# Report on

## Program on Developing Proposals on Climate Change Adaptation and Mitigation to access Climate Funds

## 29-30-31 August, 2016 - IL&FS Training Centre, Mumbai

**Orgainsed By:**

IL&FS ACADEMY OF APPLIED DEVELOPMENT

**Partnered By:**

NABARD NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT

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Climate Change Asia
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## BACKGROUND

Consideration to Climate Change (CC) needs to be mainstreamed in the development projects in India. The government of India and in specific the Ministry of Environment and Forests and Climate Change (MoEFCC) have responded to this need by preparing State level CC Action Plans and by facilitating CC related funds via NABARD.

To take advantage of these funds, State level agencies and the Private sector should get a rounded exposure and hands-on training on how to write proposals. A three-day comprehensive training program was therefore planned under the leadership of IL&FS Academy for Applied Development (IAAD). The program focused on improving climate change knowledge among the professional working in the infrastructure, banking, agricultural and water sectors. It builds their capacities towards preparing and assessing proposals for adaptation-mitigation projects from various climate funds.

## COURSE OBJECTIVES

- Increase the general knowledge on global warming and climate change.
- Provide a foundation for understanding impacts of climate change.
- Provide a framework for conducting vulnerability assessments at different scales, ranging from neighborhoods, cities, regions/catchment areas and the State.
- Enable participants to generate a portfolio of strategies to systematically identify and address vulnerabilities.
- Provide tools and techniques to establish priorities and evaluative criteria to choose between resilience, mitigation and adaptation options.
- Provide an overview of various climate funds (AF, GCF, and NAFCC) and other such instruments (e.g. Green Bonds).
- Build skills with the help of case studies and group sessions on the process of preparing and appraising proposals to meet the requirements of NAFCC

## TARGET AUDIENCE

- Senior Technical officers and planners working in natural resource management in sectors such as infrastructure, agriculture, water, and climate change, etc.
- Senior officers In charge of state nodal department dealing with climate change adaptation
- Senior National and State department staff implementing the State action plan on climate change
- Project Managers in Development Financing Institutions, Impact Funds & Commercial Banks
- Consultants working on adaptation to climate change
- Research and Academia
- NGO/Civil Society

## FACULTY / EXPERTS

- Dr. Dev Niyogi, Prof. Purdue University and State Climatologist, Indiana, USA
- Mr. Bikram Ghosh, Chief of Party - USAID ADAPT project, Thailand
- Dr. Mukand Singh Babel, Prof., Asian Institute of Technology, Thailand
- Dr. Prasad Modak, Dean, IAAD
- Dr. B.G. Mukhopadhyay, Chief General Manager, NABARD
- Dr. Puja Sawhney, Sr. Program Specialist, Climate Change Asia,
- Mr. Kirtiman Awasthi, Senior Policy Advisor, GIZ, India
- Ms. Ruchita Ingle, Asst. Vice President, EMC
- Mr. Jaideep Srivastava, General Manager, NABARD
- Mr. Sachin Kamble, Asst. General Manager, NABARD

## TRAINING PROGRAM

The workshop was designed to encourage participation and facilitate stakeholder interaction. The first two days included lectures and group work. The third day of the workshop was designed as hands-on proposal writing for the given cases.

<table>
<tr><th>TIME</th><th>DAY 1</th><th>TIME</th><th>DAY 2</th><th>TIME</th><th>DAY 3</th></tr>
<tr><td>09.30-10.00</td><td>Registration</td><td>09.30-09.45</td><td>Recap of Day 1</td><td>09.30 - 09.45</td><td>Recap of Day 2</td></tr>
<tr><td>10.00-10.05</td><td>Welcome - Dr. Shrikar Dole, IAAD</td><td rowspan="4">09.45-10.45</td><td rowspan="4">Strategies for Reducing Vulnerabilities & Mainstreaming Resilience - Mr. Bikram Ghosh</td><td rowspan="6">09.45-13:00</td><td rowspan="6">Group work on Proposal writing (There will be three Working Groups) - Ms. Ruchita Ingle and EMC team<br><br>There will be a 30-minute presentation on State Level Procedures (Director Env. SAPCC / ACT)</td></tr>
<tr><td>10.05-10.15</td><td>Inaugural Address - Mr. Jaideep Srivastava, NABARD</td></tr>
<tr><td>10.15-10.20</td><td>Opening Remarks - Mr. Hari Sankaran,C&MD, IL&FS / Dr. Prasad Modak</td></tr>
<tr><td>10.20-10.30</td><td>Introduction of Faculties</td></tr>
<tr><td>10.30-10.45</td><td>Introduction by Participants</td><td rowspan="2">10.45-11:45</td><td rowspan="2">Response to Climate Change Adaptation & Mitigation - Prof Dev Niyogi</td></tr>
<tr><td>10.45-11.45</td><td>Overview of Climate Change, & Scoping Climate Impacts - Dr. Prasad Modak</td></tr>
<tr><td>11.45-13.00</td><td>Introduction to Vulnerability, Exposure & Sensitivity - Prof Dev Niyogi</td><td>11.45-13.00</td><td>Adaptation & Mitigation Planning - Prof. Mukand Singh Babel</td></tr>
<tr><td>13.00-14.00</td><td>LUNCH BREAK</td><td>13:00-14:00</td><td>LUNCH BREAK</td><td>13:00-14:00</td><td>LUNCH BREAK</td></tr>
<tr><td>14.00-15.00</td><td>Assessing Vulnerability - Dr. Puja Sawhney</td><td>14:00-15:00</td><td>Case Studies on Extreme risk, vulnerabilities & community-based adaptation in India - Mr. Bikram Ghosh</td><td>14:00-15:30</td><td>Group work on Proposal Finalization& Presentation</td></tr>
<tr><td rowspan="2">15.00-17.00</td><td rowspan="2">Group exercises on Vulnerability Assessment - Ms. Ruchita Ingle</td><td>15:00-16:15</td><td>Climate Funds - Mr. Kirtiman Awasthi</td><td>15:30-17:00</td><td>Presentations by Groups and Response by Expert Panel</td></tr>
<tr><td>16.15-17.30</td><td>Preparation of Proposals & Appraisal of Projects - Mr. Jaideep Srivastava and Mr. Sachin Kamble, NABARD</td><td>17.00-17.30</td><td>Program Evaluation, Feedback & Closing</td></tr>
<tr><td>17.00-17.10</td><td>Next Day Agenda & Group photo</td><td>17.30-18.00</td><td>Case study Briefing & Next Day Agenda - Ms. Ruchita Ingle</td><td></td><td></td></tr>
</table>

## ORGANIZING & SUPPORTING PARTNERS

This workshop was organized by IL&FS along with 7 other partners. The following table outline profiles of all the organizations.

