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Safeguarding Environment for Future

Upcoming

- Preparation of Sector Action Plan for Environment and Climate Change
- Coastal Resilience: Developing New and Innovative Approaches in India and Bangladesh along the Bay of Bengal

Inside

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Dredging Sector in Bangladesh:

Current Scenario and Promoting Potential Strategic Public-Private Partnership

Mahmudul Islam, Advisor, CEGIS,
Former Additional Secretary to the Government of Bangladesh

Bangladesh is the largest delta with its vast network of crisscross rivers, canals, and wetlands. Only about 700 rivers, including tributaries, have a total length of about 24,140 km. However, a maximum of 6000 km can be used safely, and in the dry season, it shrinks to about 3800 km. An estimate indicates that the country can only use 16%-25% of its river lengths to transport viable waterways. The rest, 75%-84%, remain unused for its inadequate depth caused mainly by high siltation levels.

It is assessed that, due to relatively higher settling velocity, the large-grained sediments are deposited near the source area on the riverbeds, forming sand bars. In the rainy season, regular water flow does not accommodate within the rivers, and it overflows, causing flood and eventually public loss. If the siltation could have been controlled or reduced in any way, the rivers could be made more useful for transportation and be made a lesser threat as a flood source. Dredging is a possible and perhaps best viable solution to reduce siltation and keep the water flow regular for navigation, irrigation, and other necessities.

This strategic outlook has been pointed out at the policy level, and specific initiatives have been focused but not railed properly in past decades. However, BDP-2100 and 8th

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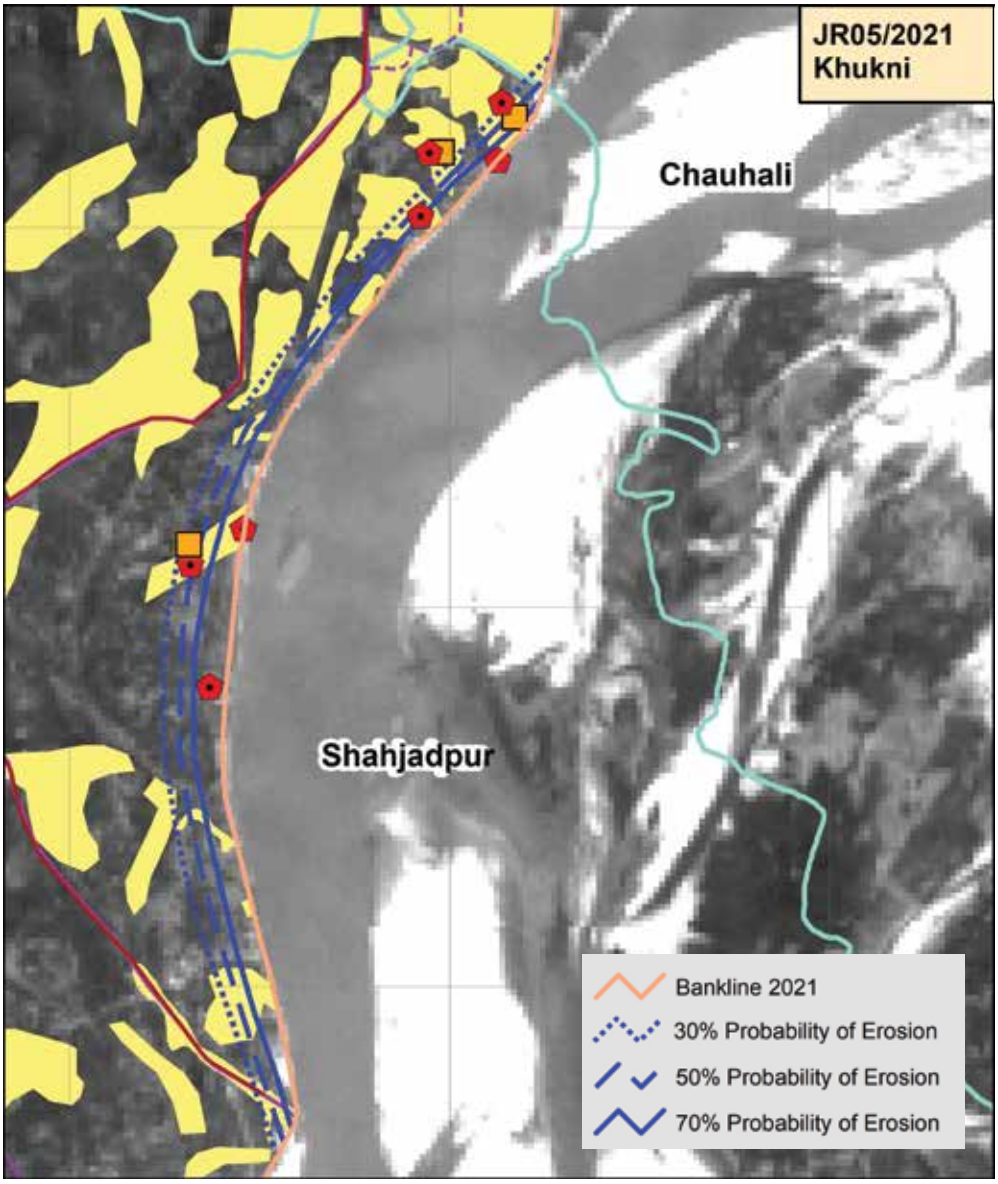
Riverbank Erosion Prediction for 2021

