

# Framework for Implementing Green Growth Vision in Bangladesh

# The current growth paradigm poses a threat to long-term development objectives

Current growth is at the cost of environmental degradation, resulting in negative health effects, economic, and natural capital losses

## Economic loss exacerbated by air, water, soil pollution

- Ranked 173rd (down from 162<sup>nd</sup> in 2020) out of 180 countries in the 2022 EPI report
- The annual cost of environmental health effects was estimated to be Tk 4.4 trillion in 2019, equivalent to 17.3% of GDP
- Air, water pollution caused nearly 32 % of deaths in Bangladesh in 2019 (up from 28% in 2015)

## Threat to attainment of poverty and development goals, and overall competitiveness

- 2019 Global Competitiveness Report highlights environmental pollution as a significant emerging risk impacting industrial competitiveness.
- The need for enforcement for environmental safeguards and pollution control poses challenges in meeting stricter compliance requirements for both domestic and international markets.

## limited industrial and urban pollution monitoring, and natural capital loss

- Excessive exploitation of national resources, such as groundwater, forests, fisheries, and coastal ecosystems, neglects the potential of environmentally friendly and economical nature-based solutions
- As industries expand, pollution levels surge exponentially due to untreated chemical runoff from factories, untreated urban sewage, agricultural runoff, and other sources.

## Critical challenges to be addressed by development strategies in Bangladesh



Climate Change



Environmental degradation



Public health



New drivers of Economic growth and Quality jobs



Energy transition



Food security

# What it will take to achieve Green Growth in Bangladesh

Green growth policies need to adhere to GRID principles and require reinforcement from cross cutting enablers, to ensure success

## Three dimensions of GRID

### Green

Focus on transitions in Energy, Agriculture, food, water, land, transport, cities, and manufacturing systems

Support policies to produce the required skill mix and build social support for change

Support solutions that sustain natural capital, jobs, and do not undermine tomorrow's growth

### Resilient

Invest in risk management to prevent and prepare for climate change, pandemics, natural hazards, socioeconomic and financial shocks

Mainstreaming risk management principles in all sectors, including infrastructure, cities, social systems, services delivery, and macro stability

### Inclusive

Support solutions that do not leave anyone behind and reduce disparities in opportunities and outcomes

Include beneficiaries in the design of policies and investment projects by public and private entities

## Cross cutting enablers

Investing in human, physical, social, and natural capital

Macroeconomic & structural policies, institutional strengthening, and technology innovation

Mobilizing capital at scale, especially from the private sector

# What does Green Growth mean for Bangladesh?

Green Growth is more than just planting trees and saving energy

## A Holistic Approach

- Living in communities with clean air, clean water, and fertile land
- Living in well-designed communities with quality jobs for everyone
- Inclusive, clean, and affordable mobility
- Using clean, efficient, and practical technologies to enable businesses to produce goods and create jobs without polluting the environment
- Investing in people and nature to benefit everyone

## Green Growth for Bangladesh

## Green Growth for Bangladesh is

- **Economy and nature in harmony**
  - Economic growth and the well-being of society are intrinsically linked to the health and sustainability of natural ecosystems
- **Improved quality of life for everyone**
  - Creating conditions and opportunities that enhance the well-being and overall standard of living for all citizens, ensuring that the benefits of sustainable development are accessible to everyone
- **A livable Bangladesh**
  - Designing and developing cities, towns, and rural areas that are conducive to human well-being, with a focus on social, environmental, and economic sustainability

How will the Green Growth strategy for Bangladesh help the Finance Division to achieve GCR objectives?

Enable the government to **integrate GCR (Green Growth and Climate Resilience) goals into planning and budgeting processes**. Frame the **selection and prioritization of policy & projects that enhance public planning and deliver green and climate-resilient interventions**. It will also drive key sector reforms to promote climate-smart production and services.

