

Global Climate Change Negotiations: Implication for Bangladesh Agriculture

Bangladesh is the innocent victim of climate change due to its low riparian flat coastal landscape and high population density with poor financial capacity to respond to the adverse impact of climate change. Natural hazards like floods, droughts, cyclone and sea level rise are increasing day by day that will push poorer section of the population to the very margin of survival. Bangladesh government realizes that it is necessary to raise her voice in global forum in an effort to minimize impact of global warming largely caused by developed countries

In view of the issues, a seminar on experiences sharing on **Global Climate Change Negotiations: Implication for Bangladesh Agriculture** was organized by Krishi Gobeshona Foundation (KGF) on 17 January at SAC Conference, Farmgate, Dhaka. Dr. Ainun Nishat, Professor Emeritus, BRAC University shared his vast experiences on global climate change which impact on the agriculture of Bangladesh

The seminar was chaired by Dr Wais Kabir, ED, KGF. Forty-four (44) personnel from BARI, BRRI, BSMRAU, BAU, DAE, IRRI, KGF were present in the seminar.

The following points were shared by the speaker in brief:

- (1) UNFCCC was initiated in 1992
- (2) Kyoto protocol in 1997
- (3) Paris agreement in 2015 to eliminate food crisis. Sustainable food consumption would be helpful in this regards.



Dr. Ainun Nishat (left), Professor Emeritus, BRAC University

Audience of the Seminar

The speaker asked the audience about their queries on the topic and based on his response, formal talk was discussed which were as follows:

- Will Bangladesh be submerged by 17% because of climate change impact?
 - No, it will not because coastal embankment.
- Which gases are responsible warming?
- Will there be similar cold-summer cycle in future?
 - Mainly CO₂, CH₄, CFC and N₂O are responsible for warming. Cold-summer cycle will be erratic in future because of climate change impact. Temperature during 1860-2018 has

increased by 0.8-1.2°C. Moreover, this planet has undergone 7 times cooling and 7 time warming in the past.

- Is SO_x is responsible for GHG effect?
 - No. NO_x is responsible. SO₂ is responsible for acid rain.
- What will be the nature of air circulation and rainfall in future?
 - Air circulation will be changed and so does reduced rainfall is likely in future. But intensity of rainfall will be increased for a short period resulting in sudden drainage congestion, especially in urban areas. It was likely heavy flooding in Bangladesh during 2017, but in reality it has not happened because of embankment.
- Will there be any changes in fish breeding behavior?
 - Fish breeding characters will be changed because of variations of thunderstorms timing.
- What will be the impact of climate change on crop production in future?
 - If temperature rises by more than 3°C, productivity of present varieties will be reduced; flowering time will be changed, but vector borne diseases will be increased. Ecosystem will be changed because of climate change impact. Salinity level will be increased. Upward movement of salinity could reach to Gopalganj, Barishal, Pirojpur, Madaripur and Jhalakathi regions of the country. Moreover, frequencies of extreme events will be increased in future.
- What was the air GHG level in the past?

○ Year	GHG level (ppm)
1990	280
2015	400
2018	405
- Do we need mitigation strategy for GHG emission reduction?
 - Emission from Bangladesh is minimum compared to developed countries. Bangladesh needs adaptation strategies through generation of technologies and coordination among stakeholders. In 1992 OECD meeting, Annex-I countries admitted that they are responsible for global warming and they will take the responsibility of mitigation. However, representatives from USA, Russia, Saudi Arab and Kuwait in COP24 were pressing more for response measure. Even, USA opposes the notion of climate change impact issues.

Concluding remarks

- By 2050, damages of climate change will be visible
- Sea level rise will be 1m by the end of this century
- Salinity levels and saline areas will be increased in Bangladesh
- Area of land erosion and its recovery during last 30 was same. Silt moves to deep see, it takes 10000 years for land development
- Heat tolerant genotypes will be needed for sustained agricultural production in Bangladesh