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BANGLADESH is recognised around the world as one of the countries most vulnerable to the impacts of climate change. Alarmingly for an agro-based country such as ourselves, our agriculture sector stands to be hardest hit by climate change.

In this article, I would like to elaborate on the linkages between climate change and food security, and the need for an adaptation strategy for the agriculture sector. I will put forward some suggestions that might be useful for an adaptation strategy geared towards ensuring Bangladesh's food security.

According to the Intergovernmental Panel on Climate Change (IPCC), climate change refers to a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, which persists for an extended period, typically decades or longer. Thus, climate change includes change in distribution of weather parameters such as rainfall, temperature, wind speed, cloud coverage, etc.

On the other hand, food security is defined as "access by all people at all times to enough food needed for an active and healthy life. Its essential elements are the availability of food and the ability to acquire it" (Reutlinger, 1985).

It is important to view food security from both national and individual angles. At the national level, food security means availability of sufficient food stocks to meet domestic demand in the country until such time as stocks can be replenished from harvests or imports. At the individual level, it means that all members of society have access to the food they need, either from their own production, from the market, and/or from the government's transfer mechanisms.

Bangladesh has so far made tremendous progress in food production and food security. Production of all food items (on a per capita basis) has increased substantially between 2008 and 2009, compared to the time between 1970 and 1971.

Production of food grains (rice and wheat) has increased by more than three times (from 9.99 million tons in 1972-73 to 32.17 million tons in 2008-09). During this period, potato production increased by seven times (from 0.75 million tons to 5.27 million tons), production of vegetables increased by four times (from 0.67 million tons to 2.69 million tons), although the production of pulses decreased.

Milk production has increased by five times (from about 0.49 million tons to 2.29 million tons) while meat production increased by four and a half times (from 0.24 million tons to 1.08 million tons). Egg production has increased by four times (from 1.185 billion pieces to 4.696 billion pieces) and fish production has increased by 3.3 times (from 0.82 million tons to 2.70 million tons).

Increased production, along with liberalised imports, has increased both per capita availability as well as consumption of food items. Availability of pulses and oilseed remained more or less constant. Per capita per day availability of energy has increased from 2,069 kilocalories in 1991-92 to 2,580 kilocalories in 2005-06.

During the same period, availability of proteins per capita per day has increased from 53.6 gm to 72.4 gm. In case of fat, availability has increased