Year 24: Issue 86
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The Common Crane

the CEGIS NEWSLETTER

Safeguarding Environment for Future

Upcoming

- Dhalai River in Seven Forms
- Sandhya-Baleshwar River System: Integrated Water Resources Management in the Sandhya–Baleshwar River Basin

Inside

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Modernizing Land Governance in Bangladesh: *Strategic Strengthening of Institutional Capacity and Systems*

A drone view of rural landuse along the Bhulli River, Thakurgaon

The Context: Structural Blockages in Land Administration

In Bangladesh, land is a crucial yet limited resource, currently under pressure from rapid urbanization and climate change. As the country pursues ambitious infrastructure and economic development, land acquisition has become increasingly complex, marked by systemic delays, legal disputes, and procedural inefficiencies. These issues are further complicated by a fragmented administrative system in which ministries and local authorities often operate in silos, leading to a legacy of outdated records and unclear ownership.

While prioritization is essential for advancing development projects, the existing land governance framework in Bangladesh suffers from institutional fragmentation. Overlapping responsibilities between ministries and local authorities contribute to a "silo effect," leading to high transaction costs, prolonged legal battles, and information gaps. The primary factors behind these challenges can be identified as follows:

Pressure Dynamics: The convergence of rapid urbanization, infrastructure demands, and climate-induced land loss has outpaced existing regulatory capacities.

Operational Deficits: Outdated records and unclear acquisition processes often lead to significant delays in "fast-track" national priority projects.

Against this backdrop, CEGIS guided by the World Bank and for the Ministry of Land, has launched a study titled "Strengthening Institutional Capacity and Land Management System in Bangladesh." The project aims to modernize and enhance the country's land governance framework, addressing critical challenges in institutional capacity, transparency,

Cont'd on page 5

The Return of the Common Crane to Bangladesh's Wetlands

Common Crane (Grus grus) has been sighted in Kanaighat, Sylhet

Profile

The Common Crane (*Grus grus*), locally known as **Pati Saros**, is a majestic migratory bird recognized by its ash-grey plumage, long neck, and slender legs. Adults feature lighter tones on the neck and wings, a pale head patch, and a straight bill adapted for foraging. Juveniles are duller and gradually gain full coloration as they mature. In flight, they are easily identified by their outstretched necks and trailing legs.

Habitat and Diet

These cranes frequent large wetlands, haors, floodplains, and river chars. They prefer shallow water and mudflats rich in aquatic vegetation. Their diet includes small fish, frogs, snails, and insects. Highly vigilant, they favor calm, open spaces and will take flight at the slightest disturbance.

Recent Sightings in Bangladesh

Once considered absent from Bangladesh for nearly a century, the Common Crane made a historic return in 2015.

2018–2020: Multiple sightings in the Padma River chars, including a group of six.

2025: The most recent sighting occurred in Kanaighat, Sylhet, confirming their continued, though rare, presence.

Conservation Challenges

The species remains critically vulnerable due to:

Habitat Loss: Encroachment and destruction of wetlands.

Human Interference: Illegal hunting, noise pollution, and intrusive photography.

Environmental Stress: Excessive movement in once-secluded feeding grounds.

The Path Forward

To ensure the Common Crane remains a part of Bangladesh's biodiversity, we must:

Protect Ecosystems: Safeguard haors and wetlands from encroachment.

Enforce Laws: Strictly prevent hunting and regulate tourism.

Community Engagement: Involve local residents in conservation and monitoring.

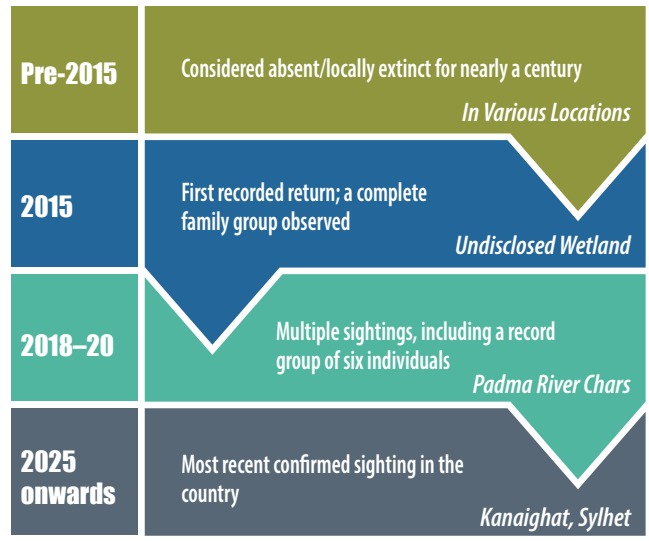
Practice Ethical Birdwatching: Maintain safe distances and minimize noise.

