



# APN CAPaBLE

**- Making a Difference -**

Scientific Capacity Building & Enhancement for Sustainable Development in Developing Countries

## **New risks of climate change-Building capacity to protect the most vulnerable**

**Final Report for APN CAPaBLE Project:  
CBA2007-05NSY - Kelkar**

## Overview of project work and outcomes

### Non-technical summary

Climate change is one of the gravest catastrophes in the history of mankind. It is multi-faceted and pertinent to our civilisation, and poses ongoing challenges for both present and future generations. Scientific research indicates that, because of climate change, we may experience more intense and frequent extreme weather events such as hurricanes, acute heat waves, floods in some areas and drought in others. This may also trigger natural disasters, such as tsunami, disease outbreak etc, more frequently. Global sea levels are predicted to rise by up to three feet by 2100, threatening regions at or below this rise in sea level (IPCC, 2007). Climate change is often viewed as a gradual, progressive, and long-term phenomenon, but past climate and disaster history will no longer be a good benchmark, and future changes could be non-linear and abrupt. In fact, climate change would be manifested not just in terms of a change in averages but also in terms of increasing variability.

Climate change is expected to further aggravate its impacts in developing countries, whose economies are closely tied to climate-sensitive sectors like agriculture, and which are already facing multiple stresses due to population growth, urbanisation, industrialisation, and globalisation. In the tropics and subtropics, where some crops are already near their maximum temperature tolerance and where rainfed agriculture dominates, yields are likely to decrease for even small changes in climate, which could lead to increased risk of hunger. Often the poorest in rural areas occupy the most marginal lands and this forces people to rely on highly vulnerable livelihoods in areas prone to drought, flooding, and other hazards. Developing countries also lack the financial mechanisms and technical resources to effectively defend themselves against natural disasters (IPCC 2001). Thus, regions and communities that are unable to cope with current climate hazards are also likely to be the most poorly equipped to cope with the adverse impacts of climate change (Adger et al., 2003).

The first step towards meeting the challenges posed by climate change is by creating awareness among civil society and policy makers about probable impacts of climate change, its causes, possible consequences and what can be done to mitigate it. This study is particularly aimed to enhance existing capacities of policymakers and practitioners not directly dealing with climate change issues on various aspects of climate change science, relevant information about factors responsible for adverse change in atmosphere, sectoral impacts and institutional responses that can be integrated effectively through policy making framework. The outcome of this study is a comprehensive web-based database and tools to inform and prepare policy-makers for effective responses and measures, both at macro and micro levels.

### Objectives

The present project aims to build capacity of policymakers and practitioners in developing countries:

- To systematically screen new risk presented by climate change, and
- To make available affordable and innovative risk-transfer mechanisms to the most vulnerable communities.

### Amount received and number years supported

The Grant awarded to this project was:

- US\$ 20,000 for Year1, 2007-2008:

### Work undertaken

- *Literature Review:* Review of the available information on various aspects of climate change to assess the existing outcomes that can be translated to

capacity building tools from ongoing research projects.

- *Stakeholder consultations:* Consultations carried out in on-going other projects were designed to identify priorities, requirements and existing gaps in available information among policymakers and practitioners to enable integrating climate change action in all policies driving co-benefits in long term.
- *Policy Analysis:* To identify its effectiveness in terms of addressing relevant causes and impacts at both micro and macro level.
- *Development of web-based learning package:* The relevant information like current state of knowledge, latest climate change science findings, disaster trends and unanticipated changes, strategic opportunities, etc... were collated and developed in web-based learning packages.
- *Pilot testing and refinement of package:* The packages were consulted with stakeholders for making it user friendly and acceptable. The selected packages were also presented in a side event in Bali for discussions and dissemination.

## **Results**

After compiling relevant studies and success stories from developing countries, an appropriate framework was developed for the web-based portal. The prototype of the portal was initially launched for feedback from stakeholders (both policymakers and practitioners) during Delhi Sustainable Development (DSDS) in Feb 2008 at Delhi. The results are being put for dissemination on a new portal being prepared by TERI as part of the bigger programme. The name of the portal will be 'climate of concern' and still to be uploaded in public domain.