# Readiness for Green Growth in Bangladesh

Bangladesh's national strategies already include elements of Green Growth, showing the government's commitment to sustainable development. The proposed Green Growth framework synthesizes these elements into a cohesive document

## Bangladesh Delta Plan 2100

- ❖ **BDP2100 highlights the link between poverty reduction and environmental management**, showcasing the role of climate change and natural hazard vulnerability
- ❖ **The BDP2100 encourages nature-based solutions**, including for flooding, agriculture, and renewable energy development.
- ❖ It emphasizes the role of public investment programs in reducing climate change and natural hazard vulnerability at the national level
- ❖ **The BDP2100 integrates sustainable development issues with the macroeconomic framework**, recognizing the financial cost of environmental degradation and its impact on GDP growth

## 8<sup>th</sup> Five Year Plan

- ❖ **The 8th Five Year Plan (8FYP) commits to a green growth strategy** but currently defines it narrowly within the environmental sector, specifically the forest sub-sector.
- ❖ The 8FYP outlines specific strategies, policies, and institutional reforms for green growth, including integrating environmental costs into the macroeconomic framework
- ❖ However, the 8FYP does not fully integrate environmental and climate change considerations into its overall growth strategy.

## Mujib Climate Prosperity Plan

- ❖ **The Mujib Climate Prosperity Plan focuses on green growth and green jobs.**
- ❖ It aims to promote a climate-resilient, low-carbon, and resource-efficient economy that creates jobs quickly.
- ❖ **The plan emphasizes the upskilling of the workforce for high-quality green tech jobs** and increasing protection for workers against rising heat in the workplace.
- ❖ **Greening Bangladesh's energy mix is a significant focus**, along with enhancing the climate resilience of the power system to improve energy reliability and quality.
- ❖ The plan requires prioritizing interventions aligned with climate action and development, which can deliver immediate benefits in terms of green and inclusive jobs.

# Green Growth for Bangladesh:

An efficient, clean, resilient, and inclusive pathway  
That creates new growth engines and jobs



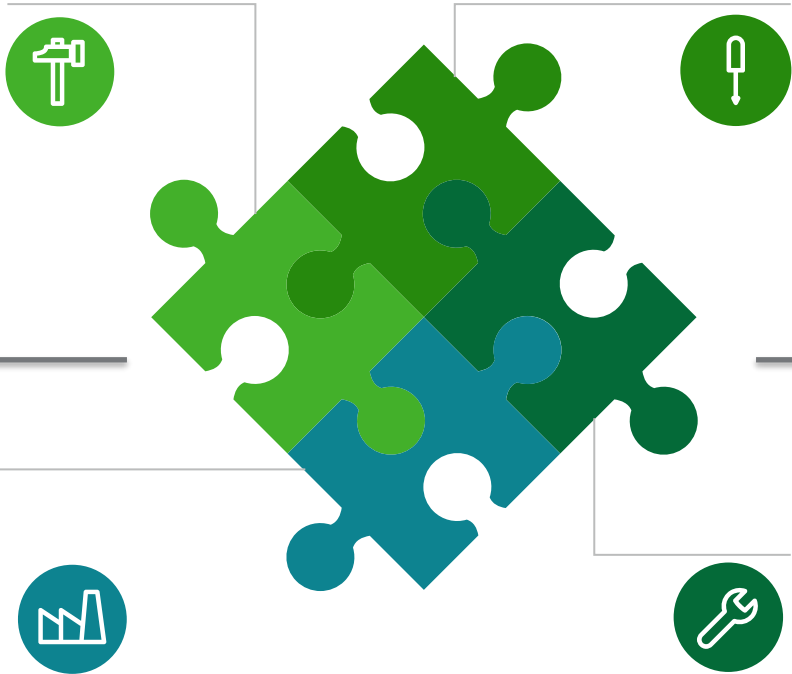
[https://www.youtube.com/watch?v=mwPw\\_ncY8yU&ab\\_channel=WorldBank](https://www.youtube.com/watch?v=mwPw_ncY8yU&ab_channel=WorldBank)

# Green Growth is an alternate growth paradigm for development in Bangladesh

Current growth is at the cost of environmental degradation, resulting in negative health effects, economic, and natural capital losses

## Green growth will boost growth in Bangladesh by enhancing the capital stock

- **Increasing natural capital:** Promote better management of scarce resources, leading to the preservation and sustainable use of natural capital
- **Increasing labor:** By improving environmental quality, such as reducing pollution in cities, GG will enhance labor productivity
- **Increasing physical capital:** Effective environmental policies can help manage natural risks and reduce the economic losses caused by natural disasters.



## Green Growth will boost growth in Bangladesh by stimulating sustainable investments and job creation

- **Increased demand:** Implementing GG policies involves investments in RE, sustainable transport, and green infrastructure, thereby boosting demand
- **Job creation:** The development of green industries, GG generates employment opportunities
- **Enhancing competitiveness:** By enhancing competitiveness in the global market, Bangladesh can attract more customers, increase exports, and stimulate economic growth.

