- **Project-4:** Determination of marine pollution by assessing seasonal seawater quality and identifying the status of micro plastic in the coastal area of Cox's Bazar.
- Project-5: Coastal Acidification and its coping mechanisms of different marine invertebrates inhabit in South east coastal area of Bangladesh
- **Project-6:** Trend detection of temperature and rainfall in the coastal region of Bangladesh.

# **Research Projects of 2017-18**

- Project-1: Investigate the status of Coastal Upwelling and Spatialtemporal variability of stratification with reference to Chlorophyll & Nutrients around Saint Martin's Island, Bangladesh.
- **Project 2:** Sedimentary & Mineralogical Composition and Sediment Province Analysis of the Nearshore Area surrounding of Saint Martin's Island, Bangladesh.
- Project-3: Adaptive responses to ocean warming and acidification of different marine invertebrates inhabit in the south east coastal area of Bangladesh.
- Project-4: A Preliminary taxonomic checklist of marine algae (phytoplankton & Seaweeds) around St. Martin's Island and Inani Coast, Bangladesh.
- Project-5: Determination of Marine Pollution by coastal water quality assessment and marine litter loads around the Coastal Area of Saint Martin's Island

# **Future Planning**

- Implementation of short-term, mid-term and long-term planning for blue economy.
- Acquisition of an 80-100 meter oceanographic research vessel.
- Acquisition of modern equipment for quality research.
- Establishment of a marine aquarium at BORI campus.
- Set up of an oceanographic data center.
- Development of knowledge and skill of scientists by proper training and higher educational degrees.
- Establishment of a modern training center for oceanographer, ocean engineers and related professionals.



Round Conference Room of BORI



















# Bangladesh Oceanographic Research Institute

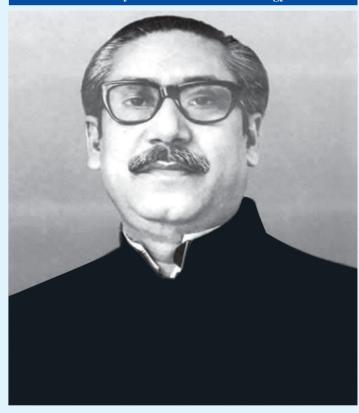
Ministry of Science and Technology Cox's Bazar.

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Bangladesh Oceanographic Research Institute
Ministry of Science and Technology



Bangabandhu Sheikh Mujibur Rahman, Father of the Nation, enacted **The Territorial Waters and Maritime Zones Act, 1974** and took initiative to establish Oceanographic Research Institute



Bangladesh Oceanographic Research Institute (BORI)



Honorable Prime Minister Sheikh Hasina

#### **BORI** at a Glance

Bangladesh Oceanographic Research Institute (BORI) in Cox's Bazar under the Ministry of Science and Technology is the country's first and only national research institute on maritime science and oceanography. In the context of winning the maritime boundary delimitation with Myanmar and India, Bangladesh achieved sovereign right over all types of living and non-living resources within 1,18,813 sq. km. area having 200 nautical miles Exclusive Economic Zone (EEZ) and 354 nautical miles Continental Shelf (CS) from the coast of the seafront. Development of Blue Economy is the electoral manifesto of present Government and as a new sector there is a huge probability of Blue Economy in Bangladesh. For this reason, Bangladesh Oceanographic Research Institute (BORI) is playing an important role in performing ocean related research and development activities. The Institute is working to conduct all the activities as a focal point of Bangladesh at national and international level in the field of oceanography.

- Status of Institute: Statutory Body under the Ministry of Science and Technology
- Location: Marine Drive Road, Ramu, Cox's Bazar-4730.
- Acquired Area: 40.62 Acres. Manpower: Current -104 persons, Sanctioned: 223 posts.
- Physical Facilities: 1 Main Institute Building, 1 Rest House, 5
   Officer's & staff quarters, 2 Dormitories, 8 Laboratories, 1 Officer's
   Club, 1 First Aid cum Kinder Garten School, 1 Security Building, 1
   Director General bungalow etc.
- Research Departments: Physical and Space Oceanography, Biological Oceanography, Chemical Oceanography, Geological Oceanography, Environmental Oceanography & Climate and Oceanographic Data center.

#### Vision

To contribute in the economic development of the country by adopting maritime research activities, applying research results, operating, managing and controlling all the related activities.