Monitoring: Regular monitoring by research and conservation institutions.

The presence of the Common Crane is not just a rare sighting; it is a vital sign of ecosystem health. If these ecosystems are preserved, the crane may once again consider Bangladesh a safe and regular stop along its migratory route.

Historical vs. Recent Sightings of the Common Crane

To help track the species' resurgence, below is a breakdown of its documented presence in Bangladesh over the last decade.



Sharif Tanver Ahammad
Ecology, Forestry and Biodiversity Division

Contract Signing for Different Studies

During the 4th quarter of the year 2025 (October to December), CEGIS has signed notable 11 (Eleven) contracts with different organizations and clients. The contract titles with clients and dates of signing are as follows:

i) "Consultancy Service for Environmental Safeguard and Social Security Compliance Monitoring of Construction of Substations with Transmission Line" with Dhaka Electric Supply Company (DESCO) on 12 October 2025;

ii) "Development of Training Manual and Delivery of Trainings on Climate-Resilient WASH" with WaterAid Bangladesh on 19 October 2025;

iii) "Consolidating the SIBDP2100 and Moving Forward" with Embassy of the Kingdom of the Netherlands on 15 October 2025;

iv) "Feasibility Study of Fisheries Resource Development Projects in Baor and Beel Areas" with Department of Fisheries (DoF) on 28 October 2025;

v) "Environmental Impact Assessment under Consultancy Services for Feasibility Study and Conceptual Design of Mongla Bridge over the Mongla River at Mongla Port Area, Bagerhat" with Infrastructure Investment Facilitation Company (IIFC) on 13 November 2025;

vi) "Feasibility Study of Repair and Renovation of BSCIC Industrial Estates in Narayanganj District" with Bangladesh Small and Cottage Industries Corporation (BSCIC) on 13 November 2025;

vii) "Integrated Water Resources Management in the Shandya–Baleshwar River Basin" with Bangladesh Water Development Board (BWDB) on 17 November 2025;

viii) "Integrated Water Resources Management in the Burishwar–Payra River Basin" with Bangladesh Water Development Board (BWDB) on 17 November 2025;

ix) "Study for North-Rajshahi Irrigation Project" with Bangladesh Water Development Board (BWDB) on 18 November 2025;

x) "Thermal Plume Study of Waste-to-Energy (WtE) Project at Aminbazar, Dhaka" with CMEC Bangladesh on 24 November 2025;

xi) "Salinity Scoping Study in Bangladesh" with Netherlands Food Partnership (NFP) on 1 December 2025.

Dr. Md. Khairul Islam, Project Director & Superintending Engineer (Civil), Directorate of Planning-I of BWDB and Mr. Md. Motaleb Hossain Sarker, Deputy Executive Director (Operations) of CEGIS with other professionals from both organization were present in the contract signing ceremony on the Study for North-Rajshahi Irrigation Project with BWDB on 18 November 2025

Expert Stress Need for Realtime Data and Modern Technology to Strengthen Technology to Sindh's Water and Agriculture Management

The Sindh Water & Agriculture Transformation (SWAT) Project, a World Bank-funded project carried out by the Irrigation Department, Government of Sindh in partnership with the US-Pakistan Center for Advanced Studies in Water (USPCAS-W), Mehran University of Engineering and Technology (MUET), Jamshoro, organized the final workshop for Phase-I of the Hydro-Agro Informatics (HAI) Program on December 11, 2025, at a hotel in Karachi, Pakistan. The Secretary Irrigation Mr. Zarif Iqbal Khero said that the Government of Sindh consistently supports technology driven initiatives that assist in the evidence-based decisions particularly during the calamities such as resent floods in the province.