## Green Growth will boost growth by correcting market failures and influencing behaviors related to efficient resource use

- GG policies targeting energy consumption and carbon emissions will address market failures and influence behaviors, leading to a more efficient economy with reduced environmental damage

## Green Growth will boost economic growth in Bangladesh by promoting innovation

- Green growth policies accelerate the development and dissemination of innovative green technologies, leading to increased productivity and economic growth
- Knowledge spillovers occur when advancements in green technologies benefit other sectors and industries, driving further innovation and economic growth.

# The proposed Bangladesh Green Growth framework

The Bangladesh Green Growth strategy is aimed at tackling the imminent development challenges faced by the country

Objectives	Facilitate effective environmental governance and energy transition	Foster new growth engines and skills for green growth	Achieve a just transition enabling resilient, green, and healthy society
Policy directions	<ol style="list-style-type: none"> <li>1. Strengthen environmental governance and accounting systems</li> <li>2. Enable energy independence through energy efficiency and renewable energy trade</li> <li>3. Promote inclusive connectivity through green transport and logistics systems</li> </ol>	<ol style="list-style-type: none"> <li>4. Invest in new green industries and human capital to promote job creation and green innovation</li> <li>5. Promote livable green cities through urban regeneration and new “smart” cities</li> <li>6. Stimulate the blue economy and strengthen coastal resilience by leveraging natural capital</li> </ol>	<ol style="list-style-type: none"> <li>7. Strengthen social protection and capacity of citizens to adapt to an inclusive climate-resilient economy</li> <li>8. Improve public health and well-being through a cleaner environment</li> <li>9. Enhance engagement and cooperation with the international community on climate change</li> </ol>
Key Issues tackled	<ul style="list-style-type: none"> <li>• Climate change</li> <li>• Environmental degradation</li> <li>• Energy security</li> </ul>	<ul style="list-style-type: none"> <li>• Drivers of economic growth, and quality jobs</li> <li>• Climate change</li> <li>• Environmental degradation</li> </ul>	<ul style="list-style-type: none"> <li>• Climate change</li> <li>• Environmental degradation</li> <li>• Food security</li> <li>• Public health</li> </ul>



# Opportunities: Applying Green Growth principles to achieve “paradigm shift”

BBG to Greener Growth Roadmap and Action Plan:

## Leveraging Partnerships

Develop a green growth roadmap and action plan that would inform GoB with policy and investment priorities.



# Success will require wide-ranging policy reforms

Achieving Green Growth in Bangladesh will require a medley of cross-cutting enablers.



## Institutional strengthening

- ❑ Strengthening Environmental Coordination
- ❑ Strengthening the Ministry of Environment, Forest and Climate Change (MoEFCC): Strengthening Delta Management Institutions
- ❑ Decentralization of Environmental Management: Alignment of Key Ministries with Green Growth
- ❑ Encourage Private Sector Engagement



## Regulatory reforms

- ❑ The relevance and necessity of a climate change law in Bangladesh should be discussed
- ❑ The Bangladesh Climate Fiscal Framework provides a starting point for fiscal planning, but more systematic costing of climate investments is needed, including core climate programs



## Climate responsive public finance

- ❑ Strengthening environmental concerns in planning and budgeting
- ❑ Strengthening green budget formulation
- ❑ Role of State-Owned Enterprises (SOEs)
- ❑ Active involvement of private sector and NGOs



## Indicative Policy framework

- ❑ Implementation of the Bangladesh Delta Plan
- ❑ Apply the "beneficiary pays" and "polluter pays" principles to fiscal policies for better environmental management
- ❑ Remove fuel subsidies to support climate change goals and invest in sustainable energy systems
- ❑ Introduce a green tax on fossil fuel consumption as a revenue source for clean energy and environmental programs

# Strengthening green growth finance in Bangladesh

Robust financing mechanisms are vital to support green growth initiatives and address environmental challenges in Bangladesh

## Create an environmental management ecosystem





- ❑ Adopt a broad-based national green growth strategy and a national action plan backed by the **right mix of regulatory and institutional frameworks**
- ❑ **Constitute a high-level national oversight body** to coordinate and monitor the progress of green growth efforts
- ❑ **Create an ecosystem of ministries and government agencies** that collect and analyze point-source data to enforce policies that create a pipeline of verified investment-ready projects
- ❑ **Promoting green technologies that measure and monitor pollution** can mitigate the risk due to lack of verifiable information investors and financial institutions (FIs) face when lending