IAAD is a "not for profit" organization whose mission is to activate a new paradigm through continued education and capacity building focusing on resource efficiency and conservation as the strategic response to environmental issues. IAAD's vision is to be the leading research-to-practice facilitator in the domain of sustainability to address the emerging challenges and opportunities in the areas of climate change & sustainability.

IAAD will leverage on the enormous experience of IL&FS in Public Private Partnerships (PPP) using it to provide solutions for sustainable development in line with the national agenda. Areas of interest for IAAD cut across various sectors including roads, water, energy, health, waste management and education. www.ilfsacademy.org

Environmental Management Centre EMC's consulting services are essentially strategic, knowledge driven and supported through research and training. In all the consulting assignments, EMC's expertise lies in harmonizing economic, environmental and social considerations (triple bottom line).

In past 15 years, EMC has developed and executed a number of national, regional and international assignments that have set several "firsts". Many of these assignments have stimulated action leading to policy reforms, sustainable investments and led to long-term capacity building. www.emcentre.com

National Bank for Agriculture and Rural Development (NABARD) is an apex development bank in India with a mandate for facilitating credit flow for promotion and development of agriculture, small-scale industries, cottage and village industries, handicrafts and other rural crafts.

It also has the mandate to support all other allied economic activities in rural areas, promote integrated and sustainable rural development and secure prosperity of rural areas. In discharging its role as a facilitator for rural prosperity NABARD is entrusted with

- Providing refinance to lending institutions in rural areas
- Bringing about or promoting institutional development and
- Evaluating, monitoring and inspecting the client banks

www.**nabard**.org

Climate Change Asia at the Asian Institute of Technology—or CCA@AIT—is a one-stop knowledge hub for meeting the diverse range of capacity building needs required to pursue low carbon development and achieve climate resilient societies, with a special emphasis on developing capacities to prepare, finance, and implement 'bankable' climate change mitigation and adaptation projects.

The Asian Institute of Technology promotes technological change and sustainable development in the Asian-Pacific region through higher education, research and outreach. Established in Bangkok in 1959, AIT has become a leading regional postgraduate institution and is actively working with public and private sector partners throughout the region and with some of the top universities in the world. www.**ait**.ac.th

USAID Adapt Asia-Pacific is USAID's Climate Change Adaptation Project for Asia and the Pacific (Adapt Asia-Pacific). Helping nations in Asia and the Pacific obtain financing from international climate change adaptation funds is the purpose of the USAID Adapt Asia-Pacific program.

Funded through USAID's Regional Development Mission for Asia (RDMA) and implemented by AECOM, the program is designed to share information and best practices about climate fund requirements and help governments build capacity to access the existing pool of international climate change adaptation funds. www.adaptasiapacific.org

GIZ has over 50 years of experience in a wide variety of areas, including economic development and employment, energy and the environment, and peace and security.

The diverse expertise of their federal enterprise is in work with the German Government, EU institutions, UN and governments of countries.

Together with partners, GIZ works to deliver solutions that offer better prospects and sustainable development. www.giz.de

Action on Climate Today is a five-year programme to develop strategies to combat the impact of climate change.

Funded by the UK Department for International Development (DFID), ACT began in 2014 with the aim to help partner countries integrate climate change into their policies, plan and budgets.

ACT believes that only a collective effort will help us solve one of the biggest problems facing humanity. www.actiononclimate.today

## WORKSHOP SESSIONS

### 1) Inaugural Session

Dr. Shrikar Dole, Head, IL&FS Academy of Applied Development, welcomed all the participants to the three day Program on Developing Proposals on Climate Change Adaptation and Mitigation to access Climate Funds. He introduced the two guest speakers Mr. Harishankaran, Vice Chairman and MD, IL&FS and Mr. Jaideep Shrivastava of NABARD.

In his inaugural address on the behalf of NABARD Mr. Jaideep Shrivastava informed that NABARD, is the national implementing entity for Green Climate Fund and National Adaptation Fund for Climate Change which is a Govt. of India fund. He stated that vulnerability assessment is a challenge in India and that there is a need for strategic planning to be undertaken before submitting projects to GCF. He mentioned that NABARD is also looking for active participation from private sector.

In his opening remarks, Mr. Harishankaran, Vice Chairman and MD, IL&FS informed about the involvement of IL&FS in Environmental & Social Sustainability since mid-90 and has an independent audit of Environment and Social compliances. He also added that, IL&FS sees environmental & social assessments and interventions as a critical way of bridging the expectations gap between the catchment areas and project sponsors. He encouraged the participants to challenge themselves for radical thinking. He also cautioned the participants that with expectations they will find opposition for everything they do because climate change is still not in that sense an understood concept and that's the gap this program should fill up.

Dr. Shrikar Dole, then invited all the partner institution to give a brief introduction of themselves and their institutions they represent and the work carried out by them.

The session ended with round of introduction by the participants. Nine speakers constituted as faculty for this course, encompassing eleven lecture sessions and a case study exercise. Session wise details of the workshop in next few pages:

## 2) Overview of Climate Change & Scoping Climate Impacts

Dr. Prasad Modak started the presentation with explaining the difference between weather change and climate change. He elaborated the definition of climate change given by various agencies. He discussed the natural and human activities that lead to climate change and the major sectors that contribute to climate change. He explained the global impacts of climate change on different sectors such as water, agriculture, health, forest, businesses, etc. and impacts of climate change on India.

