

**Event Report for the Regional Conference for
“A Scoping Study on the Impact of Climate Change and Food Insecurity on Poverty in
South Asia”**

January 11, 2011, Magnolia, India Habitat Centre, New Delhi

Background

Climate change is expected to affect human and animal life in various ways. Due to dependence of agriculture on environment, food security is expected to be affected due to any changes in the climate. Climate change induced food insecurity will have severe implications for the people, particularly those who are poor. Small and marginal farmers (constituting the bulk of the poor in developing countries) will face impoverished conditions due to possible fall in their agricultural productivity and output. Farmers along the coastline may even lose their lands with rise in sea level. Number of urban poor may also rise with fall in purchasing power resulting in higher rural-urban migration. Consequently, magnitude of food insecurity and associated poverty, which is already a daunting problem faced by the poor countries will increase with further negative effects of climate change.

Given this background, CUTS has undertaken a research-based advocacy project entitled “A Scoping Study on the Impact of Climate Change and Food Insecurity on Poverty in South Asia”. In partnership with local organisations, it is being implemented in four South Asian countries, viz. Afghanistan, Bangladesh, India and Pakistan. The project is supported by Oxfam Novib, The Netherlands.

A long-term objective of the project is to have a better understanding of linkages between climate change and food security, and associated policy and practice changes which are necessary to address possible negative consequences of those linkages. An immediate objective is to understand the real causes of the decline in crop yields in these countries in South Asia and ascertain their linkage with climate change through literature review, analysis of secondary and primary data including by gathering perception among farmers (primarily small and marginal ones) and other stakeholders about those impacts.

Based on the findings of the project, CUTS International has prepared a preliminary report collating the available information from secondary and primary sources. A regional conference was organised with the prime objective to gather feedback from the project partners, experts and other stakeholders, on the findings of this report including deliberations on learning from four South Asian countries regarding issues related to climate change, food insecurity, and associated poverty.

Inaugural Session

Pradeep S Mehta, Secretary General, CUTS International, welcomed the participants and speakers and provided a brief introduction to CUTS International and a background to the project. In his opening remarks on climate change, he emphasised that though climate change will have its impact on the whole humanity, but the larger impact will be on the poor because large number of poor are more dependent on nature and because they have limited availability of resources for adaptation. Changing climatic conditions will have a substantial impact on agricultural activities. He emphasised that the magnitude of food insecurity and

associated poverty will pose a daunting problem, further increasing the pressure on economic and natural resources of the world.

Kirit Parikh, chairman of the Expert Group for Low Carbon Strategy for Inclusive Growth of the Planning Commission of India, in his inaugural address expressed that climate change has a number of implications such as alteration in the rain pattern and hydrological cycles, rise in sea level, salination ingress, temperature, and reduction in number of sunlight hours. These together will impact the type of crops cultivated and cropping patterns in various countries. It is essential to understand the likely climate scenarios and relate the land quality with such parameters to workout the relative productivity of different crops under this environment. This would determine cropping patterns, which will in turn alter the supply and distribution of food in the country. These will obviously have an impact on the prices, incomes and consumption of the population, especially that of the poor.

He emphasised that techniques for downscaling climate change models need to take into consideration the global climate scenarios. This will help in painting an ideological future and also help in determining the alternative approached to deal with climate change. The changes in climatic scenario must be translated into yield functions i.e. given these inputs of weather, rainfall etc., what the crop yield would be, which can be conducted through agro-physiological crop models. Another approach is to develop new crop varieties with shorter maturity period, reduced water requirement, flood resistant and so on.

It is important to recognise that such a problem requires for government support and social action, and ensure that the poor have income and access to food. While concluding his remarks, Parikh said that there are many research challenges in this field, which need to be explored through different research programmes.

Mehta welcomed. Srikanta K Panigrahi to deliver the special address. Panigrahi, Director General of Carbon Minus India, an initiative of the Indian Institute of Sustainable Development (IISD), expressed his pleasure to be a part of the conference. He praised the research completed as a part of the project and the draft report so prepared. He presented key insights from researches conducted in different agro-climatic zones in India. Though increase in temperature has benefited agricultural productivity in the colder regions, the production of fruits like mango, lichee, kiwi, banana and apples has been affected adversely. Apple orchards particularly have been affected a lot. Apple producers either need to migrate to a higher altitude or have to resort to producing other crops suitable to a warmer temperature. Thus, the impact of climate change on the lives and livelihoods of rural people is severe. He reiterated that the poorer the people are, the higher is the impact of climate change.

Panigrahi mentioned that countries such as India can not spend huge amount of money on mitigation. However in few areas such as CDM, the country is very active. According to him, adaptation does not require as much investment as mitigation, thus, India must focus on adaptation. Solutions in the form of seed bank, irrigation and water storage and most importantly food bank initiative must be explored in India.