Sudipta Kumar Hore, River, Delta and Coastal Morphology Division

Riverbank erosion, one of the major natural disasters in Bangladesh, causes untold miseries every year to thousands of people living along the banks of the rivers of Bangladesh. Riverbank erosion alone has rendered millions homeless and has become a severe social hazard. Structural interventions to protect against riverbank erosion are very costly. Along with structural measures, less costly nonstructural measures, like erosion prediction, could reduce the loss due to riverbank erosion and lessen people's suffering.

CEGIS has developed a unique tool using time-series satellite images for riverbank erosion prediction in the Jamuna, the Ganges and the Padma Rivers. Like previous years, CEGIS has predicted twenty (20) probable vulnerable locations for 2021 along both the banks of the Jamuna, the Ganges and the Padma rivers for three different probabilities (70%, 50% and 30% probability of erosion), which is supported by Research and Development fund of CEGIS. Among these, fourteen (14) locations are in the Jamuna River, five (5) in the Ganges and one (1) in the Padma River. The prediction is limited to identifying the vulnerable locations and provides information on the vulnerability of the predicted sites' land, settlement, and other physical infrastructures.



Map showing Probability of Erosion at Jamuna River near Shahjadpur, Sirajganj

It was predicted that riverbank erosion in the Jamuna River would be about 1265 ha whereas, for the Ganges and the Padma Rivers, it would be 475 ha and 1060 ha correspondingly. Moreover, the following potential damages may occur due to riverbank erosion in 2021.

- 340 ha of settlement;
- 6.0 km of road (District, Upazila and Rural road);
- 3.7 km of the embankment;
- 40 educational institutions;
- 5 hat/bazars,
- 26 mosques, 2 health centers; and
- 2 government offices and 2 non-government offices.

The riverbank erosion was predicted to affect 13 districts situated along the banks. These are Kurigram, Jamalpur, Gaibandha, Bogura, Sirajganj, Tangail, Manikganj, Pabna, Kushtia, Rajbari, Rajshahi, Faridpur, and Madaripur.

However, CEGIS regularly monitors the erosion prediction to assess the robustness of the prediction tool. It was observed that erosion prediction made in the previous year (2020) showed a good match with the occurrences although there were few locations of slight riverbank erosion where erosion was not predicted. However, the overall accuracy of this prediction tool is approximately 70-80%.

Contract Signing for Different Studies

During the second quarter of 2021 (April - June), CEGIS has signed several contracts with different organizations. The contract titles with the date of signing are given below:

i) "Morphological Study of Sugandhya, Burirswar-Payra and Patuakhali River for fixing the alignment of 230 kV Transmission Line (TL) from Patuakhali to Barishal for a project of Power Grid Company of Bangladesh Limited, named Power Grid Network Strengthening Project under PGCB" with Fujian Minneng Survey and Design Co. Ltd. (FJMN) on April 4, 2021; ii) "Hydrology & Morphological Study of the Karnaphuli River (Chandraghona-Raikhali Portion) and the adjoining area of the river for construction of a bridge at 16 km of Ghagra - Chandraghona - Bangalhalia - Bandarban Regional Highway (R-161) under Roads and Highways Department during the year 2020-2021" with Roads and Highways Department on April 26, 2021; iii) "Preparation of 25 year Master Plan for Madhabkundo Eco Park" with Sylhet Forest Division, Forest Department, Bangladesh on June 1, 2021; iv) "Preparation of Environmental & Social (E&S) Documents under the World Bank's Environmental and Social Framework (ESF) of Jamuna River Economic Corridor Development Program" with World Bank on June 25, 2021; v) "Feasibility Study, Route Survey & IEE for Construction of Internal Power Transmission Infrastructure at Bangabandhu Sheikh Mujib Industrial City" with Power Grid Company of Bangladesh Limited (PGCB) on June 28, 2021; vi) "Rendering Consultancy Services for Monitoring of Environmental Parameters and Implementation of Environmental Management Plan during Construction Period along with Engineering Activities for 2x660 MW Maitree Super Thermal Power Project at Rampal in Bagerhat District of Khulna Division, Bangladesh" with Bangladesh-India Friendship Power Company (Pvt.) Limited (BIFPCL) on June 29, 2021. vii) "Climate Change Risks and Vulnerability Assessment (CRVA) for Fisheries and Aquaculture Sector" with Food and Agriculture Organization (FAO) on June 30, 2021.