Narrowing down to India, he briefly highlighted the India's plan to combat climate change. Dr. Prasad Modak concluded the presentation with discussing options to finance climate change (adaptation and mitigation) projects.

## 3) Introduction to Vulnerability, Exposure & Sensitivity

Prof Dev Niyogi started the presentation by explaining the difference between weather & climate and climate change & climate variability. He explained the basic terms and concepts of exposure, sensitivity, adaptive capacity, and vulnerability that are used very frequently in addressing climate change.

Prof Dev Niyogi covered, in brief, the different downscaling options.

He highlighted some of the examples of smart urban climate resiliency such as flood inundation maps in Australia, Open Street Map project for Typhoon Haiyan in the Philippines, GIS system development in the city of Honolulu which allows any citizen with internet access to find out the flood vulnerability level of any spot in the city.

## 4) Assessing Vulnerability

Dr. Puja Sawhney started the presentation with explaining the definition of vulnerability to climate change. She described vulnerability as a function of Exposure, Sensitivity, and Adaptive Capacity. She elaborated in detail the vulnerability assessment frameworks - *top down and bottom up*. She also highlighted the steps to be carried out for vulnerability assessment - *Define the purpose, Planning, Assessing current Vulnerability and Future Vulnerability*.


## 5) Group exercises on Vulnerability Assessment

The group exercise was conducted by Ms. Ruchita Ingle from EMC. In the first session of the exercise, all the participants were given a question and answer sheet. The question answer sheet consisted of 50 multiple choice questions on the basics concepts of climate change. The participants were asked to select the correct answer for the asked questions in 20 minutes. All the participants successfully filled the answers. The participants were given the correct answer sheet for cross checking their answers.

In the second session of the exercise, the participants were divided into three groups. Each group was given a case study. Participants were asked to read the case carefully and brainstorm among themselves to identify the vulnerabilities and propose appropriate adaptive measures for their case.

## 6) Strategies for Reducing Vulnerabilities & Mainstreaming Resilience

In the first part of the presentation, Mr. Bikram Ghosh discussed the criteria to evaluate climate change adaptation and resilience options. Some of the evaluative criteria discussed were: *Effectiveness, Cost, Technical feasibility, Ease of implementation and Co-benefits.*

In the second part of the presentation, he discussed, how to develop evaluative criteria to rank the adaptation options.

Some of the tools that were discussed to rank the adaptation options were Goeller scorecard, Goal achievement matrix, Technical Advisory Group, etc. The third part of the presentation focused on mainstreaming Resilience measures into existing local plans and budgets with broad public support.

## 7) Response to Climate Change Adaptation & Mitigation

Prof Dev Niyogi started the discussion with explaining the difference between two responses to climate change – *adaptation and mitigation* by giving examples. He highlighted a number of decision support tools such as AgClimate View$_{DST}$, Climate Patterns Viewer$_{DST}$, etc. that converts useful climate information into usable information for the general population.

Prof Dev Niyogi covered in his presentation the steps to climate-proof cities. The steps consisted of - *Preparation (education, awareness), Analysis (Vulnerability and impact analysis), Strategizing actions and Integration & implementation.*

## 8) Adaptation & Mitigation Planning


Prof. Mukund Babel started the presentation by explaining the basic concepts of Vulnerability, Exposure, Sensitivity, Adaptive Capacity, etc. He elaborated in detail the step by step process of Adaptation Planning.

He laid down the adaptation planning process in the steps such as - Establish a vision and guiding principles, Review and Establish a Baseline, Assess Vulnerability and Risk, Develop the Adaptation Plan, Design the Implementation of Actions, Monitor, Evaluate and Update the Plan, Engage Stakeholders, Mainstream Adaptation, Communicate and Raise awareness.

Prof. Babel discussed a number of projects carried out by Asian Institute of Technology (AIT) offering more insights on vulnerability assessment and adaptation planning. The cases that were discussed includes 'Climate Risk and Adaptation for Bangkok Metropolitan Region's 'Integrated flood risk assessment' carried out for the Day river diversion area in the Red River, Vietnam; 'Climate Change Impacts on Hydrology, Water Resources, and Water Use Sectors: Cases from Asian Countries'.

## 9) Case Studies on Extreme risk, vulnerabilities & community-based adaptation in India

In the first part of the session, Mr. Bikram Ghosh discussed a case on "Integrated Flood Management in Valenzuela, Philippines". The discussion was about the risk and vulnerabilities faced by Valenzuela, adaptation options for the identified vulnerabilities, project objectives and components. In the second part of the session, Mr. Bikram Ghosh conducted a group exercise. A case study on "Conservation and Management of Costal Resources in Krishna Delta, Andhra Pradesh" was given to the participants. The participants were divided into four groups. Each group was given the following task to be presented:

- Group 1: Identifying Risks and Vulnerabilities
- Group 2: Identifying Options for Adaptation
- Group 3: Identifying Project Objectives
- Group 4: Identifying Project Components

Each group at the end of the session presented the outcomes followed by discussions.

Group 1: Identifying Risks and Vulnerabilities

- Loss of livelihood was identified as the key vulnerability due to flooding, sea level rise and increase in intensity of cyclonic storms

Group 2: Adaptation Options

- Building dike using in-situ earth excavation around the paddy farm to prevent ingression of sea water
- Promoting paddy-fish culture or integrated fish farming in the channels around the paddy farm
- Water efficient agriculture practices such as drip irrigation
- Introducing System of Rice Intensification (SRI)
- Building water harvesting structures for post Kharif intensification of agriculture

Group 3: Identifying Project Objectives/Goal

- The overall goal is to enhance the adaptive capacities of the local community and other stakeholders by strengthening their institutional mechanisms, restoration, and management of coastal resources and building livelihood assets.
- To assess the baseline situation and monitor vulnerability due to the predicted impacts of climate change on natural and social systems and build on the current coping mechanisms and adaptive strategies.
- To train and build the adaptive capacities and climate resilient livelihood options for the stakeholders.
- To develop and demonstrate replicable models of community-based mangrove restoration in unprotected mangroves and mangrove based agro-aqua farming systems as potential means to adapt to seawater inundation due to sea level rise triggered by climate change.