The mentioned remarks/address of the key speakers set the tone for discussions to be held during the conference.

Session 1: Climate Change and Livelihood Concerns of Farmers: Learning from South Asia

Chairperson: Ms. Ilona Porche from GIZ (formerly GTZ).

Presenters from partner organisations

- Ghulam Habib, Afghan Development Agency (ADA)
- Faruk Ul Islam, Practical Action Bangladesh
- Alka Awasthi, The Centre for Community Economics and Development Consultants Society (CECOEDECON)

This session was organised to showcase insights about the impact of climate change on livelihood concerns of farmers in four South Asian countries, viz. Afghanistan, Bangladesh, India and Pakistan. Such insights aim to bring forth inter-country comparison and highlight possibilities for integrated efforts to address such concerns through adaptation as well as mitigation. Regretfully the representatives from partner organisation in Pakistan, Sustainable Development Policy Institute (SDPI) could not attend the conference due to non grant of visa to India for some reasons..

The session commenced with the presentation by Munir Mashal, ADA.. Mashal presented an overview of current climatic trends in Afghanistan and the changes which have been observed over the last decade. Human behavioural and consumption patterns have largely been held responsible for these changes. Also, there is a high degree of political apathy at the domestic and international level and hence limited mitigation and adaptation measures have been taken. Government needs to follow a two-pronged approach i.e. increase awareness about climate change and increase resilience to such changes.

Faruk Ul Islam, from Practical Action Bangladesh made the next presentation. After giving a brief overview of the vulnerabilities of Bangladeshi population due to climate change, he explained in detail about the areas prone to drought, floods and flash floods. Due to increased salinity in the coastal districts, concerns related to shortage of drinking water, decline in aquatic animal biodiversity, farming, and vegetable cultivation including forestation have risen. At the micro level, affected communities in such regions are trying to cope up with changed conditions. To name a few strategies, farmers grow crops varieties with shorter maturity period and higher climatic resistance, and have expanded fish farming and poultry activities. However, measures are required at the meso and macro level which would focus on structural improvement, community preparedness, planning and investment to build adaptive capacity and assets for the poor.

Alka Awasthi, representative of CUTS partner in India – CECOEDECON – presented key findings from the survey conducted in various parts of India. Similar to other project countries, seasons, rainfall patterns in India have altered. These changes are reflecting upon the cropping pattern, fish cultivation and livestock breeding. To a large extent, the impact of agriculture is affecting livelihood patterns of the people. In addition, a number of industries setup along the coast, have further deteriorated the living conditions, leading to forced migration to urban areas. Farmers, in order to adapt to such changes must develop alternative livelihood skills and cultivate climate suitable varieties, many of which are being developed by agriculture research institutes in India. There is also a need for reliable weather forecasting and creation of mitigation tools. Implementation of government schemes requires a sensitivity and readiness of various government departments towards the issue of climate change, which would lead to prompt initiatives in this regard.

Comments by Chairperson

Porche, chairperson, said that environmental concerns are given lesser priority than immediate concerns about world peace, poverty etc. However, climate change will not wait for the world to be in peace. Thus, it should be allocated equal importance. Productivity of crops and livestock is expected to be affected. Environmental pollution also is a serious concern, so not everything can be attributed to climate change.

Floor discussion

According to an observation made in one of the presentations, fish population is declining. However, one of the participants pointed out that such a decline could be due to climate change or encroachment of fishing areas by mechanised fishermen. Also pollution, especially during certain periods, has had a severe impact on fish population such as prawns. Land use change has also contributed to reduced fish population.

In the case of Bangladesh, small size of landholding and lack of technology which has led to low productivity and output was discussed. There is also a problem of ownership of undecided land such as sand bars which is spread over hundreds of hectares of land. Cultivation of tobacco and peat cultivation method for growing pumpkin, provide good returns and help the poor, who do not have ownership of land.

In the case of Afghanistan, insurgency and unsafe conditions came up as a main concern for conducting primary research. This was made possible by ADA's long term association with the government, various schools and communities.

There was also a suggestion from audience that apart from the victims of climate change, the people who are causing climate change must also be involved in this process and sensitised towards their responsibilities.

A valid concern was raised about the lack of availability of meteorological data to the agricultural departments at district level officers. Also, the data available is at macro-level, which is of less use to the farmers.

Local institutional framework, such as the Panchayati Raj institutions in India, can play a very significant role in adaptation and mitigation against climate change. It was suggested that Nepal must also be included in this study, given their vulnerability to climate change. Local knowledge base must be protected and disseminated for larger use.