#### Mission

- To conduct research activities on development of mineral, mariculture, marine fisheries, environmental and industrial sectors using sea resources and to develop eco-friendly and sustainable technology for the betterment of markind
- To conduct activities on maritime research, education, training and to enhance knowledge on exploring and exploiting ocean resources through taking initiatives to protect marine environment.
- To explore all living resources in ocean and to expedite sustainable production of these resources for economic welfare.
- To identify and research on mineral resources including placer deposits, coal, oil and gas in offshore islands, coastal regions, sea bottom including subsoil.
- To study hydrography, sedimentation, astrology, meteorology, navigation and communication system and to develop commercial communication
- To encourage public and private organizations to invest in maritime trade and marine environment and to serve as consulting organization.
- To provide proposal for maritime strategies, policies and planning including maritime law of the country.
- To identify various environmental issues (coastal, deep sea circulation, delta formation, water flow, etc.) and natural disaster and climate issues.
- To improve international relation and to take integral activities to link with local and international organizations regarding oceanography.



# **Research Projects of FY 2021-22**

- **Project-1:** Blue Carbon stock assessment in the Maheshkhali Channel and the Naf river estuary of Bangladesh.
- **Project-2:** Distribution Mechanism of Physicochemical Parameters in Maheshkhali Estuary, Northern Bay of Bengal.
- **Project-3:** Determination of Sedimentological & Mineralogical Distribution to delineate sedimentary process of the Nearshore Area of Maheskhali-Kutubdia, Bangladesh.
- **Project-4:** Influence of Physico-chemical Parameters on Abundance and Distribution of Plankton Composition along the East Coast of Bay of Bengal.
- **Project-5:** Explore agarophyte to optimization of Phycocolloids and continuation of taxonomic baseline study of Saint Martin's seaweed.
- **Project-6:** Status of Oil-Grease and BTEX in the South Eastern Coastal water of Bangladesh.

- **Project-7:** Biogeochemical Process of Cox's Bazar's different E stuaries (Naf, Rejukhal, and Maheshkhali Channel): Assessing its feasibility study for mariculture.
- Project-8: Assessing the microplastic distribution in water, sediment and some commercial fish species in the coastal region of Cox's Bazar.

# Research Projects of FY 2020-21

- Project-1: Beach profiling along Marine drive road of Cox's Bazar.
- **Project-2:** Detecting floating marine debris in the eastern coastal zone of Bangladesh using remote sensing technique.
- Project-3: Determination of Sedimentological & Mineralogical Distribution to delineate sedimentary process of the Nearshore Area of Maheshkhali-Kutubdia, Bangladesh.
- Project-4: Phytoplankton assemblages in the south patches fishing ground of the Bay of Bengal with reference to the seasonal variability of nutrient abundance.
- **Project-5:** Quantification of potential nutritional value from 10 seaweeds, experimental extraction of Phyco-colloids from 3-5 seaweeds available around St. Martin's island and continuation of taxonomic base line study.
- Project-6: Biogeochemical Process of the Moheshkhali Channel: Physical, Biochemical and Primary Productivity Characteristics of the Channel.
- Project-7: Assessment of Plastic Debris (Macro to Micro) in the coastal area of Moheshkhali

### **Research Projects of FY 2019-20**

- Project-1: Spatial and temporal variations of surface Chlorophyll and nutrient in the coastal area of Kutubdia Island.
- **Project-2:** Beach profiling along the coast of Cox's Bazar.
- **Project-3:** Delineation of tectonic effect on relative sea level fluctuation on the basis of subsidence and upliftment signature of the Eastern Coastal Belt of Bangladesh.
- **Project-4:** A study on nutritional status and culture of Green Mussel (*Perna viridis*) at Rejukhal Estuary.
- **Project-5:** Monitoring of ocean acidification with special reference to coral bleaching at Saint Martin's Island, Bangladesh.
- **Project-6:** Potential nutritional evaluation of 20 seaweeds, experimental extraction of Phycocolloids from 3 seaweeds available around St. Martin's island and continuation of seaweed base line study.
- **Project-7:** Occurrence and characteristics of macro, meso and microplastic in the coastal area of Cox's Bazar.
- **Project-8:** Determination of marine pollution by assessing seasonal seawater quality monitoring and health of marine organisms in the coastal area of Cox's Bazar, Bangladesh.
- **Project-9:** Statistical analysis and future prospecting of Nonconventional Marine Fisheries and algae resources in the Cox's Bazar District of Bangladesh.

# **Research Projects FY 2018-19**

- **Project-1:** Spatio-temporal variability of stratification along the coastal area of Cox's Bazar.
- **Project-2:** Determination of Sedimentological & mineralogical distribution and sediment province of the Nearshore Area of Cox's Bazar-Teknaf peninsula of Bangladesh.
- **Project-3:** Study on seaweed Biochemical composition with references to physico-chemical parameters of water and bottom sediment and continuation of taxonomic identification, around St. Martin's Island, Bangladesh.