Group 4: Project Component

- Community mobilization and organization
- Capacity building for coastal protection and livelihoods
- Restoration of mangrove areas for coastal protection
- Demonstration of Integrated mangrove based fishery livelihoods
- Knowledge Management for Improved Coastal Protection

## 10) Climate Funds

Mr. Kirtiman Awasthi started the discussion with linking climate change and development. The major focus of the presentation was climate financing - *financing provided by national, regional and international entities for climate change mitigation and adaptation projects and programs.*

He discussed various National and International options to finance climate change. The National fund he elaborated were *NCEF, CCAP, NAFCC* and the International fund covered were *Adaptation Fund (AF) and Green Climate Fund (GCF)*. He also briefly talked about the methodology to access the climate finance.

## 11) Preparation of Proposals & Appraisal of Projects

Mr. Jaideep Srivastava of NABARD started the session by introducing the current situation of climate funds in India. He mentioned the eligibility criteria to access the Adaptation Fund as well as Green Climate Fund and the budget available. He has mentioned successful projects and projects under review.

After an insightful talk by Mr. Jaideep Srivastava, Mr. Sachin Kamble started the presentation explaining the role of NABARD in channelizing National & International finance for climate change projects. He elaborated in detail the step by step process to access the Green Climate Fund (GCF). The discussion entailed financing details, investment criteria of GCF, documentary requirement, proposal approval process, etc.

## 12) Case Work by Participants

On the third day of the workshop, a presentation was made by Ms. Naman Gupta, State Team Leader – Maharashtra for ACT CCIP briefed the participants about the work being done by them to capacitate the various State governments for preparing their State Action Plan and support in preparing the proposal for access to funding.

Participants were divided into three groups for case work. The purpose of the case work was to get a hands on experience of proposal writing to access climate funds. In particular, the case work seeks to deepen the grasp on:

- How to extract relevant information from the case study
- How to implement whatever has been learned during the workshop
- Come up with strong objectives or goals for the proposal
- Strategic framework for vulnerability assessment and relevant adaptation-mitigation tools

Each group was given a different case study. The three case studies given were:

- **Star City, Gujarat**
  STAR City is located on the bank of river Devi in Baridan District, Gujarat State. STAR City is conceptualized as a global financial and IT services hub and characterized to be a Central Business District (CBD). The Natural and Climate Disasters faced by the city are Earthquake, Floods, Heat Waves and Droughts. The planning cell of the city is envisioning to climate-proof the City by incorporating adaptation and mitigation strategies into existing plan. Participants were given the role of consultant, who is expected to propose adaptation and mitigation strategies to climate-proof the city.
- **Balasore district, Orissa**
  Balasore is one of the coastal District of Orissa. Natural and Climate Disasters faced by the District are Sea Level Rise, Floods, Cyclone, Tsunami, Desertification and Droughts. District Development Authority is envisioning to climate-proof the Balasore District by incorporating adaptation strategies into existing plans. Participants were given the role of consultant, who is expected to propose adaptation strategies to climate-proof the District.
- **Thermal Power Plant, Cuddalore district, Tamil Nadu**
  TCPC is developing a project comprising of Thermal Power Plant, Desalination Plant, and Coal Handling capacity of the captive port. The project was accorded EC and CRZ with a condition to implement CSR activities worth USD 15 Million in addition to developing an EMP. CSR Cell of the company is keen to come up with a plan that takes CC Adaptation & Mitigation into consideration. The cell is envisioning the Adaptation Strategies to spread across the entire district. Participants were given a role of consultant and were expected to prepare a comprehensive plan that takes on-site and off-site adaptation, and mitigation into consideration. The plan should be such that adaptation forms the core and mitigation strategies act as drivers of adaptation

Each group was asked to discuss the case amongst themselves and answer a series of questions which have been handed out along with the case study. Time allotted for answering all the questions and coming up with a strategy for each group was 3 hours and 15 mins. All the groups were asked to make a presentation of their strategies. Each group presented their proposal in front of the panel of experts for review and comments.


## 13) Closing Session

During the closing session Participants presented their group work on 3 cases studies to the Panel of experts, which included Dr. B.G. Mukhopadhyay, CGM NABARD, Dr Prasad Modak, Prof Dev Niyogi, Mr. Bikram Ghosh and Dr. Puja Sawhney and received inputs on how to better prepare a proposal for adaptation-mitigation projects to various climate funds.

Dr. Mukhopadhyay, lauded the efforts made by IAAD in bringing together various expert organization and preparing a comprehensive program for the capacity building in this field. He mentioned about continuous dialogue between NABARD and IAAD and hoped that the same would continue in the future. He also presented the certificates to the participants. Dr. Shrikar Dole Thanked all the expert faculties and participants for their support and cooperation.

## PARTICIPANTS LIST

Twenty-six participants registered for the workshop representing diverse sectors such as infrastructure, banking, agriculture, water, energy and Environmental Consulting firms.

