

TOT Module for Mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into Rural Development Policies and Programmes (Revised)

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Preparing Long Term Training and Capacity Building Strategy for Disaster Risk Reduction in India, under NCRMP



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Acronyms

AIE	:	Alternate Innovative Education
ASHA	:	Accredited Social Health Activist
ATIs	:	Administrative Training Institutes
BPL	:	Below Poverty Line
CCA	:	Climate Change Adaptation
CCMNC	:	The Cabinet Committee on Management of Natural Calamities
CCS	:	The Cabinet Committee on Security
DDMA	:	District Disaster Management Authority
DDP	:	Desert Development Programme
DMD	:	Disaster Management Department
DRR	:	Disaster Risk Reduction
EGS	:	Education Guarantee Scheme
EIA	:	Environmental Impact Assessment
ERA	:	Environmental risk assessment
HFA	:	Hyogo Framework for Action
HRVCA	:	Hazard Risk Vulnerability and Capacity Assessment
IAP	:	Integrated Action Plan
IAY	:	Indira Aawas Yojana
ICDS	:	Integrated Child Development Services Scheme
IPCC	:	The Inter-governmental Panel on Climate Change
KSA	:	Knowledge, Skills and Attitude
LWE	:	Left Wing Extremism
MDGs	:	Millennium Development Goals
MHA	:	Ministry of Home Affairs
MNREGA	:	Mahatma Gandhi National Rural Employment Guarantee Act
MoRD	:	Ministry of Rural Development
NAPA	:	national Plan on Adaptation
NCLP	:	National Child Labour Project
NCMC	:	National Crisis Management Committee
NCRMP	:	National Cyclone Risk Mitigation Project
NDMA	:	National Disaster Management Authority
NDMF	:	National Disaster Management Framework
NDPs	:	National Development Programmes
NDRF	:	National Disaster Response Force
NEC	:	National Executive Committee
NIDM	:	National Institute of Disaster Management

NRHM	:	National Rural Health Mission
NRLM	:	National Rural Livelihoods Mission
OECD	:	Organisation for Economic Co-operation and Development
PMGSY	:	Prime Minister's Gram Sadak Yojana
Q&A	:	Question and Answers
SAT	:	Systematic Approach to Training
SDMA	:	State Disaster Management Authority
SDT	:	Sustainable Development Triangle
SFIT	:	Strategic Framework for Implementation of Training
SHGs	:	Self Help Groups
SIDS	:	Small Island Developing States
SSA	:	Sarv Shiksha Abhiyan
TOT	:	Training Of Trainers
UNDP	:	United Nations Development Programme
UNFCCC	:	The United Nations Framework Convention on Climate Change
VANE	:	Values, Attitudes, Needs and Expectations
VANI	:	Values, Assumptions, Needs and Interests

Introduction

This training module is developed as a tool to train policy makers and senior programme managers for mainstreaming disaster risk reduction (DRR) and climate change adaptation (CCA) perspectives and elements into policy making, planning and programming processes within the rural development sector in India.

India is the second most populous country after China. Total population of the country is 1210 million (census 2011) and annual population growth is 1.77 percent. It comprises of 640,930 census villages and 7933 towns. While cities are seen as major growth engines of the economy, the fact remains that 68.2 percent of the 1210 million people are still living in the rural areas. Despite urban contribution to GDP being estimated to be 65 percent of the total economy, agriculture still remains the primary sector in terms of offering livelihoods to around 700 million people in the rural areas. Agriculture is the largest employment providing sector in the country and growth of the secondary and tertiary sectors is directly dependent on it. While industry and services are major sectors contributing to economic growth in the urban areas, agriculture constitutes the core of the rural development, as one of the most important sectors of the Indian economy in many ways.

In order to achieve inclusive, resilient and sustainable growth in rural India, disaster risk reduction (DRR) and climate change adaptation (CCA) need to be mainstreamed into rural development initiatives across the country. India is among the world's most disaster prone areas. Of the 35 States and Union Territories, as many as, 27 are disaster prone, (Gol, 2004a). Most disasters in India are water related. At aggregate country level, India ranks third with 21 significant disasters recorded (China recorded 38, followed by US which recorded 31). In terms of victims India ranked third with 7.3 million after China-88 million and Philippines-8.6 million. China, US and India also remain the countries with the highest reported disaster related damages (China- 13.5 billion US \$, US- 5 billion US \$ and India -3.3 billion US \$) (CRED, 2007).