The project's Technical Advisor, Mr. Malik Fida A. Khan, Executive Director, CEGIS, discussed Bangladesh's experience via video link, while the Team Leader, Engr. Motaleb Hossain Sarker, Deputy Executive Director (Operations), CEGIS, discussed the viewpoint of development partners in the workshop.

MetroMorning

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Experts stress technology's role in smart hydro-agro decisions

By our correspondent

KARACHI: Experts emphasized that the use of modern technology enables timely and informed decision-making in the public interest, provided real-time data is available.

These views were expressed at the final workshop for Phase-I of the Hydro-Agro Informatics (HAI) Program, held under the Sindh Water & Agriculture Transformation (SWAT) project — a World Bank-funded initiative implemented by the Irrigation Department, Government of Sindh, in collaboration with the US-Pakistan Center for Advanced Studies in Water (USPCAS-W), Mehran University of Engineering & Technology (MUET), Jamshoro.

Secretary Irrigation Zarif Iqbal Khero stated that the Government of Sindh supports technology-driven projects that help inform decision-making, particularly during calamities such as the recent floods. He noted that action plans are now being formulated based on historical and real-time data. Khero also highlighted that water pricing is being enforced effectively, with sufficient revenue collected from the Thar Coal Power Project to fund the construction of new canals. Water expert and former Indus River System Authority (IRSA) member Ehsan-ul-Haq Leghari said the implementation of HAI would benefit the provincial irrigation and agriculture departments, provided the system is adapted to departmental capacities.

Malik Fida A. Khan, Executive Director of the Center for Environmental and Geographic Information Services (CEGIS) and Technical Advisor to the HAI project, shared Bangladesh's experience via video link, explaining how 26 components of its Flood Action Plan were developed using HAI technologies to minimize flood damage and enhance resilience.

Nazir Ahmed Memon, Project Coordinator of the SWAT Project's Project Coordination Monitoring Unit (PCMU), highlighted the relevance of adopting modern, technology-oriented projects for adaptation and resilience.

Prof. Dr. Tuaha Hussain, Vice Chancellor of MUET Jamshoro, thanked participants and emphasized the university's role in developing industry-academia linkages, collaborating with international agencies, government bodies, and end-users. He noted that establishing an HAI data center would provide long-term benefits to provincial line departments.

In the plenary session, Dr. Kamran Ansari, Director of USPCAS-W MUET Jamshoro and team leader, presented Phase-I outcomes, including the institutional model, key framework, technology stack, and plans for Phase-II rollout. Motaleb Hossain Sarker, Deputy Executive Director of CEGIS Bangladesh and Phase-I team leader, shared the perspective of development partners.

The workshop was attended by Simi Kamal, Chairperson Hisaar Foundation; Prof. Dr. Altaf Ali Siyal, Vice Chancellor Sindh Agriculture University; Prof. Dr. Bakhsal Lashari, former Director USPCAS-W; Dr. Rafiq Chandio, Director General Bureau of Statistics; Muhammad Saleem Shaikh, Director General Agriculture, Training & Research, Agriculture Engineering & Water Management; representatives from Sindh Irrigation Drainage Authority (SIDA), Karachi Water & Sewerage Corporation (KWSC), Irrigation and Agriculture Departments, Information Department, academia, water researchers, and civil society activists.

Bangladesh's BTR1 and NC4: Advancing Climate Resilience and Transparency

Bangladesh is currently finalizing its combined Initial Biennial Transparency Report (BTR1) and Fourth National Communication (NC4) for the UNFCCC. This integrated reporting effort aims to meet the requirements of the Paris Agreement's Enhanced Transparency Framework (ETF) while aligning national climate action with broader development priorities.