| Sr. No. | Name | Designation | Organization |
|---|---|---|---|
| 1 | Ms. Dipti Padwal | Dy General Manager | Reliance Infrastructure Ltd. |
| 2 | Mr. M S Prithvi | Asst. Vice President | ILFS Water Ltd |
| 3 | Ms. Shruti Arora | Asst. Vice President | IL&FS Maritime |
| 4 | Mr. Arvind Solanki | Sr. Executive | IL&FS Environmental Infra |
| 5 | Mr.Balamurali A | AGM | IL&FS Thermal Power |
| 6 | Mr. Bhaskar J Paul | Program Officer | Mangrove Cell, Forest Dept, Maharashtra |
| 7 | Dr. Subir Ghosh | Project Coordinator | Mangrove Cell, Forest Dept, Maharashtra |
| 8 | Mr. Sushant Patil | Manager | NABARD |
| 9 | Mr. Aditya Lothe | Sr. Manager | IL&FS Transportation |
| 10 | Mr. Sandip Keswani | Manager | KPMG |
| 11 | Mr. SR Murthy | Asst. Vice President | IIDC Ltd |
| 12 | Mr. Sanjay Joshi | Sr. Vice President | IL&FS ( Social Inclusion Group ) |
| 13 | Mr. Ameet Hede | Sr. Manager | IL&FS Urban |
| 14 | Mr. Santosh Shidhaye | Sr. Vice President | Corporate Sustainability Cell, ILFS |
| 15 | Mr. Garvit Sah | Project Finance and Operations Consultant | New Development Bank, Shanghai |
| 16 | Ms. Munini Tefera | Regional Programme Associate | UNDP-Global Environment Facility |
| 17 | Ms. Karishma Amod Gupte | Coordinator | 2030 Water Resources Group (WRG), IFC |
| 18 | Ms. Yogita Moza | Manager | NABARD |
| 19 | Mr. Srinath Komarina | Executive Vice President | Yes Bank |
| 20 | Mr. Chaitanya S Kommukuri | Senior Manager | Yes Bank |
| 21 | Mr. Rakesh Kumar | CCF cum Director | Hariyaali Mission, Govt. of Bihar |
| 22 | Mr. Suman Kumar | Dy. Director | Fisheries(SPU), Govt. of Bihar |
| 23 | Ms. Naman Gupta | State team leader - Maharashtra | Action on Climate Today |
| 24 | Ms. Prutha Vaze | Technical expert | Action on Climate Today |
| 25 | Ms.Nisha Jayaram | Counsellor | CII – Sohrabji Godrej Green Business Centre |

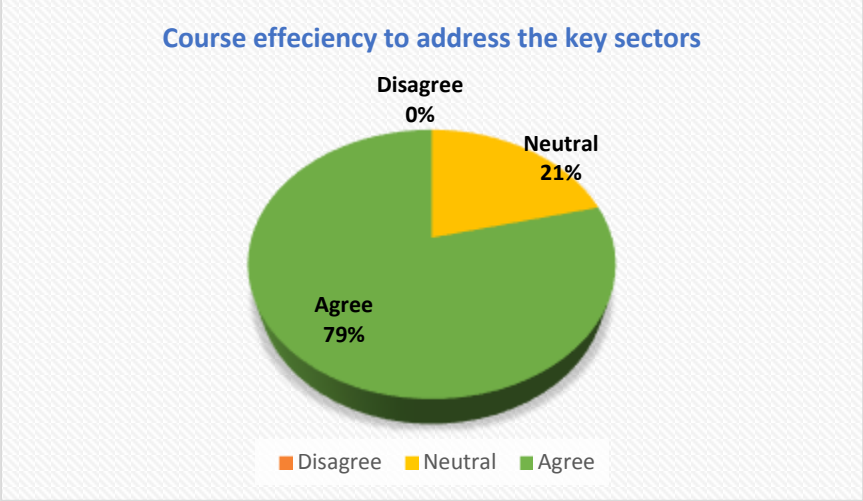
## FEEDBACK ANALYSIS

At the end of the workshop, participants were requested to fill the feedback forms. The key findings of the feedback sheets are mentioned below.

- 90% of the participants agreed strongly that they have a better understanding of the procedures, priorities and criteria for the climate funds as a result of the course.
- 79% of the participants strongly agreed that the course addressed all the key sectors.
- 74% of the participants agreed strongly that the course has provided them with the better understanding of climate change impacts.
- 78% of the participants agreed strongly that the course has prepared them to access domestic and international financing for climate adaptation.

- **Did the course effectively addressed the key sectors in the participant's country?**

  79% of the participants strongly agreed that the course addressed the key sectors in their country and 21% neither agreed nor disagreed.

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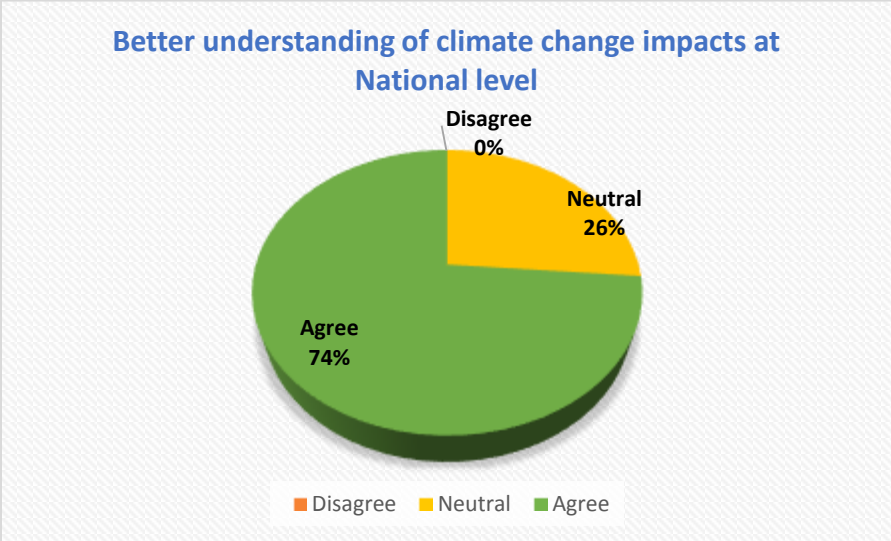
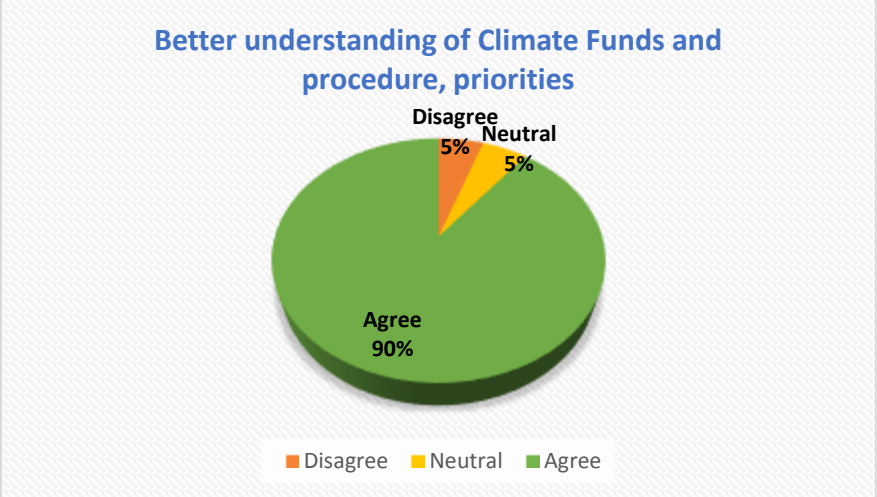
- **Do the participants have a better understanding of climate change impacts in their countries?**

  74 % of the participants agreed strongly that the course has provided them with the better understanding of climate change impacts in their country whereas 26% neither agreed nor disagreed.



