for its supremacy.

COVID-19 situation analysis

At present, outbreak of novel corona virus of COVID-19 is a burning issue throughout the globe which has heavily affected world economy and world politics in a negative way. As economic activities have stopped in almost all areas of the world to avoid the infection from this virus, it will definitely put long time impacts on world economy. Most alarming thing is, till now, no vaccine or medicine is discovered and the world does not know how long it will take to get a cure for this virus. So, how much impact this virus is going to put on the world economy still not clear and cannot be calculated as well.

Virus spreading started from China and many countries are blaming China for this and some countries like USA is claiming it was done intentionally by China. But at present this claim is a matter of investigation to prove it as an intentional move of China to increase its domination and financial benefit. Those countries address this virus as a biomedical weapon of China and considering it as a win for China of World War III.

Whatever is the case truth will come out in post COVID-19 through investigation which may provide a new shape to world politics. However, the present situation indicates that it is somehow providing leverage to China. USA is affected most by corona virus; their economy is collapsing day by day which will decrease its strength eventually. On the other hand, China already controlled the situation and using its currency to buy falling companies of USA and EU. China is also earning for its assistance to combat the virus in many countries of the world including USA. So to sum up the scenario USA's strength is decreasing and China's is increasing. Claim against China will be investigated in a post COVID-19 setting and the world will know the truth.

Options for Bangladesh (BRI or Indo-Pacific)

Smaller nations of the region including Bangladesh should primarily look at these initiatives from a development point of view through cooperation. Initiatives like Indo-Pacific and Belt & Road Initiative can be complementary for Bangladesh from this point of view. Both can co-exist. These are not antagonistic or mutually exclusive. Bangladesh should make sure investments are flooding for its development irrespective of the strategy.

The USA and China have fallen into the Thucydides' trap



Policy of engagement not alliance

Bangladesh, being a coastal state of Bay of Bengal, is a stakeholder in Indo-Pacific Strategy. However, the policy of Bangladesh should be of engagement rather than alliance. The objective of Bangladesh should be to achieve economic benefits from infrastructural initiatives. At the same time it is also a part of Indian Ocean Rim Association. Therefore, the position of Bangladesh in nurturing multi-focal and multilateral foreign policy is to promote win-win situation with the major powers within and outside the region. Bangladesh should cooperate with the major players in order to be on the path of sustainable development.

Welcoming investment for infrastructure development

Bangladesh should welcome any investment from any country for its infrastructure development. For example, China is going to invest more than 26 billion in Bangladesh in different projects; Japan is building Matarbari port and a power plant under the Bay of Bengal Industrial Growth Belt (BIG-B) initiative.

On the other hand Bangladesh and India has established a mutually beneficial tie to develop an inter-state economic relation which is signified by the transport and transshipment agreement, energy cooperation etc. Bangladesh should encourage this trend to enhance its prosperity.

Bangladesh may create a win-win situation like Myanmar

Myanmar being a small coastal country to Indian Ocean showing its

diplomatic and strategic efficiency in dealing with the major super powers of the world. The country has become the means for China's access to Indian Ocean by providing its support to China. As a result, China is investing huge capital in the infrastructural development in Myanmar. The country is also defending Myanmar in the United Nations, which was clear in case of Rohingya issue. At the same time Myanmar is purchasing sub-marine and military equipment from India considering it as neighbouring country. Different bilateral and multilateral military and economic cooperation with its neighbouring countries of the region are also encouraged by Myanmar. It is maintaining a win-win situation with all the countries of the world. Similar policy should be adopted by Bangladesh and the country should give highest priority to infrastructural development.

Conclusion

Post COVID-19 world will show us the clear picture of the rivalry between USA and China which is little bit hazy at present. However, the rising strength of China in military domain and continuous growth of economy will definitely lead to a Thucydides' Trap and conflict will begin sooner or later. It is just a matter of time now.

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