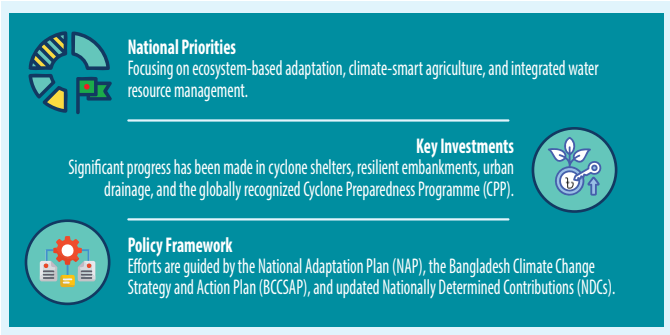
As part of this initiative, CEGIS has developed two foundational chapters: Information Related to Climate Change Impacts and Adaptation Information on Financial, Technology Development & Transfer and Capacity Building Support Needed and Received.

Stakeholder Consultation Meeting at the Department of Environment

Climate Impacts and Adaptation Strategies

Due to its unique deltaic geography, Bangladesh remains one of the world's most climate-vulnerable nations. The country faces escalating threats from floods, cyclones, storm surges, droughts, salinity intrusion, riverbank erosion, and heat stress—all of which jeopardize agriculture, infrastructure, and public health.

In accordance with Article 7 of the Paris Agreement, the report provides a comprehensive overview of:



Finance, Technology, and Capacity Building

The second chapter outlines the institutional frameworks Bangladesh has established to manage and report climate-related support. While the country has built a solid foundation for the ETF, a significant "finance gap" persists.

Finance Gap	
Adaptation	$230 Billion (Estimated Need)
Mitigation	$143.7 Billion (Estimated Need)
Total Received	$9.9 Billion (During 2015–2024)

Key Findings

Support Sources: International aid has been channeled through multilateral climate funds, development banks, and UN agencies, targeting urban resilience, disaster management, water, agriculture, ecosystems, and energy sectors.

Technology & Gender: There is a growing emphasis on technology transfer and gender-responsive strategies to ensure equitable climate outcomes.

Constraints: Despite progress, institutional capacity and the massive scale of required funding remain the primary hurdles to long-term resilience.

Water and fields merge—climate challenges rural resilience

Progress Summary

Overall, these two chapters demonstrate that while Bangladesh is a global leader in adaptation and institutional readiness, the escalating risks of climate change demand a massive scaling-up of international finance and technological cooperation. Such support is essential to meet national goals and strengthen long-term resilience in the face of intensifying climate threats.

Bhuiya Md. Tamim Al Hossain
& Md. Tanvir Alam Tarafder
Climate Change and Disaster Management Division

Modernizing Land Governance in Bangladesh ... (Cont'd from page 1)

and operational efficiency. This one-year project, launched in April 2025, moves beyond simple digitization to address the root causes of inefficiency.

Methodological Rigor: A Geo-Diversity Approach

The study's analytical strength lies in its stratified sampling across three distinct ecological and economic zones. By selecting these regions, the research captures a comprehensive spectrum of land-use challenges:

Patuakhali (Coastal): Challenges of climate vulnerability, accretion, and erosion.

Jashore (Plain lands): Issues related to high-yield agricultural land conversion.

Gazipur (Peri-urban): Intense industrialization pressures and complex valuation disputes.

Strategic Intervention: The SOP as a Catalyst for Reform

The core output of this initiative—a standardized SOP—acts as a mechanism for institutional promptness. By codifying workflows, the project aims to:

Minimize Discretionary Power: Standardized guidelines reduce the "human element" that often leads to inconsistencies and rent-seeking behavior.

Streamline Workflows: Providing a clear roadmap for both "Acquiring" and "Requiring" bodies synchronizes inter-agency efforts, shortening the project lifecycle.

Once finalized, the SOP will undergo a pilot implementation involving 50 "Project-Affected Persons" (PAPs) under a government development project. The pilot's outcomes will help refine the SOP before official adoption. In parallel, the capacities of both acquiring and requiring agencies will be assessed and strengthened to support effective implementation.