Geo-Spatial Analysis Support for Land Acquisition Process of the River Training Works under Padma Multi-Purpose Bridge Project

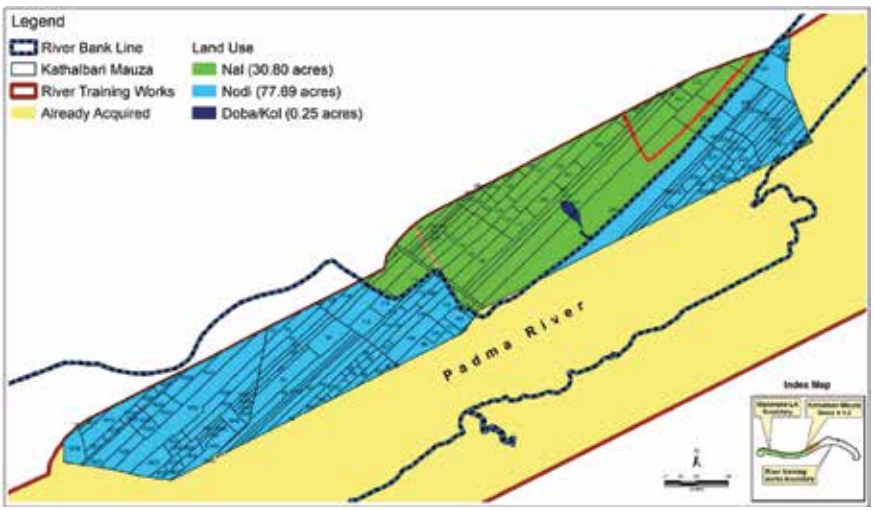
S M Shafi-Ul-Alam, GIS Division

The Padma Multipurpose Bridge Construction Project sent a proposal to the Deputy Commissioner of Madaripur District in January 2017 for the acquisition of 226.27 acres of land classified as "River" in six Mouzas (Matborerchar, Dakshin Charjanajat, Boro Keshabpur, Baghia, Kathalbari and Vasaldi) under Shibchar Upazila of Madaripur District for carrying out the River Training Works. Though a joint survey was started on July 2017, it couldn't be completed due to land classification complications.

Under such circumstances, it was decided to acquire the land as 'Real Class' through joint investigation while assessing the feasibility. Deputy Commissioner of Madaripur District requested Center for Environmental and Geographic Information Services, to prepare a digital map of go-referenced six mauzas and provide information of the relevant plot class (dag) with alignment by analyzing the satellite image of January 2017.

Multispectral high resolution of World View-3 Satellite Images of December 30, 2016, has been used for delineating land use/ land cover of the proposed six mauzas. Land use classes were outlined through the onscreen digitization technique and verified with ground truth data. All the collected mauza maps of the study area have been scanned and digitized, along with plot numbers. Mauzas were geo-referenced and appended together to make a single GIS database. Finally, prepared the mauza-wise plot index containing JL number, dag number, entire plot or partial plot status and plot areas.

Through overlay analysis of land use and mauza database, it was found that nearly 30.80 acres of land in Kathalbari Mauza is 'Nal (Agriculture Land)' while roughly 77.69 acres is as 'Nodi (River)'. On the other hand, 0.25 acres of land was found as 'Doba /Kol (Ditch)'.



