

## Coping with climate change

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Weekend

Dr AKM Saiful Islam, Professor, Institute of Water and Flood Management (IWF), BUET speaks on climate change adaptation and having sufficient research to combat the problem



### **What is the state of research on climate change in Bangladesh?**

As a nation we are really climate resilient. We can naturally cope with disasters and calamities. Yet, the bottom line is we suffer a lot. But sufferings can always be curtailed with the knowledge about the calamity, and that knowledge eases the ways to preparednesses and having protections against disasters.

A consortium of research, having proper projection of the situation, assessment of data and information, is an essential first tool to successfully operate any programme. Climate change is such a multi-dimensional and long term problem for a poor country like ours, that initiating good research programmes, having first hand information from field level and implementing that knowledge in coping with the actual problem will be a very timely and appropriate step towards the solution of the problem.

### **How is climate change affecting the flood situation in the country?**

A number of research is in progress regarding the impact of climate change. Since our country has a good number of rivers that we are heavily dependent on, the impact of climate change on our rivers is a major concern.

The threat of sea level rising, will impact the entire internal river system of the country.

Firstly, the increased water level in the sea will actually flow inward to the land and rivers. Different assessments and reports say quite a significant amount of land in the coastal areas will be a submerged due to this. For a hugely densely populated country like ours, this will be a massive threat.

In addition, the sea's saline water, on coming in contact with the land and fresh-water bodies, will adversely affect soil fertility, severely damaging agriculture, which is a major mode of subsistence in rural Bangladesh.

The lives of rural people will also be affected with the change of the hydro-logic cycle, which is another impact of climate change. The temperature will increase, the time-cycle and frequency of rain will be changed. For example, pre-monsoon rain may decrease and may increase again

during monsoon, which will affect the cultivation of crops badly. A number of reports say, the monsoon period will increase up to 6-10%. Another risk of increased rainfall is that it will not increase evenly. Thus the frequency and magnitude of flood in the country will be changed.

### **Where are we in the climate change situation?**

Man made disasters are also a major contribution towards the climate change situation in the country. We have a total of 57 trans-boundary rivers, three out of which, flow in from Myanmar and the most of the rest from India, with a few from China and Bhutan. We have a number of infrastructures like dams and barrages, which alter the flow of the rivers and cause additional threats to the local environment. along with the ones caused by climate change. Deforestation is another massive problem.

### **What is the solution?**

Climate change is not a disaster like cyclone that its affect can be seen easily and measured instantaneously. Our approach should be adaptation and not mitigation, since we are not among the country's producing large-scale emissions. However, there is a limit to the extent to which one can adapt. All the global conferences claim the situation will not escalate to a point that it goes beyond adaptation.

In terms of flood management, we can focus on the benefits that the annual flood waters provide, which is the minerals it brings in that contributes towards enriching the soil.

In the case of urban areas, the government should work on improving an early warning mechanism and plan how to manage prolonged floods, as they have a long term effect on GDP and economic growth.

### **What can the government do?**

The government must initiate a proper coordination among the disaster management and environment protecting bodies. This can ensure having a proper action plan and more importantly the preparedness to fight flood and other disaster.

And further, awareness regarding climate change issues needs to be enhanced, and that can be done once the government itself has sufficient information and data in its hand regarding climate change and its impact.

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