Capacity Building and Policy Synthesis

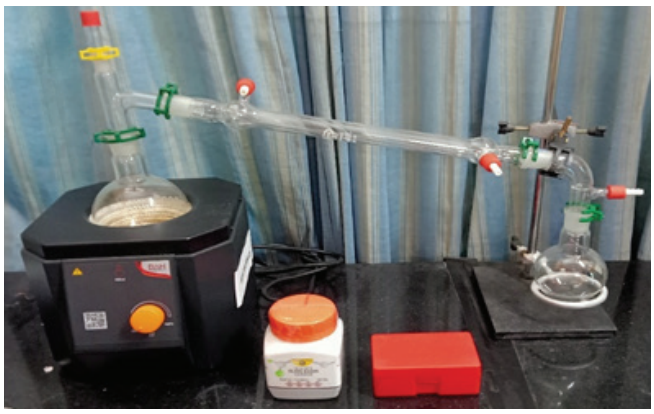
The project recognizes that technology and documentation are ineffective without human capital development. CEGIS is working closely with the Ministry of Land and other relevant bodies to enhance institutional capacity through targeted training and technical support. Stakeholder workshops have been held, and a draft SOP is in progress, guided by local realities and best practices. The project also involves policy analysis, resulting in a brief for future reforms. The final report will summarize findings and recommendations to address the complexities of land acquisition in Bangladesh.

Synthesis: Toward a Sustainable Land Ecosystem

This study represents a transition from reactive management to proactive governance. By leveraging technology, enhancing institutional capabilities, and encouraging transparent practices, it aims to accelerate the modernization of the land management system and strengthen the institutional capacity of both acquiring and requiring parties involved in the land acquisition process. By aligning best practices with ground-level realities, the CEGIS-World Bank collaboration seeks to transform land from a developmental hurdle into a transparently managed, efficiently administered national resource.

Mobasher Bin Ansari
Socio-Economic and Institutional Division

Distillation Process for Purifying Water Samples at CEGIS LAB for UV-1800 spectrophotometer analysis



Distillation is a physical separation process of purifying substances that leverages differences in boiling points to separate components of a liquid mixture, which involves phase change from liquid to vapour, then back to liquid, but no chemical change occurs. It involves heating the mixture to vaporize the component with the lowest boiling point, then cooling and condensing that vapor back into liquid, effectively separating it from other components. In general, heat corresponding to the boiling point of the desired liquid is applied to the mixture that will be distilled. In another instance, pressure is lowered to optimise the distillation process. As is natural, collected water samples may contain various interference substances, so the distillation of samples is necessary for Fluoride, Arsenic and other analyses. Most interferences of interfering substances in collected samples to be tested can be eliminated from acid solutions by distilling samples from acid solutions as described in the process below.

Distillation involves:

- Desired liquid conversion from a mixture into vapour.
- Purified liquid condensation and cooling.
- Condensed liquid collection.

CEGIS Distillation contains:

- Heating Mantle, Erlenmeyer distillation Flask, distillate Flask, Condenser, Thermometer, and Stand.

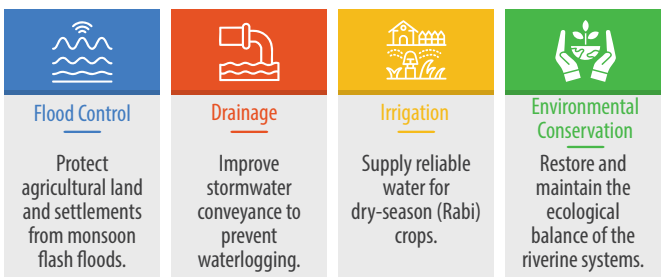
Cont'd on page 7

Environmental and Social Impact Assessment for the Rehabilitation of the Muhuri-Kahua Flood Control, Drainage, and Irrigation Project

The Muhuri-Kahua Flood Control, Drainage, and Irrigation (MKFCDI) Project is a critical infrastructure initiative aimed at mitigating flood risks, improving agricultural productivity, and restoring ecological balance in the flood-prone Feni and Chittagong districts of southeastern Bangladesh. Following catastrophic flooding in 2024 that exposed severe vulnerabilities in the existing, degraded Infrastructure, the Bangladesh Water Development Board (BWDB) has initiated a comprehensive rehabilitation program. This document presents a detailed Environmental and Social Impact Assessment (ESIA) based on proposed technical interventions. The assessment concludes that while the project offers substantial socio-economic and environmental benefits, it also presents potential negative impacts that require robust mitigation strategies. The project is poised to enhance regional climate resilience and improve livelihoods significantly.

