

Organisers:



Event partners:



Practitioner's and policy-makers exchange on climate change adaptation in agriculture



BANGLADESH

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*Practitioner's and policy-makers exchange on climate
change adaptation in agriculture*

1. Major crop agricultural industries and production systems

- More than 65% of the people in Bangladesh are directly or indirectly engaged in Agriculture
- Contribution of Agriculture in GDP is about 20%
- Contributes 7.34% of total export earnings
- Total cultivable land about 8.67 million ha
- About 46 economic crops
- Cropping intensity is 179%
- Present requirement is cereals about 30 million tons, tubers 5 million tons, pulses 1.80 million tons, vegetables 10 million tons, fruits 8 million tons, and oil seeds 3 million tons.
- Present production of Principal Crops : Rice is about 34.26, wheat 1.03, Potato 8.40 , pulses .64 , vegetables 10.86, and oil seeds .79 million tons.

2. Current and emerging climate-related threats/risks to food security

- Summer are becoming hotter (High temperature)
- Monsoon irregular with untimely rainfall
- Increased river flow and inundation during monsoon
- Heavy rainfall over short period causing water logging
- Increased frequency, intensity and recurrence of flood
- Crop damage due to flash flood
- Very little rainfall in dry period
- Crop failure due to drought
- Prolonged cold spell
- Salinity intrusion along the coast region
- Pest infestation



2. Current and emerging climate-related threats/risks to food security

Flood damaged 1.3 million tons of Rice in 2007.

- **Flash flood damages crop in Haor alternate years This year(2010) has been affected about 30 ha. Land.**
- **Erratic rainfall (e.g Very late rainfall Aug/'09)**
- **SIDR: About 15-20% of the cereals (aman paddy) were completely washed out by the tidal waves.**
- **Vegetable crops seem to be damaged by 80%, pulses were reported to have been damaged fully in most areas.**
- **A/LA: The cultivated land damaged in the area is around 96,617 ha (out of 542,006 ha cultivated in the area); the loss in the production is of around 482,144 MT that is worth of BDT 6,776 million.**
- **The consecutive droughts of 1978 and 1979 directly affected 42% of cultivated land and reduced rice production by an estimated 2 million tons.**
- **The 1997 drought caused a reduction of around 1 million tons of food-grain, of which about 0.6 million tons is transplanted *Aman*.**

3. Existing risk management and adaptation efforts

Government has been developed 3 major documents.

- 1. National Adaptation Program of Action (NAPA) in 2005**
- 2. The National Food Policy Plan of Action (2008-2015)**
- 3. Bangladesh Climate Change Strategy and Action Plan in 2009.**

The Govt. of Bangladesh has initiated a large number of programme to help manage climate related impact & to ensure sustainable food security. eg.

The Comprehensive Disaster Management Programme (CDMP) Phase-II DAE part 2010-2014; Food security programme by Soil Resources Development Institute; Barind Integrated Area Development Project by BMDA; etc.



3. Existing risk management and adaptation efforts

- Development, dissemination & extension of Flood, Drought, Salinity and disease tolerant crop varieties should be ensured on a priority basis.
- Early warning system should be developed & strengthened to inform farmers. Information based on agro-metrology & agro-climatic data & forecast of planting & harvesting time with possible yield of crops.
- Coordinated efforts are very much needed to address and taking adapting measures for probable climate change effects.
- Strengthening and capacity building of Extension personnel, Farmers and other stakeholders on Climate change issues and management.
- Reforms of Policy and Mainstreaming Climate Risk Management (CRM)

3. Questions

- **Research findings of Climate Change and its relation with Soil Health, Pest & diseases?**
- **Research development on** drought resilient, flood/saline tolerant crops in South and South East Asia?
- **Drought management & Saline management in South and South East Asia?**
- **Regional early warning system & co-operation on climate change adaptation?**



PICTORIAL PRESENTATION OF DIFFERENT ADAPTATION OPTIONS ACTIVITIES



(DROUGHT PRONE AREAS OF BANGLADESH)



Mini pond for supplementary irrigation



Cultivation of short duration rice crop



Dry seedbed practice



Napier grass cultivation



Early rice variety cultivation for avoiding drought effect



Community based pigeon pea cultivation



Mini Nursery



Alternate Wetting & drying (AWD) method



Linseed production as less water



Mung Bean for Green Manuring



Cultivation of Chick pea



Farm Yard Manure



Community based homestead garden



Cultivation of Juiubi (*Ziziphus juiuba*)



Homestead garden



PICTORIAL PRESENTATION OF DIFFERENT ADAPTATION OPTIONS ACTIVITIES



(SALINE PRONE AREAS OF BANGLADESH)



Saline resistant variety



Rice-fish culture



Re-excavation of Small Pond for rain water harvest



Improve Stove



Bio-Gas Plant



Sheep Rearing



Zero tillage potato cultivation using straw



Sarjan Method vegetable cultivation



Green Manuring



Zero tillage potato cultivation without mulch



Sweet potato cultivation



Sweet gourd cultivation



Duck Rearing



Homestead garden



Colocasia cultivation in fallow low land