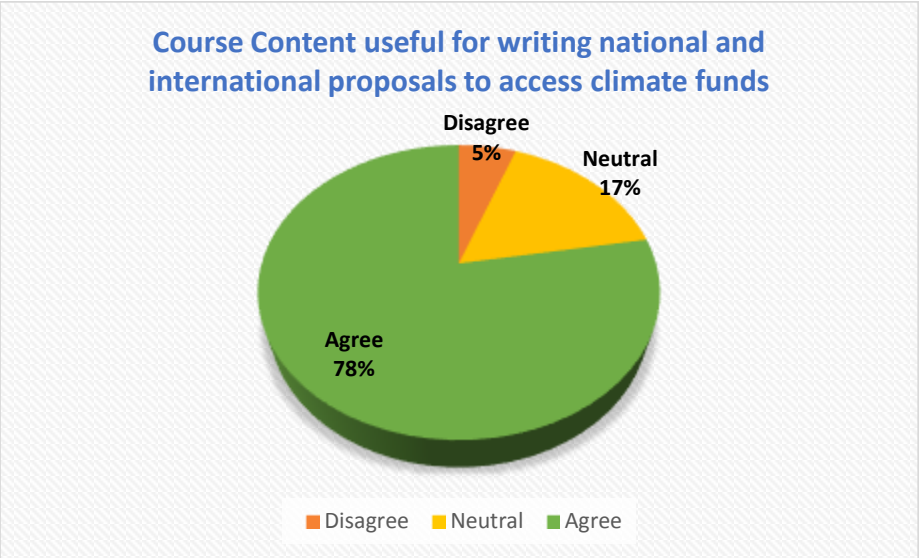

- **Do the participants have a better understanding of the procedures, priorities, and criteria of the Green Climate Fund, the Adaptation Fund, their country's national adaptation fund, and other finances as a result of the course?**

  90 % of the participants agreed strongly that they have a better understanding of the procedures, priorities, and criteria for the climate funds as a result of the course.



- **Are the participants more prepared to access domestic and international financing for climate adaptation as a result of this course?**

  78 % of the participants agreed strongly that the course has prepared them to access domestic and international financing for climate adaptation.



## KEY MESSAGE AND WAY FORWARD

- Workshop conducted with participants having diverse background provided very good learning and led to productive discussions.
- The adaptation and mitigation plans should be mainstreamed in the existing plans and policies of the region. The regional plans should align with the State-level climate change action plans.
- To respond to climate change, both adaptation and mitigation are equally important. Due to the emissions that are emitted in the past, we will continue to face the climate change impacts. So adaptation is necessary to tackle impacts of the past emissions. Reliance only on adaptation will not be effective to combat and cope up with climate change. So mitigation is necessary to reduce the magnitude of future impacts of climate change.
- As the climate change becomes more severe than originally projected, estimated financing requirements for developing countries are doubling or tripling every year.
- Delayed action on climate change will mean even higher cost in future to deal with the impacts of climate change.
- It is very important to design climate change adaptation strategies having co-benefits. The adaptation strategy having maximum co-benefits should be prioritized and put into action.
- The most pressing challenge today we face dealing with climate change is a lack of data. If data is made available, then the knowledge flows. We also need to frame indicators that can be used to understand vulnerability on city, coastal, river basin and regional scale reflecting relevance and data availability in developing countries.
- The information on climate should be translated from useful to usable for the general public. Interactive web-based and mobile device tools can be used for conveying usable climate information to general public.
- The project / program proposal submitted to access climate funds should show economic, social and environmental benefits with particular reference to the most vulnerable communities and vulnerable groups within communities including gender considerations.
- The project proposal should be consistent with national or sub-national sustainable development strategies including national or sub-national development plans, poverty reduction strategies, national communications or national adaptation programs of action or other relevant instruments.
- Although several climate change funding opportunities are available, there is a lack of good quality proposals so a need is felt for such workshops that strengthen the skills of the people working in the climate-sensitive sectors to write a successful proposal.
- There is a great need to continue organizing training workshops following the pilot led by IAAD. The future programs may run over 5 days and on a residential basis.

## SPEAKERS PROFILE

**Dr. Prasad Modak**

**Dean, IL&FS Academy of Applied Development**

Dr. Prasad Modak holds B. Tech (Civil Engg), M. Tech (Environmental Science and Engg) from IIT Bombay and Doctor of Engg. (Environmental Engg.) from Asian Institute of Technology, Bangkok.

Prasad's career has spread across a wide spectrum of agencies on a global basis with diverse portfolios in the arena of environmental management. This kaleidoscope includes teaching and research, running a strategic consulting as an entrepreneur, working with corporates like IL&FS and with development financing institutions like the World Bank, Asian Development Bank and the United Nations.

In addition to above, Prasad runs a not for profit NGO Ekonnect Knowledge Foundation dedicated to awareness raising and actioning on environmental management & sustainability. Prasad's advice is sought as an advisor by various Governments across the world including Government of India and the State Governments.