Land Acquisition at Kathalbari Mauza, Upazila: Shibchar, District: Madaripur

Updating and Enhancing NDCs by 2020 for Bangladesh

Bhuiya Md. Tamim Al Hossain, Climate Change and Disaster Management Division

CEGIS and consortium partners BCAS, C3ER Brac University, ICCCAD, IDCOL and Brac have been working on the project entitled 'Updating and enhancing Nationally Determined Contributions (NDCs) by 2020 for Bangladesh'. The project started in September 2020 and is funded by United Nations Development Programme (UNDP). The project aims to assist the Government of Bangladesh (GoB) in preparing the ambitious and updated NDC for Bangladesh for submission to the United Nations Framework Convention for Climate Change (UNFCCC) towards the fulfilment of the obligation to the convention, following IPCC guidelines and for fostering enabling conditions to mainstream mitigation concerns into sustainable development strategies .

In 2015, 196 Parties signed the Paris Agreement (PA) to change the world's course towards a sustainable pathway and limit global warming to 1.5 to 2 degrees Celsius above pre-industrial levels. One of the critical elements of PA is the Nationally Determined Contributions (NDCs). The Paris Agreement requires each Party to prepare, communicate and maintain successive NDCs. The NDCs communicated are recorded in a public registry maintained by the UNFCCC Secretariat.

Ministry of Environment, Forests and Climate Change (MoEFCC) and UNDP jointly organized the "Consultative Workshop on Nationally Determined Contribution (NDC) Review and Updated" on December 29, 2020, at Hotel InterContinental, Dhaka. Mr Ziaul Hasan ndc, Secretary, MoEFCC, graced the event as the Chief Guest. Mr Md. Mizanul Haque Chowdhury, Additional Secretary, MoEFCC, was present as Special Guest. Dr A.K.M. Rafique Ahammed, Director General, DoE, presided over the workshop.

Dr A Atiqur Rahman jointly gave a comprehensive presentation on the proposed project activities as Team Leader of the Project with Mr Malik Fida A Khan, Executive Director, CEGIS. The Chief Guest, Special Guests and participants took part in the interactive group discussion on the five sectors, namely (i) Power, (ii) Transport, (iii) Industry, (iv) Agriculture, Forestry and Landuse (AFOLU) and (v) Waste. This interactive discussion session became fruitful with several queries and feedbacks, constructive suggestions and recommendations made by the participants. More than 60 people attended the workshop physically and via zoom from different ministries, government agencies, academia and the private sector. Following this workshop, the study team prepared an interim submission document on the NDC of Bangladesh, which was submitted to UNFCCC by December 31 2020.

With the guidance and support of MoEFCC and UNDP, the NDC study team has conducted a series of consultation meetings with the relevant ministries and government agencies to facilitate the data collection and update the NDC mitigation promise. The team is now preparing the

Participants of the Workshop on Updating of Nationally Determined Contribution

Jhau Tree: roles in climate... (Cont'd from page 5)

stabilize the sandy beaches and develop the coastal greenbelt, BFD has planted over 500 ha Jhau plantations and is raised in the four forest ranges like Cox's Bazar Sadar, Inani, Shilkhali and Teknaf Ranges of Cox's Bazar Forest Division over the last three decades.

Deforestation of Jhau Plantations has been noticed frequently over the years in Cox's Bazar- Teknaf Beaches, and more than 95 ha Jhau Plantations have disappeared from the years 2006-2019. Coastal erosion due to morphological change is the prime cause, and then structural development caused 99% of areas deforestation in this area altogether.

Reference:

Hossain, Mohammed & Mahmud, Mohammed &Mohajan, Babla&Hossain, Md Ismail.(2016). Growth and Development of Casuarinaequisetifolia in the Open Sandy Sea Coasts of Cox's Bazar, Bangladesh. 10.13140/RG.2.1.1210.9680.

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CEGIS Environmental Lab: pH METER (pocket type)

Md. Rafiqul Alam, Water Resources Management Division

The pH Meter (Model: HI-98107) is a battery-operated pocket-size instrument manufactured by Hanna Instruments, USA. It can measure a wide range of pH of water samples in pH units 0 to 14 with accuracy ±0.1 pH. In CEGIS, the pH meter is used in different studies, like environmental impact assessment and monitoring, hygiene investigations. It is the perfect tool to diagnose problematic pH levels of drinking water, wastewater, river water, reverse osmosis, agriculture, fish hatcheries, aquariums, water conditioning, mining industry, cooling tower etc. The main application of this meter is water quality control as per national standards. It is easy to read the present digital value of the readings and see the current monitoring values on display.

It covers most measurements corresponding to ISO/IEC standards. Calibration is necessary before taking measures. During the measurement process, it is essential to power on the instrument. Now the meter is ready for pH measurement. Then the probe head is to be immersed in the sample completely for pH measurement. Following that, the probe is to be rinsed with regular tap water.