## Use a mix of incentives to boost environmental markets

- ❑ **Encourage the adoption of green practices and promote green businesses** that generate positive environmental externalities
- ❑ Simultaneously, **adopt incentives that address risk for FIs**, such as guarantees and publicly developed eco-certifications
- ❑ **Sustainable public procurement can also be used as an incentive** to drive markets toward sustainable production
- ❑ Fostering a collaborative institutional ecosystem implementing green financial incentives can provide the enabling environment to effectively connect the flow of financing to those sectors that need to go green





## Boost institutional and borrower capabilities

- ❑ **Build skills and expertise on green financing** across sectors, from technocrats in government agencies to financial institutions, and from private businesses to students
- ❑ **Start with defining what classifies as “green,”** create a list of associated issues (for example, plastics production) and their associated impacts (air pollution)
- ❑ **FIs need to train staff to factor in green aspects** and impacts in all their operations
- ❑ **Cottage, micro, small, and medium enterprises (CMSMEs) need support** in improving their managerial and technical capabilities, to prepare and implement viable green projects for investment

Bangladesh Country Environmental Analysis (CEA) Core Area	Green Growth Framework	Action	Impact	Timeline	Proposed Responsibility
<b>A   ADDRESSING BANGLADESH'S ENVIRONMENTAL PRIORITIES</b>					
 Improving Air Quality Management <sup>1</sup>	<b>Objective 1:</b> Policy Directives: 1, 2 & 3  <b>Objective 3:</b> Policy Directive: 9	Adopt a National Clean Air Program based on diverse policy instruments, including measures for reducing agricultural and waste burning, improving fertilizers and livestock manure management, controlling emissions from industry and the power sector; reducing road and construction dust; modernizing brick kilns; moving from solid fuel use in households for cooking to liquefied petroleum gas (LPG) or electricity.	1	S M	MoEFCC, DoE, and other members of the National Committee for Air Pollution Control. Private sector
	<b>Objective 1:</b> Policy Directive: 1	Set the stage for carbon markets and adopt fiscal instruments to address air pollution, such as the phase-out of energy subsidies and a carbon tax, combined with redistribution measures to the poor.	1	S M	MoF, MoPEMR
	<b>Objective 3:</b> Policy Directive: 9	Collaborate with neighboring countries to address transnational PM <sub>2.5</sub> pollution.	1	S L	PMO, MoEFCC
	<b>Objective 3:</b> Policy Directive: 9	Further, assess (i) the potential for promoting electric stoves and (ii) price and non-price obstacles and incentives for adopting LPG for cooking.	2	S	MoPEMR, MoF and MoEFCC
 Reducing Exposure to Lead (Pb) <sup>2</sup>	<b>Objective 3:</b> Policy Directive: 8	Undertake representative BLL measurement studies and identify sources of lead exposure to inform further policy formulation.	2	S	Health
	<b>Objective 3:</b> Policy Directive: 8	Adopt temporary measures to reduce exposure to lead: (i) supplement iron for children from 6 to 59 months; (ii) replace lead-contaminated cookware made from recycled aluminum; and (iii) rehabilitate abandoned used lead-acid battery (ULAB) recycling sites.	2	S M	Health, MoLGRDC
 Improving Water, Sanitation, and Hygiene <sup>3</sup>	<b>Objective 2:</b> Policy Directive 5  <b>Objective 3:</b> Policy Directive: 8	Prioritize (i) household point-of-use treatment of drinking water with ceramic filter; (ii) safely managed improved non-shared sanitation for households currently having unimproved sanitation; and (iii) promotion of hand washing with soap targeting caregivers of children under five.	1	S L	MoWR, MoLGRDC and MoE
	<b>Objective 2:</b> Policy Directive 5  <b>Objective 3:</b> Policy Directive: 8	Complement these measures with: (i) safely managed improved non-shared sanitation for households currently sharing sanitation with other households and (ii) promotion of hand washing with soap to all household members.	2	S M	MoWR, MoLGRDC and MoE
	<b>Objective 3:</b> Policy Directives: 8 & 9	Mitigate exposure to arsenic in drinking water through tube wells, ponds with sand filters, and household filtering.	1	S M	MoWR, MoLGRDC and MoE
	<b>Objective 2:</b> Policy Directive 5  <b>Objective 3:</b> Policy Directive 8	Implement priority projects of BDP 2100 for water supply and water resources management.	1	S L	GED, MoWR, MoLGRDC, MoEFCC, private sector
 Improving Plastic Waste Management <sup>4</sup>	<b>Objective 2:</b> Policy Directives: 4 & 6  <b>Objective 3:</b> Policy Directives: 7 & 9	Promote research and development of alternatives to single-use plastics (SUPs)	1	S M	MoEFCC, DoE, MoI, private sector
		Implement the ban on plastic bags and extend its scope to other single-use plastics (SUPs) items.	1	S	MoEFCC, DoE, MoI, BSTI
		Adopt mandatory extended producer responsibility (EPR) guidelines for plastic waste collection and recycling.	1	S	MoEFCC, DoE
		Adopt an integrated waste management framework, including waste segregation at the household level, infrastructure development, and behavior-change campaigns.	1	M	MoEFCC, DoE, Local Government Institutions (LGIs)
		Harmonize plastic-management policies to promote a circular economy.	1	S	MoI
		Implement plastic cleanup and recovery schemes to reduce legacy plastic waste and mitigate associated impacts.	1	M	MoEFCC, DoE, LGIs, private sector
		Establish a monitoring system for implementing the Solid Waste Management Rules 2021 and the targets of the Plastic Action Plan.	1	S	MoEFCC, DoE, LGIs

