

# Opening Green Windows

Technological opportunities for a low carbon world

**Bangladesh ushering the world**

**Md Abdul Bari**

Policy Advisor on Digital Government & Economy



# Agenda

01

Green Revolution

02

Challenges

03

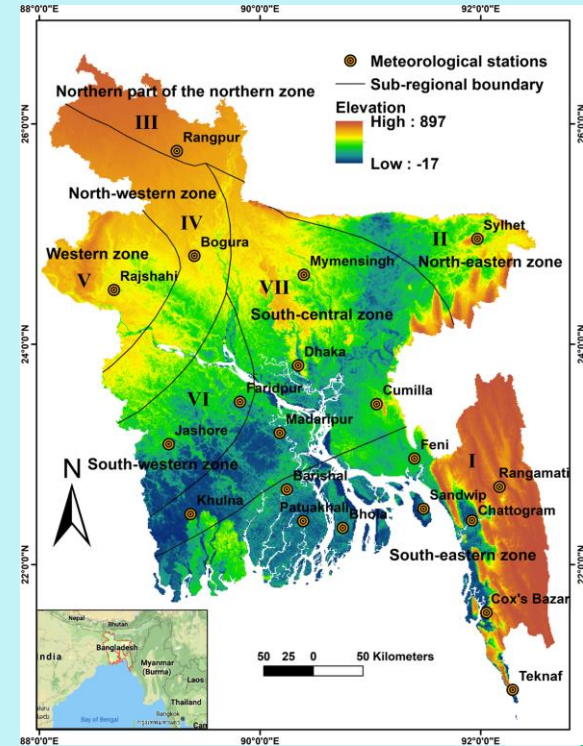
Technology & Innovation

04

International Collaboration



# Bangladesh: Size and Location



# Bangladesh: Fight against the odds



## Geography

147,570 sq. km. area  
9m average elevation



## Demography

170 M population  
Two-thirds in working age

## Economy

US\$460 Bn GDP  
6% GDP growth rate

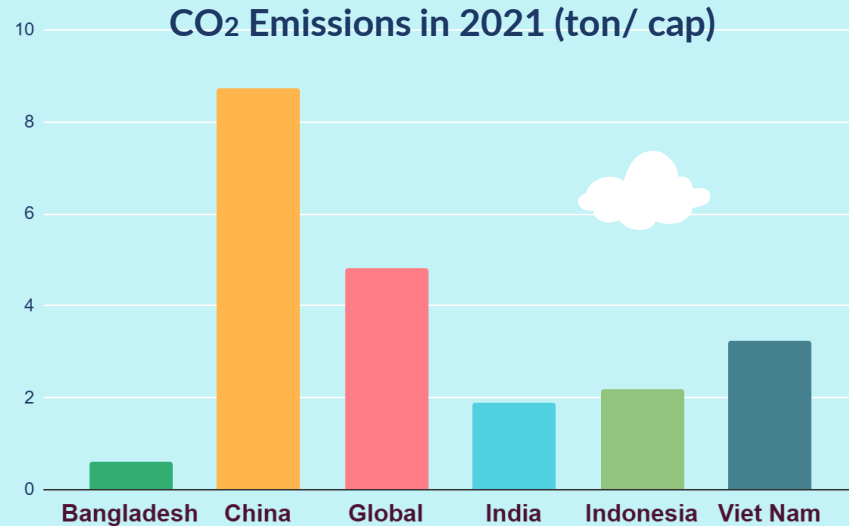


## Environment

7<sup>th</sup> Most vulnerable country  
15% area to disappear for SLR



# Bangladesh's carbon footprint



Source: European Commission

0.28%

Contribution

Global CO<sub>2</sub> emissions

0.62

Ton/ cap

CO<sub>2</sub> emissions

0.11

Ton/ \$1K GDP

High growth yet  
low emissions

22%

Reduction

Is promised by  
2030 to UNFCCC

01

# Green Revolution

Shaping a greener and cleaner future



# Bangladesh: Global champion in green factories

- Home to the highest number (**183**) of LEED certified apparel factories in the world:
  - **63** platinum rated
  - **110** gold rated
  - **10** silver rated
- **52** out of 100 top green factories in the world
- **500** more awaiting for LEED certification