Currently, Prasad is Dean at IL&FS Academy for Applied Development (IAAD) and Chief Sustainability Officer at IL&FS Ltd. In addition, he is the Executive President of Environmental Management Centre LLP that is a strategic consulting company. Prasad was a Professor at Centre for Environmental Science & Engineering at IIT Bombay and currently Professor Adjunct at Centre for Technology Alternatives in Rural Areas (CTARA).

Prasad has received a number of awards and recognitions and his name has been listed in distinguished personalities on environmental management. He has been the recipient of the Distinguished Alumni Award of AITAA in 2010 for Significant Contribution to International Affairs. In 2011, Dr. Modak was elected by American Association of Environmental Engineers as Board Certified Environmental Engineering Member for his work in Research, Teaching and Professional Practice.

**Dr. Mukand S. Babel**

**Professor Water Engineering and Management (AIT)**

Dr. Mukand S. Babel is a Professor and Coordinator of Water Engineering and Management at the Asian Institute of Technology (AIT), Thailand. In addition, he holds Directorship of the Center of Excellence for Sustainable Development in the Context of Climate Change (SDCC). Concurrently, he is leading the Climate Change Asia (CCA) initiative at AIT.

Prof. Babel's professional experience in teaching, research and consultancy spans over 30 years in Asia. He teaches graduate level courses on Watershed Hydrology, Hydrologic and Water Resources Modeling, Integrated Water Resources Management and Water Supply and Sanitation. In addition, he has been/is Member of the Advisory Committee of the World Water Quality Assessment, an initiative of UN-Water Group led by UNEP and GEMS/Water. Member of the Executive Committee, Asia Pacific Division (APD) of International Association for Hydro-Environment Engineering and Research (IAHR). Directors of the Executive Board of International Water Resources Association (IWRA). Member of Asian Water Council (AWC) representing the Asian Institute of Technology (AIT).

Dr. Babel has supervised 21 doctoral and 170 master theses covering diverse areas of hydrology and water resources and has over 250 publications in international refereed journals, books. Dr. Babel has conducted many research and sponsored projects for CGIAR-WLE Program; Dutch Government; CIDA; The World Bank; FAO; UNESCO-IHE; UNU; ADB; DANIDA, ICH, Norway and NEF, Japan; GWP, Sweden; UN-DESA; ASCE; UNESCO; UNEP; IGES, Japan; APN, Japan; UCC-Water, Denmark; Govt. of Thailand; Govt. of Indonesia; Govt. of Nepal; Govt. of Bhutan; and ICAR, Govt. of India.

**Dr. Dev Niyogi**

**Professor- Purdue University**

Dr. Dev Niyogi is a professor at Purdue University with joint appointments in the Department of Agronomy, Crops, Soils, and Environmental Sciences and the Department of Earth, Atmospheric and Planetary Sciences. He is also designated as a University Faculty Scholar and the State Climatologist for Indiana.

Dr. Niyogi is the chair of the American Meteorological Society (AMS) Board of Urban Environment and has been a member of the AMS Committees on Agriculture and Forest Meteorology, Committee on Applied Climatology. He has provided invited testimonies to National Academy study groups, planning meetings and Senate Working groups and through UNESCO panel groups. He is a Review Editor for Climate Research and has been an Associate Editor for Water Resources Research and the AMS Journal of Applied Climatology and Meteorology and Guest Editor of a number of special issues on Land use Land Cover impacts on weather and climate.

He has also been a volume editor for Elsevier/Academic Press Major Reference Work on Climate Vulnerability (vol. 2 Agriculture), and has published over 150 peer reviewed journal papers, over 13 book chapters and his work has been cited over 5000 times with various media citations in popular press such as Yahoo!, MSNBC, Wired, CNN, LiveScience and NASA press releases. Website: landsurface.org and iclimate.org

**Mr. Bikram Ghosh**

**Chief of Party for the USAID ADAPT project**

Bikram Ghosh is an international expert in urban resilience and climate change. As the Chief of Party of the USAID-funded Adapt Asia-Pacific program, he manages a project preparation facility that supports planning and implementation of climate change adaptation (CCA) projects and builds the capacity of the region's governments to independently access CCA funds. Over its five years of operation USAID Adapt Asia-Pacific has supported the development and financing approval of 30 projects leveraging over $430 million in CCA financing. In addition, the project has trained over 830 persons in CCA project preparation and financing through almost 21,000 person-hours of training. In addition, the project has strengthened the institutional capacity of 32 government agencies in climate change adaptation and finance across the Asia-Pacific region.

Previously Mr. Ghosh served as the Director of Urban Planning at AECOM's Washington D.C. office supervising a portfolio of urban, infrastructure and climate change programs. In a similar role at Cardno Emerging Markets he led the Governance Practice supervising a portfolio of donor funded projects in governance and urban development. As part of the USAID Adapt Asia-Pacific program, he led the development of the Urban Climate Change Adaptation and Resilience (UCCAR) training program, a five-day training program aimed at mid-to-senior municipal officials. Mr. Ghosh has also designed and implemented training programs for municipalities in strategic planning for urban basic services, budget formulation and access to finance.

Mr. Ghosh has worked extensively across Asia including in Afghanistan, Bangladesh, Cambodia, India, Indonesia, Kazakhstan, Philippines, Tajikistan, Thailand, Turkmenistan and Uzbekistan. Globally Mr. Ghosh has experience working in North America, Latin America and the Caribbean and across the Middle East. Mr. Ghosh has a Masters in Governmental Administration with a Certificate in Public Finance from the University of Pennsylvania, Philadelphia, USA and Bachelors in Urban Planning from the School of Planning and Architecture, New Delhi, India.

**Mr. Jaideep Srivastava**

**General Manager, NABARD, Head Office, Mumbai**

Mr. Jaideep Srivastava is presently posted as General Manager in the Farm Sector Policy Department of NABARD at its Head Office, Mumbai. He has more than 31 years of experience with NABARD. In his present position, he deals with matters relating to Climate Change Adaptation and Mitigation. Policy relating to Farmers Welfare and Farm Sector initiatives and Natural Resource Management. The portfolio also includes project / programme implementation under national & international funding arrangements viz. Adaptation Fund of UNFCCC, Green Climate Fund (GCF) & National Adaptation Fund for Climate Change (NAFCC) of Govt. of India. Prior to the current posting, he was a Faculty with the Bankers Institute for Rural Development (BIRD), Lucknow. He has also worked in various capacities in NABARD in Punjab, Haryana, Uttarakhand, Maharashtra and Uttar Pradesh.