This study identified tools and techniques that can enable and strengthen the policymaking processes and practitioners to understand issues related to climate change, with the help of the following web-based packages:

- Understanding climate change and impacts
- Climate Risk Screening Methods
- Building Coping Strategies
- India's Action on Climate Change
- Vulnerability index and hotspot mapping
- Addressing issues of burden sharing, equity and ethics of climate change
- Understanding the Southern perspective for Adaptation and Mitigation
- Mitigation and CDM: facts and figures
- Information and Communication Technology (ICT) for awareness and capacity building for enhancing adaptive capacities of vulnerable communities

## **Relevance to the APN CAPaBLE Programme and its Objectives**

The project activities focused on the need to protect the most vulnerable communities in developing countries from the new risks presented by climate change. The project implementation was based on assumption that a critical role can be played by policymakers and practitioners not directly dealing with environment and climate issues. These include finance or agriculture ministry officials, insurance regulators, and micro-finance institutions. The final outcome envisaged to develop a modular web-based learning package to build the capacity of these stakeholders to address changing risks. The package used ongoing research findings, case studies/success stories from developing countries to explain the strategies that need to be adopted by both public and private players. In particular, it attempted to build capacity to enable systematically screen climate change risks, and modify currently available risk-transfer mechanisms (like insurance) so that affordable products and innovative delivery mechanisms are made available to the most vulnerable communities (like poor rural farmers).

Thus the project was directly related to the goals of the CAPaBLE Programme: (i) Capacity development of developing country scientists, (ii) Science-policy interfacing, and (iii) Awareness raising and information dissemination activities.

**Self-evaluation**

The interactive web-based portal as developed by a programme to which this project contributed tools as content is a good platform for understanding the basic concepts of climate change and associated impacts and enable dissemination of information to policymakers and practitioners. Due to the dynamic nature of the climate change phenomenon, the web-based portal will be updated on a continuous basis by capturing all the significant issues in proper relevance. Due to time constraints this portal has been developed as a prototype that needs to be extended further by incorporating other packages.

**Potential for further work**

This study has the potential to be scaled up to include a variety of sectors and end-users to mutually share best practices and success stories, especially from developing countries. Apart of dissemination through various means, it is important that the information in tools is also converted into a capacity building curriculum to be imparted as an academic course.

**Publications**

*Not applicable*

**Acknowledgements**

The project team expresses gratitude to the APN for the support provided for the developmental of the web-based portal for policymakers and practitioners. We also wish to acknowledge the efforts of our colleagues in the Center for Information Technology and Application (CITA), TERI for technical support in developing the website prototype. Finally we wish to thank reviewers and external consultants for providing valuable suggestion and feedbacks on the website portal and final report

## Technical Report

### **Preface**

Policymakers and practitioners directly or indirectly related to environment and climate issues have a critical role to play in enabling decision tools for risk reduction. Recognising the importance of stakeholders that are not directly related to environment and climate issues, the current project activity seeks to build capacities of such stakeholders to better understand the climate change dynamics. The proposed activity seeks to develop a modular web-based learning package to understand climatic risks and will also attempt to build capacity to systematically screen climate change risks, and modify currently available risk-transfer mechanisms so that affordable products and innovative delivery mechanisms are made available to the most vulnerable communities.

## **Table of Contents**

Technical Report	4
Preface	4
Introduction	6
Methodology	7
Results & Discussion	7
Conclusions	10
Future Directions	10
References	11
Appendices	11
Conferences/Symposia/Workshops	11
Funding sources outside the APN	11
Annex I - Round Table Discussion on Information and Communication Technology (ICT) and Climate Change	12
Objective of the event	12
Background	12
Agenda	13
Participant List	14

## 1. Introduction

Climate change is expected to disproportionately impact developing countries, whose economies are closely tied to climate-sensitive sectors like agriculture, which are already facing multiple stresses due to population growth, urbanisation, industrialisation, and globalisation. In the tropics and subtropics, where some crops are near their maximum temperature tolerance and where rainfed agriculture dominates, yields are likely to decrease for even small changes in climate, which could lead to increased risk of hunger. Often the poorest in rural areas occupy the most marginal lands and this forces people to rely on highly vulnerable livelihoods in areas prone to drought, flooding, and other hazards. Developing countries also lack the financial and technical resources to effectively defend themselves against natural disasters (IPCC 2001). Thus, regions and communities that are unable to cope with current climate hazards are also likely to be the most poorly equipped to cope with the adverse impacts of climate change (Adger et al 2003).