Project Background and Rationale

Initial Objectives and Scope Launched in 2012, the MKFCDI Project was designed to provide integrated water resource management. Its core objectives were:



The devastating 2024 floods served as a critical turning point. The event overwhelmed the existing Infrastructure, resulting in widespread flooding and economic disruption. In response to urgent local demands and a technical reassessment, the project's operational area was expanded from 224 sq. km to 557 sq. km, bringing the total influence area to 632 sq. km. This expanded zone now encompasses the upazilas of Parshuram, Fulgazi, Chhagalnaiya, Sonagazi, and Feni Sadar in Feni District, and Mirsarai in Chittagong District.

Analysis of System Degradation and Current Challenges

The project area's primary watercourses—the Feni, Muhuri, Selonia, and Kahua rivers—are prone to rapid swelling from intense rainfall. The existing defense systems have failed to manage this, leading to a cycle of crisis. Major causes of system degradation are:

- Infrastructure Failure: The original 122.78 km of earthen embankments and associated structures have suffered severe degradation.
- Chronic Erosion: River currents have undermined the toe of the embankments.
- Public Encroachment: Unauthorized construction has weakened structural integrity.
- Biological Damage: Pervasive rat holes have created pathways for seepage and failure.
- Land Acquisition Delays: Incomplete land acquisition has created gaps in the flood defense line, particularly along the Muhuri and Selonia Rivers.

The infrastructure failure has direct and severe Socio-Economic Consequences :

- Annual Inundation: Regular breaching of embankments results in flooding of vast agricultural lands and major business hubs, including Satkuchia, Fulgazibazar, and Joypur.
- Agricultural Losses: Delayed drainage during the monsoon damages the primary Aman rice crop, with knock-on effects that hinder planting for the subsequent Rabi season.
- Compromised Irrigation: Siltation and embankment breaches have rendered many low-lift pump irrigation systems ineffective.

Proposed Technical Interventions for Rehabilitation

To address these challenges and provide robust protection against a 50-year return period flood, a technical team has proposed the following multi-faceted engineering program.

- *Flood Defense and River Management*
  - Embankment Reconstruction: 96.46 km of existing embankments will be rebuilt to modern standards.
  - New Embankment Construction: 32.67 km of new embankments will be built in vulnerable areas.
  - Riverbank Protection: 5.64 km of critical riverbank sections will be fortified with revetments.
  - Dredging and Re-excavation: Key river and canal sections will be dredged to improve hydraulic efficiency and reduce siltation.
- *Water Control and Irrigation*
  - Regulator Rehabilitation: Key water control regulators, including the Sonagazi regulator, will be rehabilitated or newly constructed.
  - Hydraulic Dam: A new hydraulic dam will be constructed to improve w ater retention and control.
  - Irrigation Inlets: 130 new irrigation inlets will be installed to enhance water distribution for agriculture.
- *Supporting Infrastructure*
  - Bridge Reconstruction: 33 aged and vulnerable bridges will be replaced, and 4 new bridges will be constructed to maintain connectivity.
  - Land Acquisition: A formal process to complete all necessary

Cont'd on page 7

- land acquisition will be undertaken.

Environmental and Social ... (Cont'd from page 6)

The ESIA evaluates both the positive and negative consequences of the proposed interventions. The assessment findings are as follows:

Positive Impacts

- Enhanced Flood Protection: Reduced flooding risk will protect lives, property, and critical Infrastructure, fostering economic stability.
- Increased Agricultural Productivity: Reliable irrigation and reduced waterlogging will lead to higher crop yields in both the Aman and Rabi seasons, directly boosting farmers' incomes.
- Improved Ecosystem Health: Increased water availability in the dry season and better connectivity will aid fish migration and support aquatic biodiversity.
- Economic Stimulation: The construction phase will create significant local employment opportunities. Improved Infrastructure will also enhance regional trade and transport.