Basic Principle:

When the probe is placed in a solution or sample to measure the pH, hydrogen ions accumulate and replace the metal ions from the bulb. This exchange of ions generates some electric flow. The voltage of this electric flow is measured by the pH meter by converting it into a pH value by comparing the generated voltage with the reference electrode.

An increase in acidity of the solution has a greater concentration of hydrogen ions that increases the voltage, and this increased voltage decreases the pH reading in the pH meter. Similarly, an increase in alkalinity decreases the hydrogen ions or increases in hydroxyl ions concentration, reduces the voltage, and increases the pH value in the pH meter.

The overall pH sensor and pH meter principle depend upon the exchange of ions from the sample solution to the inner solution (pH seven buffer) of the glass electrode through the glass membrane. The porosity of the glass membrane decreases with continuous use that reduces the performance of the probe.

In CEGIS, this instrument is used for different EIA, EMP, SIA and ESMP studies to analyze the pH parameter of water samples for several periods. This instrument can be used in water resources and environmental impact assessment and monitoring studies.

Waterproof pH Meter

Nature
Jhau Tree: *roles in climate adaptation, disaster reduction*

Md. Amanat Ullah, Forestry and Biodiversity Division

Jhau (Casuarina equisetifolia)

Jhau (*Casuarina equisetifolia*) Tree is a prominent protector in coastal areas for its ability to reduce wind effects and high adaptation to sandy soil, salinity, rain, and extreme temperature. It also has the role of accumulating salt spray from the atmosphere. The world climate change experts showed interest in Jhau (Casuarina sp.) Plantation for its potential capacity for climate change mitigation and adaptation in the coastal sandy beach. The carbon storage in the rapidly grown biomass of this species created particular interest among climate change scientists. It was found to be the only suitable, climate-resilient, and promising species in the open coast and off-shore islands (Hossain et al., 2016). Hence, in the sandy area where there is no way to adapt other trees, establishing a greenbelt by Jhau Tree appears to be the most appropriate way to reduce the losses and damages caused, especially by the cyclone and tidal surges. Moreover, the wood is worldwide used as fuel, house posts, rafters, electric poles, tool handles, oars etc.

Jhau Tree is originated in Australia, and it appears to be native westward from Australia to Thailand and the Nicobar and Andaman Islands (Whistler and Elevitch, 2006). It is one of the world's fastest-growing medium-to-large evergreen trees that grow 15 to 30 m or more in height and up to 50 cm DBH (Diameter at Breast Height) (Geary 1985).

In Bangladesh, Jhau Tree is commonly found at coastal beaches of Cox's Bazar and Chittagong Regions but sporadically distributed in other coastal districts. The species is also naturally found in the coastal area of Chittagong (Hossain et al., 1995). Cox's Bazar-Teknaf Sea Beaches are one of the most promising areas for Jhau plantations, where the land is blessed with the Bay of Bengal having linear sand areas with the margins of foreshore alignment and sandy beaches. The Government of Bangladesh initiated the Jhau Plantation along the Cox's Bazar Sea Beach in 1972-73. Bangabandhu Seikh Mujibur Rahman gave the directives to BFD (Bangladesh