Source: The Daily Star on 25 February 2023



# Beyond the green factories



## Afforestation

- 71 M trees planted
- 6,921 hectare forest land



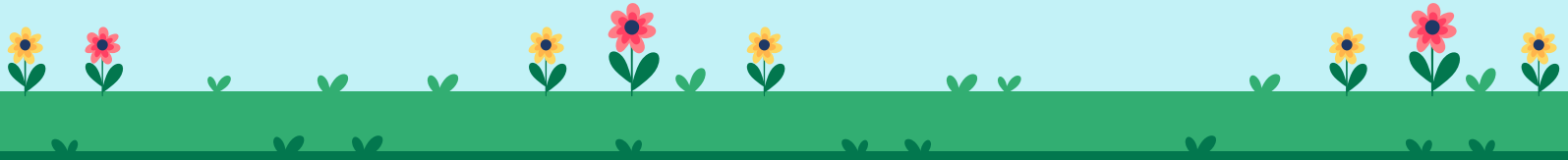
## Solar Homes

- 6 M solar home systems
- 4.5 M cooking stoves



## Floating Vegetables Bed

- 12,900 vegetable beds
- 210 villages





Action out of the box

# Floating Solar Plants

- Completed a pilot program with capacity of 10 KW solar power
- Total target of 61 MW solar power production in 3 districts
- Asian Development Bank provides funding and technical support

