



# **How are nature-based solutions being used in Bangladesh and the UK to combat climate change?**

**UK-Bangladesh Climate Partnership Forum**

**#UKBDcop26  
#ClimateAdaptation**

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# UK-Bangladesh Climate Partnership Forum

A series of webinars and an ongoing, multi-stakeholder dialogue to promote collaboration and lasting partnerships at all levels between the UK and Bangladesh

Partnership is structured around four key COP26 themes

**1**

**Adaptation and  
resilience**

**2**

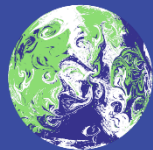
**Nature**

**3**

**Clean growth**

**4**

**Finance**



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## LinkedIn Group

UK-Bangladesh Climate Partnership Forum

[linkedin.com/groups/12485053/](https://www.linkedin.com/groups/12485053/)



## Twitter

Hashtag: [#UKBDcop26](https://twitter.com/hashtag/UKBDcop26)



## YouTube

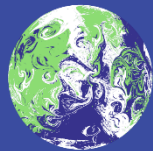
Recordings of the case study and keynote sessions on Adaptation & Resilience (24 and 25 November) are on Youtube

[youtube.com/mottmacdonald](https://www.youtube.com/mottmacdonald)

# Nature-based Solutions

“Actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”

— IUCN definition



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# How are nature-based solutions being used in Bangladesh and the UK to combat climate change?

## Programme

### Moderators

Saleemul Huq and Simon Maxwell

### Opening remarks

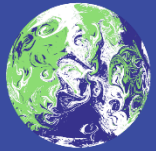
- Judith Herbertson, Director of Development, FCDO
- Md. Shahab Uddin, Minister of Environment, Forests and Climate Change
- Lord Goldsmith, Minister for Pacific and the Environment

**Keynote 1** – How NbS are being used in Bangladesh to combat climate change.

Dr. Ainun Nishat, Professor Emeritus, BRAC University

**Keynote 2** – Natural-based Solutions for climate change adaptation and mitigation in the UK.

Dr Mike Morecroft, Principal Specialist, Climate Change at Natural England



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# Keynote speakers

How are nature-based solutions being used in Bangladesh and the UK to combat climate change?



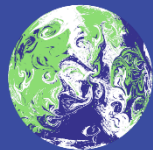
**Dr. Ainun Nishat**

Professor Emeritus,  
BRAC University



**Dr. Mike Morecroft**

Principal Specialist, Climate Change  
at Natural England



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# Panellists

How are nature-based solutions being used in Bangladesh and the UK to combat climate change?



Saber Hossain  
Chowdhury

Chair, Parliamentary  
Standing Committee on  
Ministry of Environment,  
Forests and Climate  
Change Honorary  
President Inter-  
Parliamentary Union



Dave Tickner

Chief Advisor on  
Freshwater for WWF



Rizwana Hassan

Advocate, Supreme  
Court, Bangladesh and  
Chief Executive,  
Bangladesh  
Environmental Lawyers  
Association



Prof. Alastair Driver  
FCIEEM

Director, Rewilding Britain

# How NbS are being used in Bangladesh to combat climate change

**Dr. Ainun Nishat**

**Professor Emeritus,  
BRAC University**





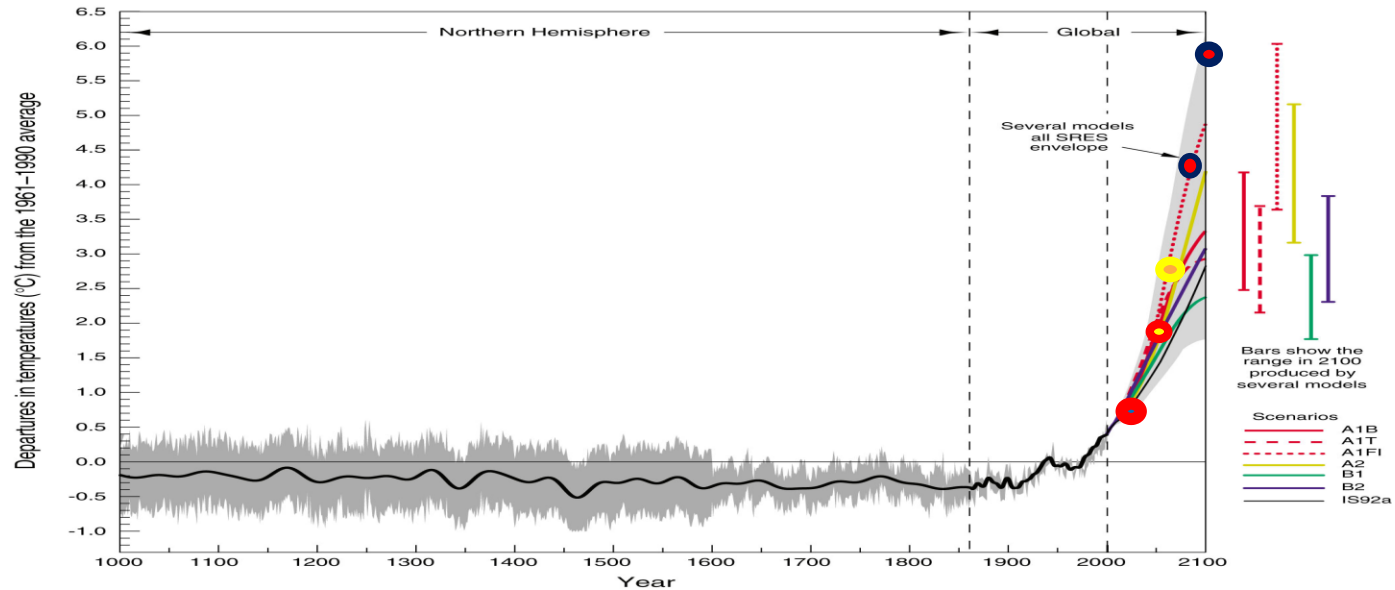
## Major Global concerns from Climate Change