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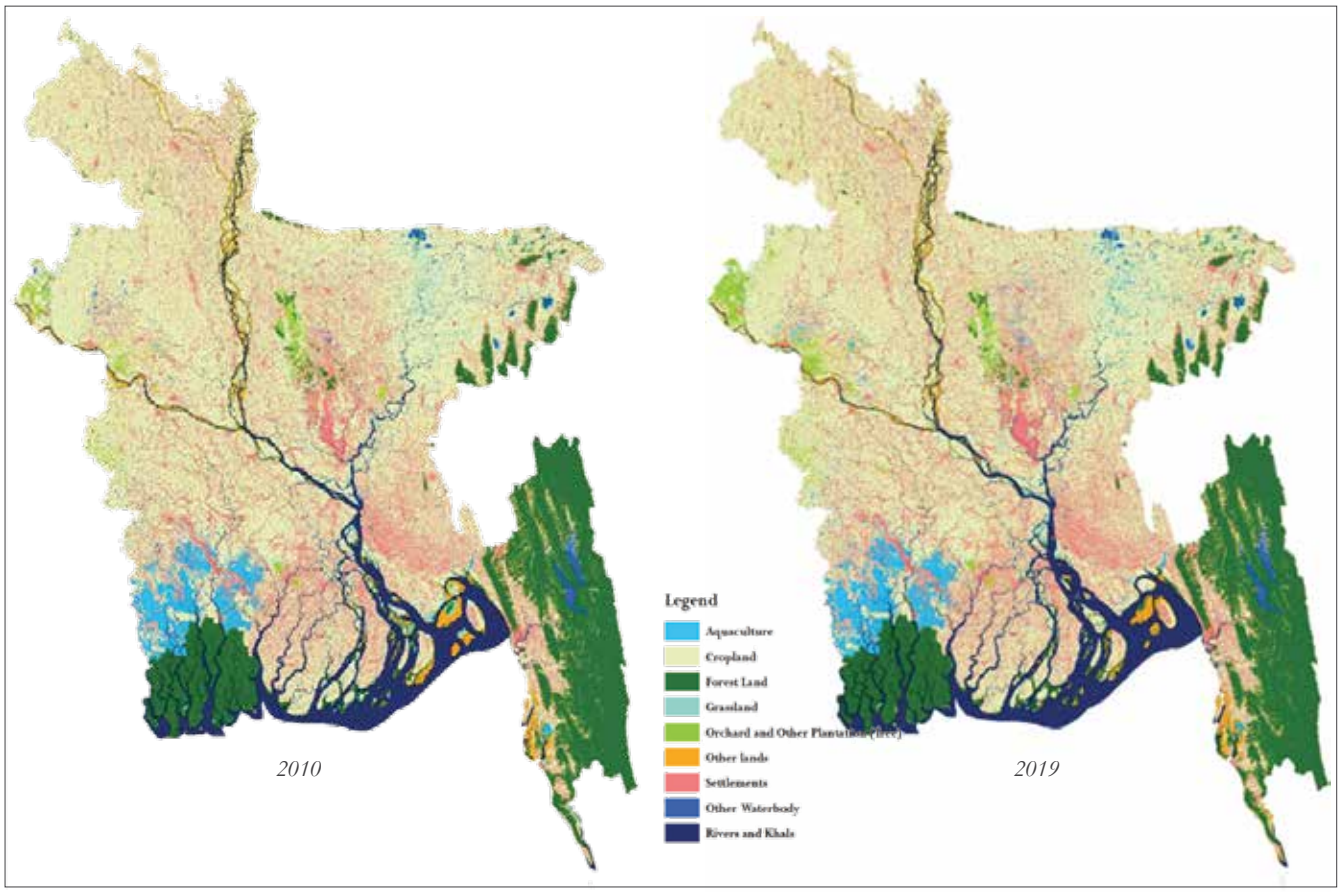
Landuse Changes in Bangladesh (2010-2019)

Md. Nasrat Jahan, Remote Sensing Division

Landuse Map 2010 and 2019 of Bangladesh were prepared from the 30-meter resolution Landsat Images for the Department of Environment (DoE) under the DOE024 project. According to the IPCC guideline and considering the study's objectives, eight (8) landuse classes were finalized as a legend for the landuse map 2010 and 2019. These helped to assess the landuse changes between 2010 and 2019. During this period, Forest land, Cropland, other Waterbody of Wetlands area coverage shows a decreasing trend. In contrast, Rivers and Khals of Wetlands, Grassland, Settlements, Aquaculture, Orchard and other plantation and other lands area shows an increasing trend.



Landuse Map of Bangladesh, 2010 & 2019

Area Statistics of Landuse Change Map (2010 & 2019) of Bangladesh

Sl. No	Class Name		Area in 2010 (ha)	Area in 2010 (%)	Area in 2019 (ha)	Area in 2019 (%)	Landuse Changes (ha)	Landuse Changes (%)
01	Forest land		2,003,242	13.41%	1,992,103	13.34%	-11,139	-0.07%
02	Cropland		7,430,127	49.74%	7,204,586	48.23%	-225,541	-1.51%
03	Grassland		68,207	0.46%	69,609	0.47%	+1,402	+0.01%
04	Wetlands	Rivers and Khals	1,330,021	8.90%	1,367,884	9.16%	+37,863	+0.25%
		Other Waterbody	136,374	0.91%	125,464	0.84%	-10,910	-0.07%
05	Settlements		3,241,673	21.70%	3,305,370	22.13%	+63,697	+0.43%
06	Aquaculture		292,949	1.96%	358,396	2.40%	+65,447	+0.44%
07	Orchard and other plantation		98,376	0.66%	177,519	1.19%	+79,143	+0.53%
08	Other lands		335,730	2.25%	335,768	2.25%	+38	+0.00%
Total			**14,936,699**	**100%**	**14,936,699**	**100%**		

Dredging Sector in Bangladesh... (Cont'd from page 1)

FYP engrossed the issue carefully and set clear targets.