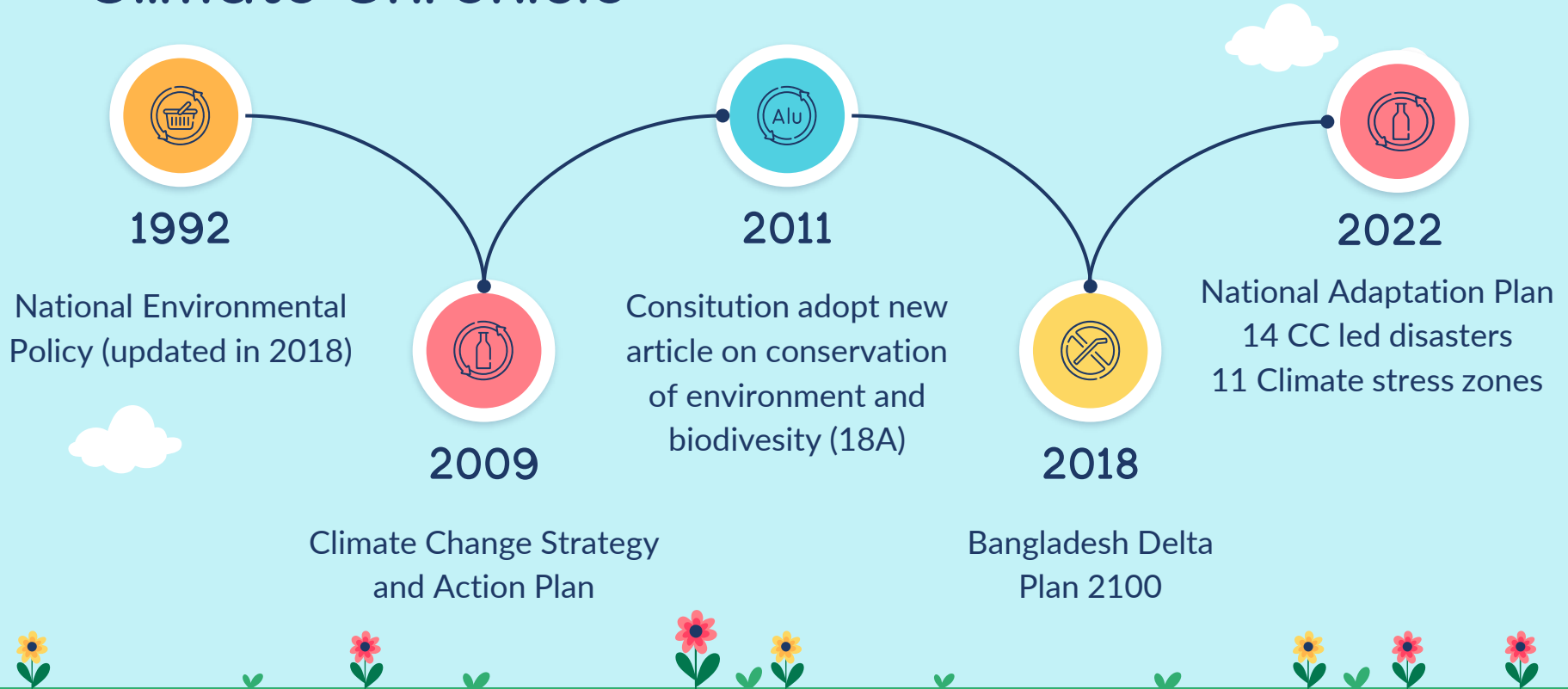


# Renewable Energy Mix (in MW)

Source of Energy	Off-grid	On-grid	Total
Solar	357	376	733 (1600)
Hydro	0	230	230
Wind	2	1	3 (149)
Biogas to Electricity	0.7	0	0.7
Biomass to Electricity	0.4	0	0.4
<b>Total</b>	<b>360</b>	<b>607</b>	<b>967</b>

Source: [National Database for Renewable Energy](#)

# Climate Chronicle



US\$3.08 Bn

Climate related alloaction in 2022-23

US\$80 Bn

Commitments by 2030

US\$49 M

Refinance Scheme of Bangladesh Bank



# Challenges



19M

People

Are dependent on forests for their livelihoods. Rapid land use changes threaten this safety net for the poor.

9M

Microenterprises

Provide livelihoods to about of half of the population having impact the environment.

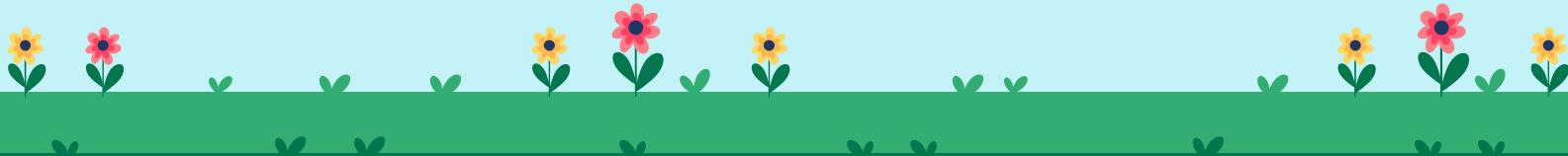


\$6.5B

Economic Loss

Is caused by environmental degradation every year.

Source: The World Bank

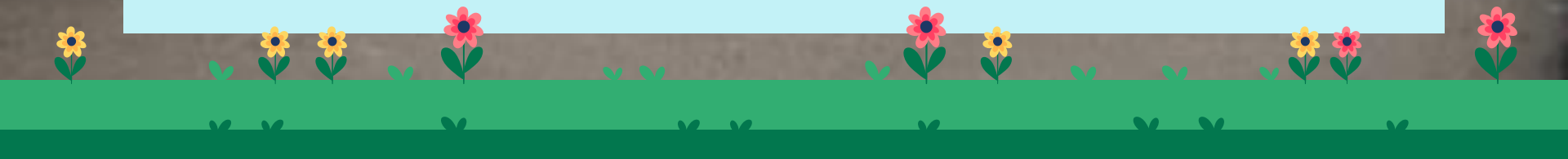


# Technology and Innovation





# Electric 3 Wheelers: Virtual Power Plants



# E3W Disruptions

## 2.5M E3W

- Ride sharing
- Cheaper
- Higher availability

## Lead-acid

- Inefficiency
- Shorter life
- Pollution

## Li-ion

- Fast charging
- Higher longevity
- Expensive

## PAYG

- Pay as you go
- Remote monitoring

## Feed back to grid

- Charge back to grid during peak (evening)