Greener Growth Aligns with Environmental, development, and resilience goals.

# Greener Growth Aligns with Environmental, development, and resilience goals

Bangladesh Country Environmental Analysis (CEA) Core Area	Green Growth Framework	Action	Impact	Timeline	Proposed Responsibility
<b>B   STRENGTHENING ENVIRONMENTAL GOVERNANCE SYSTEMS</b>					
 <p>Setting evidence-based priorities and decision-making<sup>5</sup></p>	<p><b>Objective 1:</b> Policy Directive: 1</p> <p><b>Objective 2:</b> Policy Directives: 5</p> <p><b>Objective 3:</b> Policy Directives: 8</p>	Enhance environmental monitoring and data management capacity, including automated air and water quality monitoring networks and adequate institutional presence in the field with sufficient and well-trained staff.	1	S M	MoEFCC, DoE
		Create a research and development unit at DoE	1	S	MoPA, MoEFCC
		Implement systematic evaluations of the government's interventions and outcome-oriented indicators to assess the institutional performance of environmental agencies.	1	S	MoP, MoEFCC
 <p>Diversifying and strengthening environmental policy instruments<sup>6</sup></p>	<p><b>Objective 1:</b> Policy Directives: 1 &amp; 2</p> <p><b>Objective 2:</b> Policy Directive: 4, 5 &amp; 7</p> <p><b>Objective 3:</b> Policy Directive: 8 &amp; 9</p>	Adopt economic and market-based instruments, such as pollution charges, deposit-refund schemes, EPR, and final demand interventions.	1	S M	MoF, MoEFCC, MoPEMR, MoI
		Adopt litigation-based instruments, including liability legislation.	1	S M	Parliament, MoEFCC
		Adopt information-based instruments, such as awareness campaigns and regularly disseminating environmental quality data and pollution loads.	1	S	MoEFCC, DoE, Health and MoE
		Amend or adopt, as applicable, the Environmental Conversation Act, associated rules and guidelines to (i) modernize and make enforcement activities more efficient, based on the polluters pay principle, (ii) strengthen the environmental clearance system and monitoring of projects after clearance, (iii) set the mandates and foundations for further regulations on EPR and Payment for Ecosystem Services (PES); (iv) mobilize green financing; (v) improve stakeholder engagement in environmental decision-making; (vi) require Strategic Environmental Assessment for policies, plans and programs, among other themes.	1	S	MoEFCC and Parliament
 <p>Strengthening organizational structure and institutional capacity<sup>7</sup></p>	<p><b>Objective 1:</b> Policy Directive: 1</p>	Conduct an in-depth, independent evaluation of the effectiveness and efficiency of the environmental clearance system.	2	S	MoEFCC
		Revise the EIA Guidelines for Industry 2021, update and expand their contents per the ECR 2023, and develop guidelines for non-industry projects.	2	S	MoEFCC
		Analyze the organizational structure under MoEFCC and affiliated agencies to set clearer mandates and more efficient processes for environmental governance, including inter-agency coordination.	2	S	MoEFCC
		Increase DoE's budget and headcount	1	S	MoF, MoP, MoPA, MoEFCC
		Establish a cadre of environmental specialists for DoE	1	S	MoPA, BCS
		Implement a comprehensive information management system with automated monitoring for compliance, enforcement, and policy formulation.	1	M	MoEFCC, DoE
 <p>Strengthening environmental justice and citizen-driven accountability<sup>8</sup></p>	<p><b>Objective 1:</b> Policy Directive: 1</p>	Regularly disclose data supporting key environmental indicators (including pollution loads and environmental health statistics), use public forums for air development initiatives, and conduct broader and more detailed reviews and discussions of environmental management tools.	1	S	MoEFCC, DoE
		Proceed with a comprehensive reform of the Environment Court Act, expanding legal standing to all citizens and creating the roles of environmental prosecutors and technical experts.	1	S	Parliament, MoEFCC
		Adopt rules and guidelines for applying the polluter pays principle effectively, including criteria for setting the value of fines, precautionary measures, and more severe penalties.	1	S	MoEFCC, DoE