Potential Negative Impacts and Proposed Mitigation Measures

Land Acquisition & Displacement	The acquisition of land for new embankments and structures may displace households and affect livelihoods.	▪ Develop and implement a comprehensive Resettlement Action Plan (RAP) in line with national laws and international best practices. ▪ Ensure timely and fair compensation for all affected persons. ▪ Provide livelihood restoration support and training.
Construction Related Disruption	Construction activities will generate noise, dust, and traffic congestion, temporarily affecting local communities.	▪ Implement a strict Construction Environmental Management Plan (CEMP). ▪ Limit work hours in residential areas, use dust suppression techniques (e.g., water spraying), and create traffic management plans. ▪ Ensure safe disposal of construction waste.
Ecological Disturbance	Dredging and construction activities can temporarily disrupt aquatic habitats and riverbank ecosystems.	▪ Schedule dredging to avoid critical fish breeding seasons. ▪ Implement erosion and sediment control measures (e.g., silt curtains). ▪ Mandate post-construction site restoration and replanting of vegetation.
Temporary Water Disruption	Construction of regulators and dams may temporarily alter water flow, affecting downstream users.	▪ Develop a clear water management plan during construction. ▪ Ensure continuous communication with affected communities to manage water-sharing and provide temporary alternatives if needed.

Conclusion

The rehabilitation of the MKFCDI project is not merely an infrastructure upgrade but a vital intervention for the region's climate resilience and socio-economic development. The ESIA confirms that the project's long-term benefits—including enhanced safety, food security, and environmental health—are substantial. However, realizing these benefits requires a diligent, empathetic approach to mitigating potential negative impacts. The successful implementation of the proposed mitigation measures, particularly the Resettlement Action Plan and the Construction Environmental Management Plan, will be critical to ensuring the project is both effective and equitable.

Noshin Tabassum Bhuiyan
Water Resources Management Division

Distillation Process for Purifying ... (Cont'd from page 5)

The heating mantle is made of fibreglass yarn with heating elements covered in a fibreglass sleeve, to provide uniform heating up to 4000 °C. The mantle size is as per the round bottom, ISO 4797 standard. A fume hood can be used for fume protection.

Distillation Set Up

- Place the heating mantle on a stable, level surface near a power source.
- Insert only the distillation flask with the sample into the mantle, ensuring good contact.
- Connect the device to a grounded single-phase AC supply.
- Set the heat knob to 0 before powering on.
- Adjust the knob to the desired temperature; LED will indicate heating.
- Once distillation is complete, turn off the heat and disconnect power.
- Collect distillate in an HDP bottle, dilute to 100 mL with distilled water, and refrigerate.
- Store the device safely after use.

CEGIS uses a Distillation Apparatus for fluoride distillations of seawater fluoride analysis, and it can be used for other distillations.

Md. Rafiqul Alam
CEGIS Environmental Lab

Suti River: One Name, Many Lifelines-Threads of Flow Across Bangladesh

In the vast fluvial tapestry of Bangladesh, few names recur as frequently or as intriguingly as the Suti River. While they share a single name, these elaven (11) distinct rivers and tributaries follow unique courses, nourishing diverse landscapes and sustaining local communities across the northern and central regions.

The Central Wetlands and the Gazipur Corridor

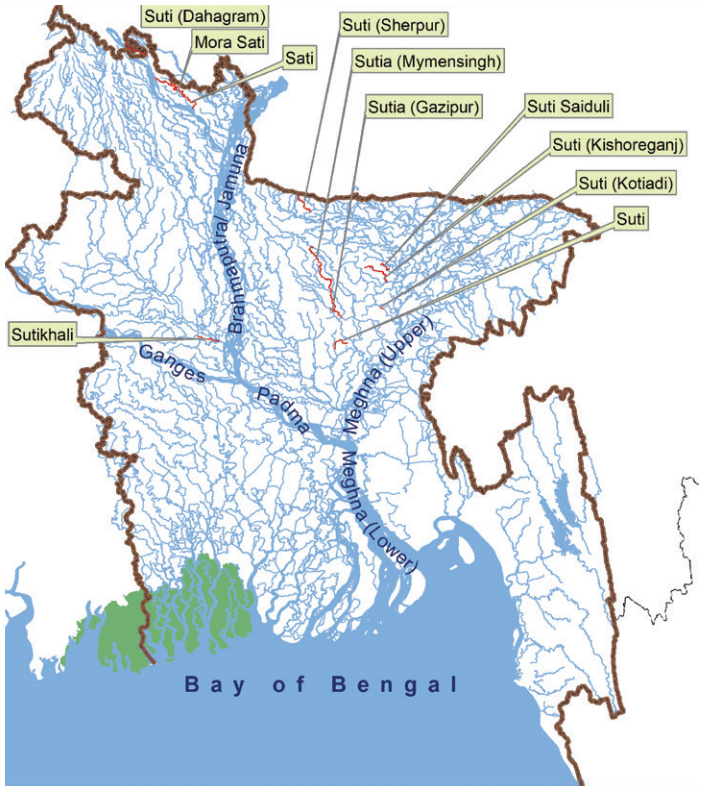
In the heart of the country, the Suti River of Gazipur rises from low-lying wetlands and flows approximately 21 km before joining the Balu River, shaping fertile floodplains that support year-round agriculture.