The impacts of climate variability or extreme events have traditionally been tackled through government assistance or informal risk sharing at the community level. Rural households respond to the lack of formal financial services by turning to moneylenders, selling assets, reducing inputs in farming, or diversifying their activities. Another strategy is to send family members to work elsewhere and remit payments. However, such traditional risk management strategies while reducing vulnerability in the short term can increase vulnerability over the longer term by promoting sub-optimal asset allocation. For instance, small farmers may opt for multiple cropping to reduce income variability rather than risk growing the most profitable crops. Without adequate recourse to formal credit and insurance, small and marginal farmers in particular become caught up in a vicious cycle of indebtedness and impoverishment. When faced with extreme events, traditional mechanisms for risk sharing can break down, and adding to existing vulnerabilities of communities (Hess et al, 2002). World Bank (2003) pointed out that the current approach of risk management through government assistance or informal risk sharing at the community level lacks institutional incentives and underplays the role of risk financing through ex-ante mechanisms (such as catastrophe reinsurance and contingent credit facilities) that could provide financial liquidity in the aftermath of a natural disaster, and kick-start economic recovery. Clearly, relief is not enough to restore those most affected to their original economic status – making risk transfer tools like insurance in the light of India's disaster vulnerability, very important.

The project was implemented on assumption that the rural poor in developing countries can be made less vulnerable to the adverse impacts of climate change through judicious natural resource management policies and access to risk transfer mechanisms. However, this requires capacity building of policymakers and practitioners not directly dealing with climate change issues. These include finance or agriculture or water ministry officials, insurance regulators, and micro-finance institutions. Hence, the project aimed to develop a web-based learning package to build the capacity of policymakers and practitioners who can play a critical role in reducing risk and vulnerability by developing appropriate policies and risk transfer mechanisms. The project activities were carried out to achieve two following objectives in last one year:

- To build capacity of policymakers and practitioners not directly dealing with climate change, who can play a critical role in reducing risk and vulnerability by developing appropriate policies and risk transfer mechanisms
- To develop a web-based learning package for easy access and wider dissemination

## **2. Methodology**

The learning packages are developed by TERI in consultation with stakeholders through consultations and interaction that shared scientific knowledge based on available information on climate change model simulated scenarios for India and vulnerability and impact assessments carried out in the country. Existing research literature – most importantly the IPCC Reports, India's National Communications to UNFCCC, National Policies in climate sensitive sectors such as agriculture, water resources, forestry etc. and related research studies were compiled and analysed. It also used case studies/success stories from developing countries to explain the strategies that need to be adopted by both public and private players. Modules have been developed for (i) researchers, (ii) practitioners, and (iii) policymakers.

The emphasis was not on developing a sophisticated information system, but on user-friendly information packages with current scientific knowledge about climate change along with case studies and success stories of coping and adaptation measures in developing countries, and building relevant capacity for effective policies to meaningfully address the changing risks posed by climate change in the process.

The project comprises of an approach that consisted three broader aspects under which the information from ongoing or already concluded research project was compiled as modular web-based learning packages vis-a-vis climate change scenarios; vulnerability and adaptation; financing mechanisms. The activities focused on assessing the needs of stakeholders in terms of existing capacities and understanding they have on climate change as problem and its impacts; identify ongoing or completed research projects, where appropriate outcomes can be converted to sensitise or enhance capacity. The assessment was carried out through stakeholder consultations carried out for various other projects as well as bi-lateral discussions with policy makers. The aspects identified, where capacity needed to be enhance were science of climate change, sectoral impacts and type of risks emerging from climate change disasters and mechanisms required to integrate necessary action in existing policies at various levels.

Following the outcomes of assessment, project team reviewed ongoing internal and external research projects to identify necessary information that can be used for preparing web-based learning packages. The information identified were recent updates on science of climate change and projections made by IPCC AR4 sensitising stakeholders on findings of scientists and extent of efforts required to stay within 550 ppm of Co2 equivalent, India's Climate Risk Screening through ORCHID tool to assess possible impacts in key sectors and recommended measures that stakeholders can adopt to mitigate severe impacts, Country's actions on climate change to orient on existing policy actions and measures need to be adopted to integrate them with their ongoing activities, building coping strategies of vulnerable communities, considering insurance as adaptation tool for short or long terms impacts on agriculture, adaptation matrix. The information also comprised projections of climate-vulnerable hot spots to help policymaker to identify and inform the policy-making framework for climate smart policy decisions.