# Policy Directions

9 Policy Directions, Across three Objectives

# Policy direction 1: Strengthen environmental governance and accounting systems

One of the most important tasks in implementing green growth in Bangladesh is laying the groundwork for effective and sustained reduction of greenhouse gas (GHG) emissions and air pollution. Improved air quality standards across multiple sectors will improve health and increase climate resilience.

**Bangladesh would benefit from (a) establishing and implementing a national GHG emissions inventory system;** (b) establishing emission-disclosure targets; and (c) making GHG reporting mandatory for businesses, government-owned enterprises, urban local bodies, and other economic actors.

Environmental degradation costs should be explicitly accounted for in planning, and green public financial management (PFM) should integrate environmental concerns in budgetary management. Project selection should consider environmental degradation issues for all investment projects.

Setting up an independent credit risk guarantee fund can promote investments to directly or indirectly reduce pollution from the brick-kiln sector and municipal waste management, along with encouraging clean cookstoves (biogas), and rooftop solar systems.

Bangladesh should pursue strategic afforestation and sustainable forest management to increase its overall carbon-sequestration capacity, promote the sustainable productive-use of its forest resources for livelihoods generation, strengthen coastal resilience, and unlock climate financing opportunities

## Green Growth Indicators to track progress

- Emissions disclosure level in listed companies (%)
- Carbon absorption by forests (MTCO<sub>2</sub>e/year)

# Policy direction 2: Enable energy independence through energy efficiency and renewable energy trade

The surge of GHG emissions in Bangladesh over the past three decades was primarily due to increased energy use, consistent with the industrial sector's expansion and increased electricity access. GHG emissions from energy and fuel combustion activities surpassed GHG emissions from agriculture in 2017

## Energy Efficiency, Smart Energy Systems, and reforms for low-carbon

- Bangladesh can introduce and implement fuel-efficiency standards for vehicles of all categories in a phased manner.
- Reforming fossil fuel subsidies can support climate change goals and free up resources for sustainable energy investments. Implementing a green tax on fossil fuels can discourage GHG emissions while generating revenue for clean energy and environmental programs
- Bangladesh can accelerate the rollout of gas meters for residential consumers, piloting smart meters for industrial consumers, and integrating better monitoring systems on the gas distribution network.
- Bangladesh should increase energy efficiency across sectors, which requires improved institutional capacity to strengthen the regulatory framework and finance mechanisms and to engage private-sector service providers and vendors.

## Enable Green Energy Transition and Energy Security with Low Carbon Options

- New and renewable energy supply can be strengthened through investments in utility-scale renewable energy (RE) generation, augmented transmission, and distribution infrastructure for RE integration.
- Green hydrogen is emerging as a key investment for energy transition. Bangladesh has an existing gas network whose infrastructure can pilot the blending of green hydrogen with existing domestic gas.

## Green Growth Indicators to track progress

- Renewable energy in the energy mix (%)
- Cross-border electricity trade
- Solar irrigation pumps (Nos.)
- Coverage of prepaid gas meters (% residential consumers, Titas Gas Transmission & Distribution Company Limited)



## Policy direction 3:

### Promote inclusive connectivity through green transport and logistics systems

Green urban planning, greening of buildings, and green transportation can significantly address the issues of clean air, urban flooding, and urban heat islands. Transport and construction are among the leading sources of air pollution in Bangladesh's cities (World Bank 2023 forthcoming)

- Significant efforts should be made to make cities pedestrian and bicycle-friendly.
- Bangladesh would benefit from implementing the green building policy and related guidelines (BNBC ), certifications (BEEER ), and reporting requirements and incentivizing builders and developers to construct affordable, resilient green housing units.
- Bangladesh should invest in urban mass transit systems that are green, accessible, reliable, and inclusive.