8th FYP document refers to the annual target of River dredging 2817 KM, Excavation/Re-excavation drainage canal 17042 KM and Excavation/Re-excavation irrigation canal 1119 KM- is a mammoth task if maintenance dredging includes with this length and sediment volume.

Against the above inspiring scenario, current logistic availability in the Public and private sectors has been reshaping but requires a different pace.

Currently, Bangladesh Water Development Board (BWDB) possess a total of 33 dredgers ranges from 6 inches to 26 inches. Bangladesh Inland Water Transport Authority (BIWTA) has a fleet of 45 dredgers ranges of different sizes from 18 inches to 28 inches. However, the private sector, including project awarded foreign companies, has capacitated with another 100 dredgers. A recent report revealed only 156 dredgers in Bangladesh, owned by the government and private sector contractors. On the contrary, the total dredger requirement for Bangladesh is about 500, and for BDP-2100, Bangladesh will need an additional 2,000 dredgers over the next 20 years.

In recent trends, reviewing the market demand, both public and private sectors have strengthened their dredger fleet. In addition to BIWTA's estimated USD 530 million procurement project for 35 dredgers includes Hopper Dredger, Grabs Dredger, Cutter Suction Dredger etc. Chittagong Port Authority (CPA) also has their project procuring two (2) dredgers with an estimated value of USD 20 million. BWDB has taken the "Capital Dredging, and Sustainable River Management "project to procure 35 new dredgers, including Hopper, Cutter Suction dredgers, Truck mounted crane with ancillary and related accessories with an estimated cost of USD 724 million. The project is under scrutiny at Planning Commission.

The private sector has also been investing an amount of around USD 700 million in procuring dredgers. This total Public and Private investment would cater to about 20-25% of ready market demand.

Dredging sector suffering from the experience of unpredictable/sudden changing flow and volume of sedimentation in different rivers. Sedimentation is, commonly by its character, an uncertain but ever-changing phenomenon and now more with climate change impact. However, despite the logistic gaps, in the operational arena, the sector fronting issues of low rate per cum, rate differences at different implementing agencies, a rising tax rate, and VAT (current AT, AIT.VAT 29% while it was only 1 % earlier). Few other significant problems reported by the private sector are - Lack of dredging specific local engineers and professional-skill workers, Lack of detailed Sediment management plan in the project, delay in land acquisition (project-specific), delay in re-fixing dredging alignment due to morphological changes, circumstantial uncertainties in dredging to maintain monsoon calendar, slow fund disbursement process etc. The issues deserve due attention at the policy level.

Lack of robust Monitoring and Evaluation both at pre and post scenario of the dredging activity is critically essential for real-time progress, and completion of the project is another area to be addressed, appropriately suggested by the private sector contractors.

The sector scenario noted that currently, BIWTA is implementing three (3) dredging projects. At the same time, data (2021-22) suggests that BWDB have 44 dredging and 20 excavation projects include components of 1331.98 km dredging length- and 3184.94 km Re-excavation length out of its ongoing 118 projects with an estimated cost of USD 137.70 million.

However, in alignment with BDP-2100, the BWDB has kicked off the single longest 217 km dredging work under 'Banglai-Korotoa-Fuljore-Hurasagar River System Dredging and Bank Protection Project'.

Another milestone project under BWDB is "Re-excavation of small rivers, canals and water bodies in 64 districts" at the cost of USD. 2.779 million. Under the first phase, by 2021, as per the project, the restoration of 448 small rivers, canals, and water bodies would stretch about 4,086km, including navigability of 1800 km inland waterway. 2nd phase of this project with 2300 small rivers & canals is getting finalized with an estimated investment outlay of USD 5 million. More river system-based dredging and maintenance dredging projects preparation are in progress in consultation with development partners, including multi financing entities, private funding agencies, and through PPP model.

A comprehensive dredging policy and master plan are essential for integrated water resources management, water availability, drainage and irrigation, flora-fauna and other aquatic lives, fisheries, poultry and livestock, ecology- biodiversity, and, more essentially, maximum navigation benefit. Since the delta plan focused on a water-centric comprehensive long term development approach, it deserves investment priority in the water sector, as manifests in its broader perspective.