The tools are ready to be packaged in learning capsules and are being edited to suit requirements of stakeholders in terms of its utility. The Learning packages will be up running on TERI website and disseminated on our sources by first week of August this year.

## **3. Results & Discussion**

This initiative provides a good opportunity to inform policymakers and practitioners about ongoing research on climate change and related issues. Usually, the determination of appropriate climate policy requires comprehensive and quantified



information system with all the stakeholders' issues included. The rationale for development of such an initiative is to facilitate a two-way learning process by providing relevant information to policymakers and practitioners, addressing their queries and also building their capacities to integrate climate change solutions in existing and future policy making processes. The vulnerability of a programme/project varies from the others, and therefore the need to assess it in a quantified manner to make the decision processes well informed and thus more robust. The learning packages focuses on several tools and mechanisms that are listed below:

- a. *Understanding climate change and impacts:* This package informs policymakers about the science behind the climate system and climate change phenomena. The scenarios in learning package discuss impacts on sectors such as agriculture, water resources, human health, forestry and biodiversity, energy etc. in a comprehensive manner. The information package has been put together as slide show flowing from basic questions on climate change towards specific examples of crucial sectors.
- b. *Climate Risk Screening Methods* - The package from DfID's Climate Risk Screening research project, ORCHID (Opportunities and Risks from Climate Change and Disasters) identifies well-structured process pathways to include the relevant adaptation options and strengthen the existing policy framework by reducing the risks of climate change (scenarios for 2020s, 2050s, and 2080s were considered). The cost-benefit analyses allow practitioners to make informed investment decisions in options that would have long-term benefits based on the climate change impacts assessments (Fig. 1).
- c. *Building Coping Strategies* – The information increases an understanding on issues and opportunities that policymakers need to address to enhance coping strategies of communities in dealing effectively with extreme climatic events such as droughts and floods. The package has been prepared from a study that draws outcomes from three case studies implemented in three river sub- basins: Pennar basin in Andhra Pradesh, Mahanadi in Orissa and Godavari in Maharashtra.
- d. *India's Action on Climate Change* – The package orients stakeholders on country's existing plans and initiatives taken in context of international expectations or requirements.
- e. *Vulnerability index and hotspot mapping:* The climate change projections also helped in identifying the climate-vulnerable hot spots to inform the policy-making framework for climate smart policy decisions. For example, to analyse the impacts of climatic changes on the Indian agricultural sector in the context of ongoing economic and policy changes, a double exposure of Indian agriculture was assessed through findings from various case studies. Case study sites were selected based on their exposure to extreme climatic conditions including droughts, floods and cyclones. It should be noted that regions with highest climate sensitivity and exposure are not necessarily the most vulnerable (Fig. 2).