#### Green Growth Indicators to track progress

- Vehicle-emission standards (coverage of vehicle categories)
- Modal shift from road to rail (passenger kms, billions)
- Integrated Internal Water Transport for passenger transport (passenger kms, billions)

# Policy direction 4: Invest in new green industries and human capital to promote job creation and green innovation

Switching to green industries is a major driver towards sustainable industrial development worldwide. For the Bangladesh economy to target middle-income status by the end of this decade, its industries need to transform into green industries by benefiting from technology upgrades and timely, short-term government intervention.

- In line with the 8th FYP, Bangladesh ought to encourage the growth of modern services – education, information and communication technology (ICT) and internet technology-enabled services (ITES), banking, and healthcare sectors
- As a first step towards building an efficient system for green-technology innovation, Bangladesh should develop mechanisms for prioritizing R&D investment in green technologies and products that have the greatest impact, manufacturing-capacity synergies, value addition, and job creation
- Based on the level of domestic technology development, Bangladesh should support market activation and green technology commercialization for green technologies
- Bangladesh can support the greening of small and medium enterprises (SMEs) through green partnerships with large buyers and initiatives as a part of the Energy Efficiency and Conservation Master Plan (EECMP)
- Bangladesh would highly benefit from encouraging the ready-made garment (RMG) and other sectors to switch to resource-efficient production and distribution models and low-carbon technologies by using renewable sources of energy and process innovation to improve efficiency, sustainability, and competitiveness.

## Green Growth Indicators to track progress

- Employment in green jobs (% of total employment)
- R&D expenditure (% of GDP)
- LEED certification of strategic export industries (% coverage)
- GHG emissions from livestock and agriculture (MTCO<sub>2</sub>e/year)

# Policy direction 5: Stimulate the blue economy and strengthen coastal resilience by leveraging natural capital

The ocean economy's contribution to Bangladesh was estimated as \$6.2 billion in gross value added in 2015 (World Bank 2018). Further, as many as 30 million people depend upon the country's ocean economy. Future growth in the blue economy will be driven by fisheries, shipbuilding, coastal and maritime tourism, mariculture, and coastal and offshore wind generation. Much of Bangladesh's blue economy potential is left untapped, but investments and capacity development can steer needed progress

- Bangladesh should invest in developing systems to measure and monitor the performance of Bangladesh's ocean economy along targeted development pathways, conduct blue economy public expenditure and institutional reviews (PERs) to enhance budget allocation and implement marine spatial planning (MSP) to allocate the spatial and temporal distribution of marine activities and investments
- The GOB could draw upon existing forecasting models of the national economy and run ocean economic development scenarios that would estimate the economic benefits to Bangladesh from various pathways to develop the ocean economy, including one or more blue economy pathways and identification of the policy reforms needed to get there.
- Effective institutional mechanisms to coordinate policy planning and implementation across key ministries in the blue economy will lower transaction costs and ultimately enhance the investment climate. ,
- Regional cooperation between the Indian Ocean Rim Association (IORA) and Bay of Bengal economies will be critical to sustaining the blue economy's benefits through coordinated and joint marine-resources management, foreign direct investment, knowledge exchange in emerging technologies and industries, and enhanced maritime connectivity

## Green Growth Indicators to track progress

- GDP added by blue economy sectors (\$ billions)
- Employment in blue economy sectors (millions)

## Policy direction 6:

### Promote livable green cities through urban regeneration and new “smart” cities

Smart cities have adopted technical and information platforms to better manage the use of their resources, improve administrative processes, monitor developments, develop new business models, provide basic services, and help citizens make informed decisions about the use of resources.

- To decongest and reduce the load on Dhaka’s and Chattogram’s infrastructure and environment, Bangladesh can develop secondary smart cities (with green infrastructure, services, innovation, human capital, good governance, and strong enabling environments) to make them attractive for investment.
- In the pilot phase, Bangladesh should invest in city-level diagnostics for identifying key urban development challenges in areas such as governance, transportation, environment, energy, solid waste management, disaster management, and water management.
- Bangladesh can strengthen the implementation of smart-city projects by institutionalizing smart cities through establishing the legal foundations for smart cities.
- Bangladesh should strengthen enablers of smart-city innovations such as technology R&D, financing mechanisms, businesses, institutions, and so forth.
- Urban afforestation measures such as designing green spaces and installing street trees should be pursued.
- Bangladesh should leverage international cooperation to pilot smart cities.