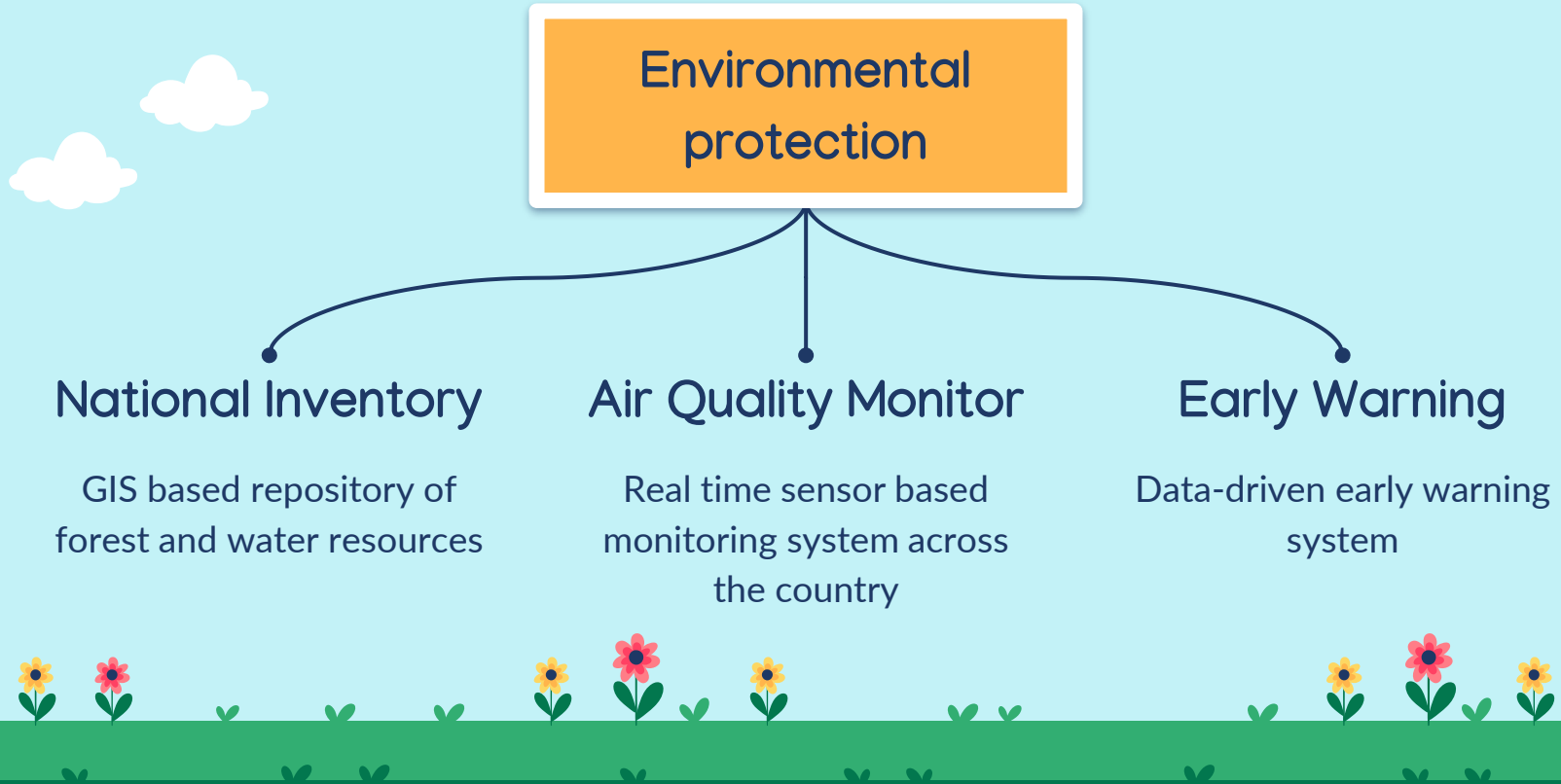
## Recharge in midnight

- Recharge during off-peak (mid-night)

Source: [CNN](#)



# Leveraging Technologies



# International Collaboration

04

## Research

In quest of new  
knowledge

## Innovation

Human centric, cost  
effective & home  
grown solutions

## Technology

Transfer of technology  
and technical know-how

## Trade

Green sourcing to be  
incentivized

## Funding

Collaborative funding  
structure

## Shared Vision

Collaborative and  
coordinated actions  
for a shared future



# Thanks!



Do you have any questions?

[abdulbari80@gmail.com](mailto:abdulbari80@gmail.com)

+88 01713 038 496



[md-abdul-bari-94b00451](https://www.linkedin.com/in/md-abdul-bari-94b00451)



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