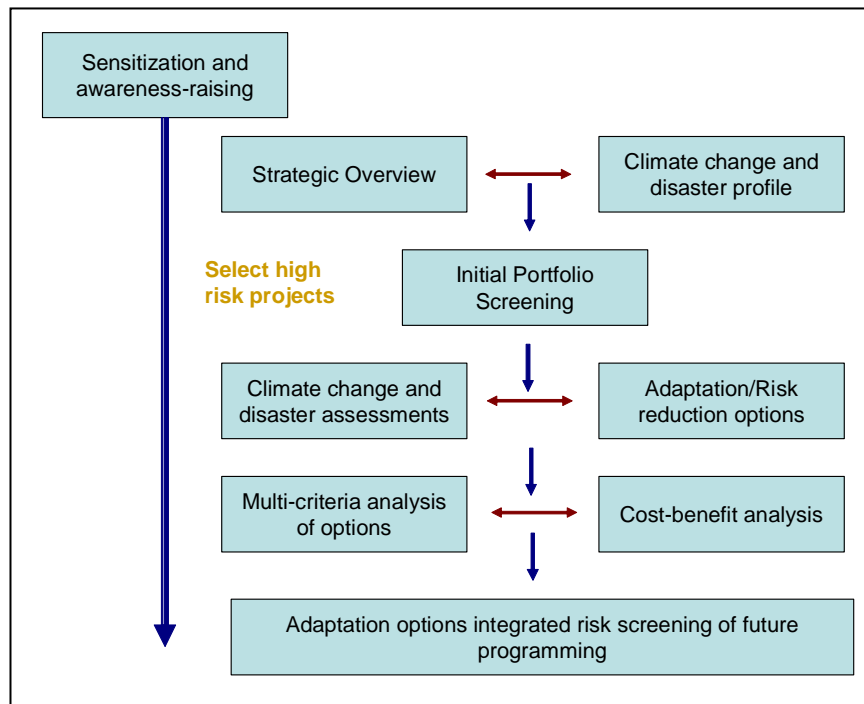


Figure 1. ORCHID process to screen and assess climate risks inherent in DfID's programmes and decision making for a climate robust adaptation option. Source: Tanner et al, 2007

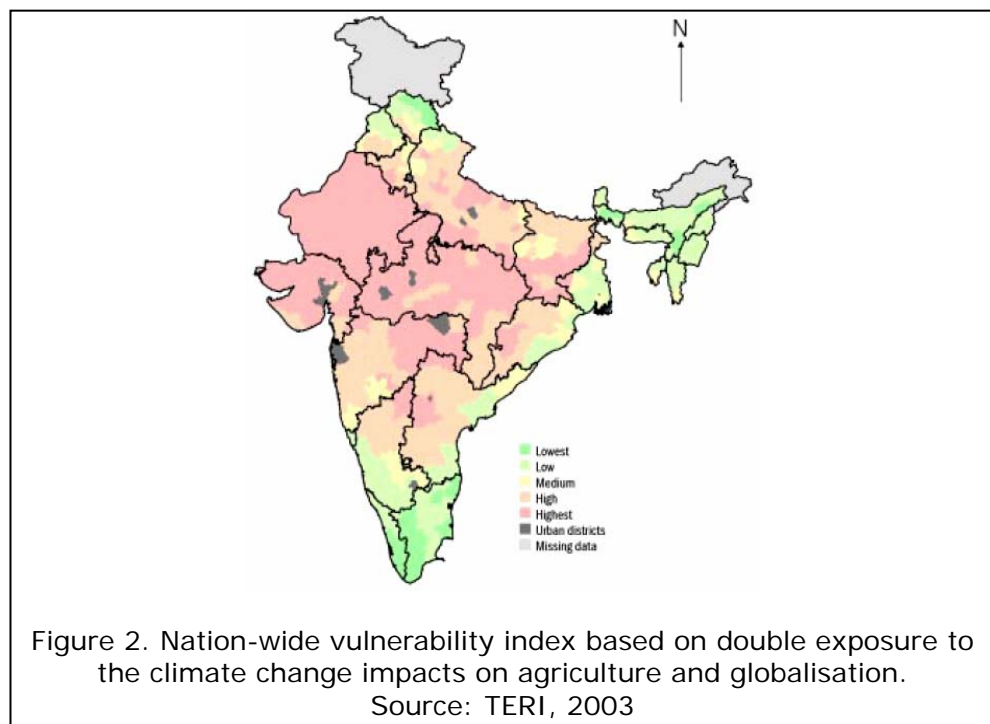


Figure 2. Nation-wide vulnerability index based on double exposure to the climate change impacts on agriculture and globalisation. Source: TERI, 2003

f. *Understanding the Southern perspective for Adaptation and Mitigation*

To contribute to a better understanding of the trade-offs and conflicts that exist between adaptation and mitigation policies, this package informs on developing novel, integrative proposals for a post-2012 climate governance architecture that will be based on scientific research as well as intense deliberative exercises. The learning package has brought forward the

concerns and priorities for/of negotiators, non-governmental organisations, and other relevant actors from the south to ascertain their concerns based on criteria including economic, financial, technological, equity and efficiency, and international political implications. The tool will feed in key policy recommendations, which in turn will feed in to shape an equity based future climate policy.

**g. *Mitigation and CDM: facts and figures***

This package informs the policymakers and practitioners of the current patterns of energy use, consumption and demand, renewable energy sources, efficiency in terms of reducing CO<sub>2</sub> emission and development of projects documents for CDM. These aspects are necessary both for the domestic policies as well as for the international policies.

