

LEAD UPDATE

Changing Climates: Pakistan's Options for Adaptation and Mitigation

Stakeholders Consultation, Lahore- February 13, 2008

With the growing frequency and intensity of extreme global events, climate change (CC) is emerging as the most critical challenge of our times. The 4th assessment report of the Intergovernmental Panel on Climate Change (IPCC) suggests that human activities will result into rise of global temperature between 1.4°C and 6°C, by the end of the current century. The ecological and socio-economic costs of CC are forecasted to be enormous for the entire planet, particularly for regions more susceptible to changes in the weather. Pakistan is amongst countries, highly exposed to the impacts of climatic events, particularly because of its agrarian economic base and resource scarcity. However, some of the worst case scenarios predicted for the country can be averted, if timely action is taken and adaptation strategies adopted to cushion against the shortfalls of CC. The challenge for Pakistan is to develop effective responses, suited to unique regional conditions.

Actions Taken

Responding to the growing threat of global warming and increasing vulnerability of developing nations, LEAD Pakistan partnered with the British High Commission to conduct a scoping study on Pakistan's Options for Adaptation to and Mitigation of Climate Change Effects. The exercise is part of LEAD's broader, interdisciplinary CC program.

Aiming to generate data and discussion for the scoping study, LEAD is holding consultations with stakeholders from government, media, industry, academia and civil society in Lahore, Karachi, Peshawar and Islamabad.

Highlighting partnership with a key decision making stakeholder, the Lahore consultation was hosted by the Environment Protection Department.

Objectives

- To map the participating stakeholders' understanding on the CC threats to Pakistan.
- To bring together groups of key actors, for exchanging knowledge.
- To develop a shared understanding among the stakeholders on the actions to be taken in response to the identified CC adaptation and mitigation needs.

Discussion

The session reflected on the growing CC concerns in Pakistan and the increasing signifi-



cance of climatic and environmental issues for policy formulators.

Secretary Environment, Mr. Badar went over the history of global warming considerations, citing the 1989 UN resolution that emphasized the CC concerns of developing countries and low-lying coastal states. Comparing the pressures of transitional economies with the conditions caused by CC, he warned against socio-economic factors and natural elements, which enhance vulnerabilities in developing countries. He urged experts to inculcate a national consensus and implement joint programs for minimizing risk of CC.

Mr. Agha Imran Hamid, made a presentation on Pakistan's Options for Climate Change Adaptation and Mitigation and highlighted the various vulnerability factors for Pakistan vis-à-vis climate change impacts, particularly in the areas of agriculture and food production, water and energy resources and marginal zones. He

LIST OF PARTICIPANTS

- Asma Maqbool, SNGPL
- Shaheen Khawar, Punjab Small Industries Corporation
- Rubina, CIDA
- Sajjad Haider, Indus Foundation
- Nuzrat Yar Khan, CTC University
- Kausar Jamal Cheema, Lahore College for Women University
- Mustafa Zaidi, LCCI
- Umar Daha, Business Support Fund
- Ali Tauqeer Sheikh, LEAD Pakistan
- Shahnawaz Badar, Secretary EPD
- Ali Qadir, NCA
- Kamran Babur, Punjab Forest Department
- Ahmad Khan, Pakistan Wetlands Programme
- Zia Mustafa, NESPAK
- Azhar Mahmood, Dupont Pakistan Operations
- Shahid Habib, PIDA-SEMU
- Sabir Ali Bhatti, NESPAK
- Naseer Ahmed, Lahore Compost Ltd.
- Muhammad Ayub, Department of Fisheries, Punjab
- Asad Rahman, Aurat Foundation
- Abdul Qadeer Mehal, Punjab Wildlife Department
- Amna Shahab, WWF-Pakistan
- M. Tahir Environment Department
- Arshed Rafiq, NEC Consultants
- Hussain Haider, CQS-Pakistan



Participants during roundtable



Group work in process

explained the negative repercussions for wheat and cereal crops from a single digit rise in global temperatures. He mentioned the threats to water availability in the Indus basin and mounting risk of floods from monsoon rains. Describing the ecological vulnerability and resource scarcity of developing countries, he advocated the need for shifting to a low carbon economy and devising strategies for meeting the eminent challenges of unpredictable climatic conditions. Participants commented on various ecological aspects of water resources, soil fertility and agricultural practices. The rising levels of silt in Tarbela and Mangla dams caused by excessive snow melting was brought to notice. National water usage statistics shared with the room revealed that 93% of water resources are utilized for agriculture and only 4% for drinking purpose. Research priorities of the country were also discussed with a conclusion that research data failed to reach the relevant stakeholders, especially farmers, and was not contributing towards action. Working groups of participants explored the effects of CC on four thematic areas namely, Food Security and Agriculture, Water Resources, Ethics and Governance and general Environmental Impacts. Participants analysed the implications of CC for their respective thematic sectors.