In addition, the Sutia (Gazipur) extends about 5 km from Khiru in Bhaluka to Sutia in Mymensingh. Likewise, the Sutia (Mymensingh), with a length of approximately 98 km, links the Old Brahmaputra River with the Lower Banar system, forming part of a vital hydrological corridor.

The Northern Frontier and Mymensingh Basin

Further north and east, the Suti name appears in several strategic channels:

The Northwest Border: In Lalmonirhat, the Suti (Dahagram) crosses from India into Bangladesh to join the Shaniajan, maintaining a modest but steady flow along the frontier. The Mora Sati River originates from the Teesta River and flows approximately 49 km before its outfall into the Bhateshwari River. The Sati River takes its offtake from the Bhateshwari River and runs for about 21 km before draining into the Sonamati/Sarnamati River.



All Suti Rivers Across the Country showing in Map

The Netrakona Mosaic: The Suti Saiduli connects the Borni and Saiduli systems. Its channel width varies dramatically—from 15 to 77 meters—as it winds through a patchwork of homesteads and paddy fields.

The Sherpur Link: The Suti (Sherpur) reinforces regional connectivity by linking the Bhogai and Gangina Rivers.

The Eastern Tributaries and Western Delta

In Kishoreganj, two distinct branches support the local ecosystem: the Suti (Kishoreganj), which branches from the Narasunda, and the Suti (Kotiadi), a short but essential two-kilometer channel. Both are critical for smallholder irrigation and wetland preservation.

Finally, moving toward the western deltaic plain in Pabna, the Sutikhali stretches 20 kilometers between the Chiknai and Hurasagor. Its wide channel symbolizes the maturity and scale of the delta's water systems.

Collectively, these "Suti" Rivers embody the complexity of Bangladesh's water system. Though they share a common name and a common purpose, each represents a unique thread in the nation's enduring lifeline of water and tradition.

To help visualize and compare these rivers, a reference info below categorizes them by their specific regional impacts.

1	Suti (Gazipur), Central Region >> ~21 km >> Wetlands to Balu River
2	Sutia (Gazipur), Central Region >> ~5 km >> Khiru in Bhaluka to Sutia in Mymensingh
3	Sutia (Mymensingh), Central Region >> ~98 km >> Old Brahmaputra to Banar Lower
4	Suti Saiduli, Netrakona >>14 km >> Borni and Saiduli systems
5	Suti (Sherpur) >> 29 km >> Bhogai to Gangina River
6	Suti (Kishoreganj), >> 39 km >> Low land to Narasunda River
7	Suti (Kotiadi), Kishoreganj >> ~2 km >> Local Irrigation
8	Sutikhali, Pabna >> 20 km >> Chiknai to Hurasagor
9	Suti (Dahagram), Lalmonirhat >> 23 km >> India into Bangladesh to the Shaniajan River
10	Mora Sati, Lalmonirhat >> 49 km >> Teesta to Bhateshwari River
11	Sati, Lalmonirhat >> 21 km >> Bhateshwari to Sonamati/Sarnamati River

Dr. Jakia Akter
River, Delta and Coastal Morphology Division