**h. *Information and Communication Technology (ICT) for awareness and capacity building for enhancing adaptive capacities of vulnerable communities:***

The impacts of climate variability and change will affect rural communities that directly depend on natural resources for their livelihoods and sustenance. Information Communication Technologies (ICT) can be used as an effective tool for information dissemination, building capacities and improving the livelihood of rural communities. ICTs have the capability to reduce time and space boundaries. Knowledge about climatic conditions is a vital factor that enables communities for advance decision-making in order to prevent losses from changes in the climatic variables. New and emerging model needs to be adopted and customised with the changing needs and time. By involving a range of stakeholders including the government and private sector there is a need to mainstream climate change adaptation into the development process at the community level.

#### **4. Conclusions**

The presence of multi-tiered socio-economic classes in the society determines the differential vulnerability levels to climatic stress to a great extent. The impacts of climate variability and change affect the poor the most, owing to their high dependence on climate-sensitive sectors, limited ability to cope with the impacts of extreme events and often also due to geographical proximity to locations exposed to extreme events (such as coastal and mountainous areas). To address these impacts and vulnerabilities, timely and accurate information about the climate system- its drivers and variability and changes- are essential. Understanding past trends of climatic variables can enable building future climatic scenarios using various integrated models- such as earth system models. These scenarios are essential to drive adaptation and mitigation efforts across regions and sectors and policy mechanisms to enable and strengthen these efforts. The study identified following tools and mechanisms that can build the capacity of policymakers and practitioners for targeted efforts towards risk identification, reduction and management and enhancing the adaptive capacities of vulnerable communities.

#### **5. Future Directions**

This study has the potential to be scaled up to include a variety of sectors and end-users to mutually share best practices and success stories, especially from developing countries.

## References

- TERI, 2003. Coping with global change: Vulnerability and adaptation in Indian agriculture. TERI, Delhi.
- IPCC, 2001. Climate Change 2001: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge
- IPCC, 2007. Impacts, Adaptation and Vulnerability. Contribution of Working Group I and II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge
- Tanner TM, Nair S., Bhattacharjya S, Srivastava SK, Sarthi PP, Sehgal M and Kull D, 2007. ORCHID: Climate Risk Screening in DFID India. Detailed Research Report. Institute of Development Studies,UK. Accessible at [www.ids.ac.uk/UserFiles/File/poverty\\_team/climate\\_change/ORCHID\\_RR.pdf](http://www.ids.ac.uk/UserFiles/File/poverty_team/climate_change/ORCHID_RR.pdf)
- Hess U, K. Richter and A. Stoppa (2002). Weather risk management for agriculture and agribusiness in developing countries. In R.S. Dischel (ed). Climate risk and the weather market: financial risk management with weather hedges. London: Risk Books.
- Adger, W.N., Khan, S.R., and Brooks, N., 2003, Measuring and Enhancing Adaptive Capacity, UNDP Adaptation Policy Framework Technical Paper 7, New York.

## Appendices

### Conferences/Symposia/Workshops

- Delhi Sustainable Development Summit (DSDS) Workshop on Information and Communications Technology, on 6<sup>th</sup> February, 2008 at Delhi.
- Climate Change Portal (<http://www.climateofconcern.org/testsite>) was test-launched for stakeholders' feedbacks at the exhibition during DSDS from 7<sup>th</sup> Feb 2008 to 9<sup>th</sup> Feb 2008 at Delhi. (Since it was an exhibition, the agenda and participants are not listed here).

See Annex for participant lists.

### Funding sources outside the APN

- Veolia, France
- Électricité de France (EDF)

### Acknowledgements:

World Bank, DfID, BHC, SDC, ADAM (EC), Dr. Prodipto Ghosh

## **Annex I - Round Table Discussion on Information and Communication Technology (ICT) and Climate Change**

Venue: Jacaranda Hall – I, India Habitat Center, Lodi Road, New Delhi  
Date: 6<sup>th</sup> February 2008  
Time: 1400 hrs– 1630 hrs

### **Background**

More than 65% of the Indian population still lives in the villages with agriculture being their main occupation. The rural communities mostly depend on the traditional tools and methods for most of their regular activities. Though, mobile phones and cable TV has spread to some extent, the level of information dissemination and awareness generation in rural areas, is still an area of concern. Information Communication Technologies (ICT) can be used as an effective tool for information dissemination, building capacities and improving the livelihood of rural communities. ICTs have the capability to reduce time and space boundaries. The role of ICT is pivotal in disseminating scientific knowledge/technologies to the end users especially to people on the other side of the digital divide in order to provide maximum benefit to the rural communities.