**Mr. Sachin Kamble**

**Assistant General Manager at NABARD**

Mr. Sachin Kamble works at NABARD as Assistant General Manager in the Farm Sector Policy Department of NABARD at its Head Office, Mumbai. He has work experience with NABARD for more than a decade. He was involved in processes related to successful accreditation of NABARD to Green Climate Fund (GCF) as National Implementing Entity (NIE). He holds B. Tech (Agricultural Engineering) from Mahatma Phule Krishi Vidyapeeth, M. Tech (Agricultural Engineering) from University of Agricultural Sciences, Dharwad and Ph.D. in Agricultural Engineering from Indian Agricultural Research Institute where he has worked on decision support system for land drainage, soil salinity management. He has also worked on project cycle management for adaptation and mitigation projects under AF and GCF: includes scoping, handholding of the project proponents, capacity building of stakeholders, appraisal, monitoring and evaluation. He has designed capacity building modules for stakeholders, monitoring and evaluation framework for adaptation projects.

**Mr. Kirtiman Awasthi**

**Senior Policy Advisor - GIZ**

Kirtiman Awasthi works at GIZ as Senior Policy Advisor as part of the Indo-German Environment Programme in Rural Areas (IGEP-RA) specifically on climate change adaptation and climate finance readiness. Kirtiman holds Master's degree in Environmental Sciences from Wageningen University in the Netherlands with specialization in Environmental Systems Analysis and from Lucknow University in India.

He is National Coordinator for Indo-German bilateral project "Climate Change Adaptation in Rural Areas of India (CCA-RAI)". His work primarily focuses on promoting science-policy-practice connect. In his previous engagement with Climate Change & Development, Embassy of Switzerland in India/ Swiss Agency for Development & Cooperation (SDC).

Kirtiman Awasthi has over 14 years of experience in research & writing, knowledge management, community support and project planning & management covering issues of climate change, biodiversity and natural resource management. He has worked as Team Leader of the Indo-Swiss bilateral cooperation programme—Indian Himalayas Climate Adaptation Programme (www.ihcap.in). He was a contributing author with Indo-Swiss Collaborative Research Consortium.

He has worked with various State Governments coordinating preparation of their respective State Action Plans on Climate Change (SAPCC). As part of the Indian Delegation to UNFCCC (during 2011-2012), Kirtiman actively covered issues of adaptation, loss & damage and capacity building and provided technical support to co-chair Durban Platform in the UNFCCC processes.

**Dr. Puja Sawhney**

**Senior Programme Specialist - CCA**

Dr. Puja Sawhney holds M.A in Geography from University of Delhi (1995), M.A in Environment and Development from University of London (1998) and Ph. D. in Geography from University of Bonn (2002). She has more than 16 years' experience on various environmental issues. Her field of expertise includes Climate Change Adaptation and mitigation, Climate Finance, local / indigenous knowledge-based sustainable resource management, state of the environment in Asia-Pacific, environment and development, conservation of natural resources and environmental policies.

She is currently on secondment to the Regional Resource Centre for Asia and the Pacific, Asian Institute of Technology (AIT) as Senior Programme Specialist and is working for Climate Change Asia (CCA). As coordinator of APAN at IGES responsible for leading the implementation of APAN activities on climate change adaptation in the Asia Pacific region; liaising with and building the capacity of government officials and key stakeholders in 48 countries in the Asia-Pacific region including Northeast Asia.

She has conducted research, baseline studies, capacity building, monitoring and reporting. Topics include- REDD+, post Tsunami recovery, climate change adaptation, disaster reduction, sanitation and Programme development and implementation. As Project Co-ordinator at UN-APCTT she has lead project on empowerment of local people and gender sensitization.

Dr. Puja Sawhney has written & contributed to Book, journals, newsletter, magazine, websites on the topics like - Emerging Issues in Adaptation to Climate Change in the Asia-Pacific Region, Institute for Global Environmental Strategies; Investing in Natural Capital for a Sustainable Future in the Greater Mekong Sub region. Asian Development Bank, Mandaluyong City, Philippines; beyond the paradox of prophecy and practice in joint forest management: arguments for monitoring the impact of JFM on livelihoods in India etc.

**Ms. Ruchita Ingle**

**Asst. Vice President, EMC**

Ms. Ruchita Ingle holds a Bachelor degree in Civil Engineering from Nagpur University, (2001) and Master degree in Civil & Environmental Engineering from Portland State University, Oregon, USA (2007). She also holds Certification in Climate Literacy from University of British Columbia, Canada (2013); Certification in Data Analysis from Johns Hopkins University, USA (2013) and Certification in Renewable Energy and Sustainability from University of Illinois at Urbana-Champaign, USA (2015)

She has more than 12 years' experience on various environmental issues. Her field of expertise include Water and Climate Change Adaptation and mitigation. She is currently working as Assistant Vice President at Environmental Management Centre, Mumbai.

She has conducted research, in the areas of Climate change and Changes in Spatial structures in Flanders oriented towards preparing policy in the domain of adaptation response to climate change. Climate change impact analysis for Belgium (Flanders) for Identification of primary and secondary effects of climate change with a focus on the water system. Land use scenario model along with the climate and socio-economic scenarios to simulate the land use pattern in 2050. Development of spatial planning adaptation strategy with a focus on water system related activities and Climate Proof Areas (CPA to study adaptation to climate change.

Ruchita has written & contributed to Book, journals, newsletter, magazine, websites on the topics like - Assessment of the spatial impacts of climate change on Flemish region of Belgium, Hydrological impacts of climate change, Assessing the combined impact of climate change and Land use changes in Belgium. She has been awarded with the first prize as the best journal article among all institutions including the IITs at the national level for the academic year 2007 from the Institute of Engineers, India.