Public and private sector players and development partners involved in the dredging arena can move forward with strategic cooperation and partnership to comply with the national policy documents and guidelines. The fact remains that the private sector pressure group in the dredging business has not grown strong enough yet. Moreover, it appears, conflict of interest among the small-medium-big enterprises persists. The formation of an active association body in this sector is still in a nascent stage. Policy support to strengthen the industry is necessary, while facilitation and incentives to be extended to achieve this mammoth dredging activity are underlined for this delta's comprehensive development.

Government should take the lead to care this very potential sector taking on board the private sector and other concerns.

Feasibility Study of Ashuganj-Palash Agro-Irrigation Project of BADC

Mirajul Hossain, Water Resources Management Division

The Ashuganj-Palash Agro-Irrigation Project uses cooling surface wastewater of the power plants, and the Power Stations collect this cooling water from Meghna and Sitlakhya Rivers, respectively. This has been a green project of Bangladesh Agricultural Development Corporation's (BADC) since 1992.

The main goal of this project is to ensure an effective and efficient irrigation water supply for the command area of the projects using used water from power plants. The gross command area of the projects is 28,867 ha in Ashuganj and 26,881 ha in Palash. The Feasibility study began in February 2019 and was completed in June 2020.

The primary objective of this study was to fix the central canal, which collects water from the reservoir and distributes it to the distributaries, which eventually drain into the field via the borrow pit of the Dhaka Sylhet Highway in Ashuganj, which will be extended to six lanes by Roads and Highway. The present length of the proposed retaining wall-cum RCC-lined canal is 11.83-kilometer consisting of an 8.33 km open canal and 3.5 km close conduit section. The inner width of the lined canal is 4.5 meters. Additional ten drainage regulators, two water retention structures, one syphon, and 13 aqueducts, as well as re-excavation of 52.92 km of khal, are proposed in Ashuganj. Modernization of the regulator's lifting device inside the power plant compound, upgrading the existing 21 regulators through gate replacement, and installing a mechanical lifting device for easy opening and closing is also recommended.

The command area under the Palash Agro Irrigation Project is rapidly urbanizing, and settlements mostly occupy the agricultural land. Under the FS study, 12.1 km re-excavation of khal, 3 km length of the lined canal is covered up by a slab (RCC) with sufficient holes to release heat from the water and protect solid waste dumped by the dwellers of the Ghorashal Paurashava. Installation of 15 LLP pump stations with 10 cfs capacity is recommended.

SOBEK 1D and SOBEK 2D were used to generate flow profiles of existing khal and river networks and flood models based on various climate projection scenarios. The CropWAT Model was used to calculate irrigation water requirements, a mandated part of the water demand assessment. This project also employs SDSM's statistical downscaling modelling. HEC-RAS

Ashuganj Power Plant Intake Point

model is used to generate the temperature profile in the central canal at Ashuganj.

After implementation of fifth phase project the total crop production will increased from 1,47,351 MT to 1,93,642 MT for Ashuganj and from 1,68,905 MT to 1,99,264 MT for Palash.

New Face

Mr Mahmudul Islam has joined CEGIS very recently as an advisor. Before his joining, he had been serving in public bureaucracy for about 33 years. During his career, Mr Islam served under the Ministry of PT&T, erstwhile Board of Investment under PMO, Chief Advisor's Office under Care Taker Government. He also served at the Prime Minister's Office, Ministry of Education, Ministry of Water Resources, including an overseas portfolio at the Bangladesh Embassy, Spain.

A hardworking, honest individual with professional integrity, committed to the organization's goal, Mr Islam is best known as a polite, friendly and helpful coworker. However, he has always been thriving on challenges. Comfortable in working independently, he prefers to work within a team setting.

He retired from the Civil Service as Additional Secretary to the Government of Bangladesh. In his last portfolio, he headed the Development Wing in the Ministry of Water Resources. During this course, he was engaged in institutional & operational strengthening of different agencies under the ministry, including BWDB- a major player in the water sector in Bangladesh. He facilitated a strategic partnership with the development partners, including WB, ADB, JICA IFAD, etc., for the water sector development aligned with Bangladesh delta Plan-2100.

Mr Islam experienced strategic training facilities at home and abroad on different issues, i.e. Business outlook for state-owned enterprises, Foreign Direct Investment, Trade facilitation, Education Quality Development, SDG –action research, Public Policy, and Negotiation skills. He also oriented with the Startup business model, especially for the IT sector. He is interested in Negotiation Skills, Social Research & Methodology, Project Management and Implementation Challenge areas.

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