Session Two: Discussion on the Draft Report on "Impact of Climate Change and Food Insecurity on Poverty in South Asia"

Chairperson: V. Arivudai Nambi, Principal, Swaminathan Research Foundation (MSSRF)

Discussants:

Vinod Kumar Sharma, Disaster Management and Environment, Indian Institute of Public Administration (IIPA)

Veena Khaleque, Country Director, Practical Action Bangladesh

Presenter: Suresh P Singh, Policy Analyst, CUTS International

Suresh Singh made a brief presentation about the draft of the report prepared by CUTS International, based on the primary and secondary research conducted under the project "Impact of Climate Change and Food Insecurity on Poverty in South Asia". The draft report has five sections:

1. Literature review
2. Perception survey of farmers in four select countries
3. Perception survey of other stakeholders
4. Review of regional food bank
5. Conclusion and recommendations

In the presentation, research methodology and key findings from the perception survey from the four South Asian countries were presented. The report mentioned that there is change in the duration of seasons, and that the intensity of temperature has been observed to have altered. Some seasons have disappeared altogether. Natural hazards have increased, although each country under study has a different trend for various hazards, depending upon the terrain and geographical location. The perception survey also showed that the farmers are more food insecure than earlier and respondents in all countries have reported a decrease in real income. Migration, in search of job opportunities and in need for more income, has also shown an increasing trend.

The farmers as well as fishers are following adaptation practices such as adopting multiple cropping patterns, cultivating heat, drought and salt resistant crops, protecting embankments, growing shrimps and so on.. The rural community also expects the government to take certain

steps in order to help them adapt to climate change. The experts in the field of climate change also see substantial role for the international institutions. Also, CUTS has made certain recommendations for both policy initiatives as well as further research in this field.

Comments by Discussant 1:

Sharma, at the outset said while discussing the draft report, it must be kept in mind that the present study conducted by CUTS is a scoping study and may not be all encompassing. While giving his general comments on climate change, he said that the most affected are farmers, especially the ones with small land holdings. This applies to all South Asian countries. If the trend remains similar in the coming years, the impact of agriculture will be severe. He also quoted Dr. Swaminathan who suggested that the wheat production will decline by 30 percent.

Sharma expressed that the data on climate change, adaptation measures is scattered and thus, a database needs to be formed which can accumulate all the available information. This can be supported by international and regional bodies, in terms of capacity building, technology transfer and knowledge transfer, among many others. Documentation of available knowledge is essential and can be shared to build each other's capacity.

Given that the impact of climate change is evident in the South Asian countries, there is scope for regional cooperation. All these nations have their strengths and they must cooperate in the key areas. There is institutional mechanism in place in most of these nations, which can become a good base for action against climate change and disaster management.

Comments by Discussant 2:

The second discussant Veena Khaleque congratulated CUTS for conducting such a study to collect more than anecdotal evidence about the impact of climate change on farmers.

Khaleque provided detailed comments on the draft report prepared by CUTS. Following are some major suggestions:

- Sample size from India should be larger than its neighbouring countries.
- Countries like Sri Lanka and Nepal can also be a part of such a study, if replicated in the future.
- More attention and analysis should be allotted to the finding of the study that community efforts for adaptation are more popular than individual efforts.
- Also, an analysis of the reason(s) behind the finding that level of awareness among farmers about climate change is low, especially in Bangladesh.

While concluding her remarks, Khaleque said that technology will play a major role in enhancing food security and combating climate change in the long run. It is important to have a more equitable allocation of resources.

Chairperson's comments

Nambi provided his comments on the draft report. He commended the regional food bank reviewed by the report as a good suggestion. However he also expressed that such food banks are only able to address only transient hunger .i.e. these banks cannot tackle hidden hunger or chronic hunger. In his address, he elaborated few models of climate change adaptation and those of food banks, being implemented presently at the local level. Training and capacity building at the local level and the customisation of the available technology will make a huge impact in tackling the problem of climate change, he expressed.

Floor Discussion

Many participants were of the view that there are unnecessary hurdles in the way of tackling climate change at a national level as well as regional and international level. Also, discussion regarding the controversial BT crops was brought forth by some of the participants. Due to such controversies and ambiguous decisions of the government, the credibility of new technology is harmed. Technologies and methodologies are available for adaptation to climate change but implementation requires initiative by government at different levels with support from the people.

Overall, the participants recognised that the report is a successful initiative of CUTS and there are many other research areas which must be explored to increase the readiness for climate change and help vulnerable sections of society in tackling the phenomenon.

Vote of Thanks

Shruti Mittal, Research Assistant - CUTS International - and programme officer for this particular study, thanked all the speakers and participants for their valuable comments and for having spared their time to contribute to this initiative by CUTS.