ICT has played a major role in bridging the digital divide. Numerous efforts by government and organisations are using ICT as a tool for information dissemination and development practices. Value based services through ICT enabled centers are being provided to the rural population. Interventions have already been made in the matters of health, water and agriculture by using ICT as a tool. The role of ICT in creating a platform for information dissemination and channeling services has been appreciated. Knowledge about climatic conditions is a vital factor that enables communities for advance decision-making in order to prevent losses from changes in the climatic variables. New and emerging model needs to be adopted and customised with the changing needs and time.

In the context of the changing climatic patterns, the adaptive capacities of the rural communities (who are mostly dependant on climate-sensitive sectors such as agriculture, natural resources, water and health for livelihood and sustenance) are often restricted because of the lack of either ability and/ or opportunity to adapt. Change in climate had often lead to changing patterns in ground water, food supply (decrease in crop yield), coastal erosion, decrease in fresh water availability.

Although there are several mechanisms of access to information on weather, crop management, healthcare and water management, however they are not integrated and often function in isolation. By involving a range of stakeholders including the government and private sector there is a need to mainstream climate change adaptation into the development process at the community level.

### **Objective of the event**

There is a need to address changes in climate with relation to the rural scenario in the country by using ICT as an effective tool. This event would be an effort towards achieving the following objectives:

- Sensitisation of the policy makers, CBOs, NGOs, and the rural community on the role of ICT for adaptation to climate variability and change
- Development of an integrated approach towards increasing resilience and knowledge of the rural communities for adapting to climate variability and change
- Showcasing of the best practices, information dissemination and models which demonstrate efficient use of natural resources management and green technologies

To discuss and find effective solution to the above objectives, TERI proposes to hold a **Round Table Discussion** with various stakeholders and come out with strategies for the future.

### Agenda

Welcome Address	Ms. Sangeeta Gupta	1400-1405
Setting the Theme Presentation	Dr. Leena Srivastava	1405- 1415
Special Guest Address	Ambassador Walter Fust, SDC	1415-1425
<b>Round Table Discussion on ICT and Climate Change</b>		<b>1425-1625</b>
Moderator	Dr. B. Shadrach	IDRC
Attendants	IMD NCMRWF NIDM SDC TERI Earth Watch Institute DFID * GTZ * Indian Agricultural Research Institute *	

\* Confirmation awaited

# Tea & coffee would be served during the discussions.

## Participant List

1	Dr. B Shadrach	Sr. Program Officer	IDRC	Moderator
2	Dr. LS Rathode	Head AgroMet, Additional Director General	IMD	Speaker
3	Dr. L. H. Prakash	Scientist "F"	NCMRWF	Speaker
4	Dr. Prodipto Ghosh	Distuingished Fellow	TERI	Speaker
5	Ambassador Walter Fust	Director General	SDC	Speaker
6	Dr. R. K. Mall	Associate professor/Assistant Professor	NIDM	Speaker
7	Dr. Veena Joshi	Team Leader	SDC	Speaker
8	Mr. Raghuvansh Saxena	Country Director	Earth Institute	Speaker
9	Mr. Sajan Veniyoor		Independent Consultant on ICT	Participant
10	Mr. A Krishnan		APCTT	Participant
11	Mr. Srinivasan.N	Incharge, Innovation Management	APCTT	Participant
12	Dr. A.L. Ramanathan	Associate Professor, School of Environmental Sciences	JNU	Participant
13	Dr.(Ms) Kadambari		ISAP	Participant
14	Mr. Sunil Khairnar	Director, projects & operations	ISAP	Participant
15	Mr. Rohit Magotra	COO	Ekgaon Technology	Participant
16	Ms. Narayani Ganesh	Journalist	Times Group	Participant
17	Mr. Michael Scholze		GTZ (German Technical Cooperation)	Participant
18	Dr. Sreeja Nair		NIDM	Participant
19	Dr. Ottmar Schwank		INFRAS	Participant
20	Ms. Sonu Jain		Indian Express	Participant
21	Mr. Anand Kumar		UN- Solution Exchange	Participant
22	Mr. Naimur Rehman		One World South Asia	Participant