- Threat of **Food shortage**
- Threat of migration; Livelihood security
- Increase in intensity and frequency of natural disasters. Erratic behavior and associated uncertainties.
- Loss of biodiversity and ecosystem
- Health security threatened
- Process of sustainable development affected
- Coping capacity of LDCs, SIDS and countries in Africa is not adequate

# Goals set out through UNFCCC (1992) and Paris agreement (2015)

- Objective of the UNFCCC (1992) is stabilization of the GHG concentrations at a level that would prevent dangerous anthropogenic interference with the climatic system. Such a level should be achieved within a time frame sufficient to:
  - allow ecosystems to adapt naturally to climate change.
  - ensure that food production is not threatened, and
  - enable economic development to proceed in a sustainable manner.
- Kyoto Protocol ( KP, signed in 1997 valid till 2012) focuses on Mitigation; a legally binding ambition of limiting and reducing the greenhouse gas emissions. KP-2 was agreed in 2012 ( valid for 2013-2020).
- Objective of the Paris Agreement (2015) is to ensure Food Security at global level,

# Rapid rate in increase in Temperature



# Climate induced hazards in Bangladesh

- Recognized globally as one of the most vulnerable to adverse impacts of Climate Change
  - Bangladesh is experiencing the increased frequencies and intensities of natural disasters.
    - untimely rainfall
    - short duration heavy rainfall, drainage congestion.
    - Ocean acidification and coral bleaching
- Floods
  - Drought-like phenomenon
  - Cyclones and Tornadoes
  - Sea Level Rise
  - Salinity intrusion
  - Tidal surges
  - River bank erosion
  - Coastal erosion
  - Lightening
  - Health hazards
  - Impact on ecosystem and flowering pattern

Changes in global climatic behavior and climatic parameters will impact ecosystem and biodiversity ----- some changes will be slow and gradual but some changes could be rapid --- for ecosystem to be adjust

Ecosystems and NbS also play an important role in regenerating and strengthening ecosystem resilience, enhancing carbon-rich habitats and supporting food production in Bangladesh



# Ecosystem Based Adaptation (EbA)

Adapting to climate variability and change has become a growing priority area all over the world.

Adaptation benefits of working with ecosystems include:

- buffering communities from, or reducing the risk of, direct climate change impacts
- ensuring that ecosystem services on which communities depend persist and meet their needs despite climate change impacts
- supporting existing livelihoods and income-generation despite climate-related financial losses
- creating new livelihood options to replace those being threatened by climate change impacts

The climate change adaptation challenge varies geographically and with local circumstance. The pressures on, and condition of local ecosystems affect their capacity to deliver ecosystem services, and consequently people's vulnerability.

EbA measures are commonly implemented in particular ecosystems (mountains, drylands, wetlands, coasts, and urban systems), reflecting .

It is often suggested that ecosystem-based adaptation (EbA) can be more cost-effective, provide both the desired adaptation benefits and multiple co-benefits, and be more sustainable than engineered adaptation measures in the long term.

# **Towards Ecosystem-based Adaptation (EbA)**

- “Ecosystem-based Approaches to Climate Change Adaptation, or Ecosystem-based Adaptation (EbA) involves a wide range of ecosystem management activities to increase the resilience and reduce the vulnerability of people and the environment to climate change” (IUCN 2009).
- Ecosystem-based Adaptation and Mitigation is managing and rehabilitating ecosystems for adaptation to and mitigation of climate change.
- UNDP-GEF promotes pro-poor ecosystem-based adaptation and mitigation approaches that foster inclusive, economic development and socio-ecological resilience in the face of climate change. Policy, legislative and regulatory reforms that work to provide equitable access to shared natural resources, will work to eradicate extreme poverty through sustainable development (UNDP .



Photograph  
taken on 12th  
Nov 2018 in  
Dhaka

# ***Shefali* in bloom in Summer**



20 . 05 . 2014

# Some Experiences from Bangladesh

- Government is supporting development of cultivars that are:
  - Saline tolerant,
  - Drought tolerant
  - Heat tolerant
  - Submergence tolerant, and
  - Short duration varieties.
- Presence of extensive Mangrove forest belt along the coastal belt saves the coastal areas from tidal submergence. Government is expanding coastal forest plantation wherever possible.



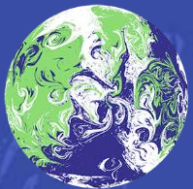
# Summing up.....

- Adverse impacts of Climate variability will change rapidly. In many places traditional crops have been replaced by mono-culture making those crops and farmers vulnerable to climate impacts.
- EbA solutions for CCA may provide sustainable and effective options for local communities.
- However, systematic and action research may provide communities with sustainable options.

# How NbS are being used in Bangladesh to combat climate change

**Dr. Mike Morecroft**

**Principal Specialist, Climate  
Change at Natural England**



# UK Priority Risks 2017



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RISK MAGNITUDE:

LOW

MEDIUM

HIGH



# High Carbon Habitats in the UK



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# Managed realignment: Coastal habitat creation



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# Forest creation for adaptation and mitigation



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# Peatland Restoration

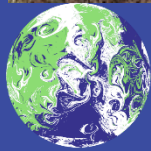


Cors Fochno Photo: Natural Resources Wales



Bolton Fell Moss

Photo: Olly Watts



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## Agri-environment schemes



## River re-naturalisation



## Urban green infrastructure

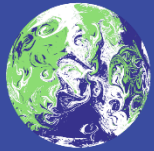


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# Community involvement and partnership



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