Key Issues & Recommendations

FOOD SECURITY & AGRICULTURE

With changing weather patterns, a disturbance in the crop harvesting period and flower formation processes has been observed. Coupled with the changes in water sources, agriculture yield is declining and food production is at risk.

Greater rainfall on crops, particularly cotton, has increased prevalence of pests and consequently the use of pesticide has gone up, further decreasing soil fertility and quality of food.

The impacts on crops and fodder production have a direct bearing on the livestock industry. An increasing prevalence of diseases in livestock is observed with the rising temperatures.

There is a dearth of research data to record the altering agriculture patterns in Pakistan for carrying-out an in-depth analysis of the impacts on food security.

Recommendations

- Introduction of weather resistant crops to replace sensitive varieties

- Enhancing the national food storage capacity and increasing shelf life of perishable items through processing and preservation and Introduction of alternative feed sources for livestock
- Exploration of genetic solutions for livestock breed improvement and resilience
- Training and capacity building of farmers on climate suitable technologies and farming practices
- Formation of an integrated agricultural research and information system that directs data to farmers and provides them solutions

WATER RESOURCES

Increasing threat of water shortage has a direct bearing on all sectors of Pakistan, particularly agriculture and food production.

Global warming is leading to a rapid decline in glaciers and a reduction in annual snow fall, thereby depleting the sources of fresh water in Pakistan (83% fresh water comes from glacial melt and snow).

Water tables are also going down, creating drought like conditions in many parts of the country, leading to the expansion of dry, arid zones.

Recommendations

- Improve water conservation with the development of small and medium sized reservoir dams
- Increase the efficiency of irrigation systems to reduce water wastage
- Promote afforestation/reforestation schemes for increasing catchment areas and reducing arid land
- Reduce water requirement in agriculture by applying composed organic fertilizers and other techniques
- Improve quality of water by establishing monitoring systems for ground and surface water sources
- Increase awareness of water consumer for judicious use

ENVIRONMENTAL IMPACT

Changes in water availability patterns and declining survival capacity of plants are contributing to the degradation of forest cover in Pakistan. Growing frequency of extreme weather events are destroying natural habitats, endangering biodiversity of flora and

LIST OF FACILITATORS

- Mr. Shah Nawaz Badar, Secretary Environment, GoPunjab
- Mr. Agha Imran Hamid, Development Expert & Event Facilitator
- Mr. Ali Tauqeer Sheikh, CEO & NPD, LEAD Pakistan

fauna. Declining availability of fresh water sources is another threat to biodiversity in the country. Vulnerability of coastal and mountain areas to climatic events is high. Swelling sea levels and frequent occurrence of cyclones and hurricanes are disrupting marine ecology and adding stress to fishing and marine based economies. Human settlements in the coastal zones are also under threat of displacement. Moreover, sea intrusion and increasing soil erosion can lead to the loss of agricultural land.

Recommendations

- Introduction of weather and drought resistant plant species
- Special government funding needs to be made available to improve forest cover in the country which is less than 4%
- Aggressive promotion of mango plantations
- Diversification of livelihood sources for communities depending on natural resource for income generation
- Raising awareness of climatic impacts among at risk communities and improving their preparedness for disasters.

GOVERNANCE & ETHICS

Public policies formulated for protection of the environment are very inactive and weak. Policy implementing agencies lack the capacity and resources to carry-out their jobs effectively.

There is a lack of sectoral integration between environmental and national policy programs.

Recommendations

- Creation of pressure groups to improve accountability and policy enforcement
- Establishment of multi-stakeholder dialogue platforms for greater involvement of actors and exchange of information
- Ground evaluation of treaties signed by the government
- Effective education and awareness raising at all levels

Conclusion

Stakeholders' dialogue demonstrated a consensus among stakeholders on a critical need for introducing CC adaptation measures in the country. The stance towards adopting CC abatement strategies is more ambiguous, as that is not considered the immediate responsibility of developing nations.

Need is for environment studies in Pakistan and integration of national strategies and policies..