#### Green Growth Indicators to track progress

- Smart cities <sup>a</sup> (Nos.)
- Green urban spaces (% of total urban area)

# Policy direction 7: Strengthen social protection and the capacity of citizens to adapt to an inclusive climate-resilient economy

As one of the most vulnerable countries to climate change, the management of climate risks has been a central issue in Bangladesh's development. Investing in adaptation is a priority in the GOB's climate change strategy.

- Bangladesh can enhance its disaster preparedness by 1) improving the accuracy and lead times of disaster forecasts, 2) strengthening the Bangladesh Meteorological Department's (BMD) hardware and ICT infrastructure for enhanced data and information sharing through resilient network systems, and 3) strengthening the observation network for tropical cyclone monitoring (automated tide gauges, equipment for oceanographic and meteorological observations).
- Bangladesh should invest in bolstering BMD's institutional and technical capacities while improving collaboration with key agencies: Water Development Board (BWDB), the Regional Integrated Multi-Hazard Early Warning System, the Indian Meteorological Department, the Japan International Cooperation Agency, the Norwegian Meteorological Institute, local urban bodies, and the Department of Disaster Management.
- To implement the BDP2100, Bangladesh can initiate tax reforms, enhance urban water supply cost recovery, establish rural Water User Associations (WUAs), and align with the 8th FYP by activating the Delta Wing, operationalizing the Delta fund, creating a Delta Knowledge Hub, and fostering multilateral collaborations.
- Bangladesh can enhance disaster recovery and resilience by (a) integrating gender considerations into social welfare programs, (b) shifting from in-kind to cash-based social protection initiatives, and (c) improving efficiency across various social welfare programs through better coordination with the Ministry of Social Welfare (MoSW).

## Green Growth Indicators to track progress

- Improved capacity for forecasting
- Upgraded and Modernized Hydromet related Network Established (%)
- Disaster risk reduction and management readiness (% of population)

## Policy direction 8:

### Improve public health and well-being through a cleaner environment

Bangladesh ought to improve the country's environmental governance to safeguard a green, resilient, and inclusive recovery of its economy. Improving the DOE's capacity to enforce upstream regulation – such as standards of wastewater treatment within industries or types of energy used within industries – is a key step to address negative externalities

- Bangladesh can undertake efforts targeted towards the development of regulations and policies to expand the DOE's regulatory mandate from controlling individual pollution sources to protecting and improving environmental quality and promoting green growth.
- Bangladesh should promote the public disclosure of key environmental indicators, such as water quality and real-time air pollution levels by area, among others.
- Bangladesh can allocate resources to establish an environment fund that can help mobilize sustainable financing for environmental conservation actions such as policy studies, R&D and technology pilots, and citizen engagements.
- Fiscal policies should adopt the "beneficiary pays" and "polluter pays" principles to address air and water pollution.
- The Dhaka Rivers Ecological Restoration Project should continue to be implemented to improve water flows in the rivers and canals and enhance domestic wastewater management around Dhaka City.

#### Green Growth Indicators to track progress

- Air quality (annual average,  $\mu\text{g}/\text{m}^3$  PM 2.5)
- Urban water bodies compliance with water quality standards (%)
- Application of polluter pays principle (% of cases)

# Policy direction 9: Enhance engagement and cooperation with the international community on climate change

Bangladesh has led climate action, particularly amongst lower-middle-income and climate-vulnerable countries. As the Chair of the Climate Vulnerable Forum (CVF) and V20, Bangladesh has promoted the interests of climate-vulnerable countries. The Global Center on Adaptation's (GCA) South Asia regional office in Dhaka shares best practices and adaptation knowledge with other climate-vulnerable countries.

- Bangladesh can actively engage in international negotiations on climate change and make contributions by playing a constructive role in building an effective global climate regime.
- The GOB should build partnerships with countries for technology transfers, technical assistance programs, and trade deals for green products and services to boost its green economy.
- Bangladesh will engage with independent evaluation agencies to improve its international competitive rankings and standing in the International Green Growth Index

## Green Growth Indicators to track progress

- Green Growth Index Level
- MoUs with international actors and other technology / knowledge sharing agreements (Nos.)

***Thank you***