The available data for 2007/08 also has India reporting third highest number of significant disasters, viz, 18 as against 22 reported by US and 20 by China. These trends are likely to exacerbate in future with climate change. The projected increase in precipitation and rainfall, the glacial meltdown and rising sea levels are likely to affect India particularly severely, creating conditions for more hazardous events and will lead to increase in incidence of floods, cyclones, and storm surges. Though it is not possible to predict the future frequency or timings of extreme events but there is evidence that the risk of drought, flooding, and cyclone damage is increasing and will continue to do so.

Climate change is also likely to threaten India's food security, increase water stress, and increase occurrences of diseases especially malaria. Lack of availability and access to technological and financial resources coupled with a high dependence on climate sensitive sectors-agriculture, fisheries, forestry-have made India highly vulnerable to climate change. A large and growing population with high population density and a low-lying coastline, and an economy closely tied to its natural resource base, further aggravates the vulnerability.

As rural development sector policies, plans, programmes are closely linked with agriculture, irrigation, rural livelihoods and rural infrastructure, the agenda and action of mainstreaming

DRR and CCA into the rural development sector has to undertaken with a wider multi-sector perspective.

In this context, integration of disaster risk and climate change resilience into sectoral and sub-sectoral plans and strategies are likely to have large scale implications on the development outcomes and their sustainability over time. Various important sectors including drinking water, sanitation, housing, electrification, transport, employment/ livelihoods are equally important for improvement of quality of life of rural masses and have knock on effects on the overall gains of DRR and CCA sensitive development planning. Integration of DRR and CCA in the development plans and programs is important for sustainable development and resilience building of all the sectors and actors. However, this particular training module is designed to cater specifically to the rural development sector in India.

There is a huge scope of decentralized planning in flagship development programmes of the Ministry of Rural Development, Government of India. Key programmes are National Rural Livelihoods Mission (NRLM), Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) and Indira Aawas Yojana (IAY). Mainstreaming DRR and CCA concerns within program design and strategy formulation of these programmes can make their implementation on the ground truly effective.

About the training module

While the focus of training approach and methodology is on experiential methods, the module uses a combination of traditional learning methods, such as presentations and discussions, along with more participatory and experiential learning approaches, e.g. case study based group work and reflections on personal experience. Practical tools and frameworks are provided throughout. There are numerous references to other sources of relevant information.

A list of hand outs is given for each session as required and the list of sources and references is given at the end of the document. Key learning points for each session are suggested so as to help the facilitator sum up the learning at the end of each session. However, the key learning points can be revised and re-defined in view of emerging new knowledge, insights and perspectives.

As required, these messages can also be presented with the help of power point, cards or flip charts or made available to participants in the form of a handout.

This training module for Rural Development (RD) is designed for a five-day workshop in which three days are devoted to the sub-module on RD and the remaining two days are designed to offer practical skills in design and delivery of training. Though the module is organised in a particular order, it is intended to be a flexible resource, in order to allow the trainers to decide how to use it according to the varying needs of each set of participants and varying specific contexts. The sub-modules, learning units and sessions can be used in the order presented, on their own, or in combination with other individual sessions and learning units within sub-modules.

The material can be adapted by the facilitator to the specific context or needs of the participants. Different and more relevant case studies can be substituted. The way the

sessions are eventually delivered may also depend on whether there is more than one facilitator, and if so, what expertise each brings to the training session. Estimated timings for sessions are offered, but these should be adapted to fit the time available and the group's level of experience and expertise.

PowerPoint presentations and hand outs are available as separate sections of the training module.

Sub-Modules and Learning Units

The modular structure of the training module allows freedom and flexibility to its users by offering them an opportunity to make their independent choices for running both the base and training of trainer sub-modules either as one compact training event or as separate training events as required.

Base Sub-Module on Rural Development

The base sub-module is divided into five learning units and eleven sessions therein. The learning units are as follows:

Learning Unit 1: Development, Disaster and Climate Change: In the context of rural development

This learning unit aims at helping the participants examine the critical linkages across development, disasters and climate change in the specific context of rural development. Poverty reduction and sustainable development have been the two core concerns of rural development globally, as also in India over last few decades. These are also embodied in the Millennium Development Goals (MDGs).

People, particularly poor and the marginalised, and their vulnerabilities constitute the core concern of all the three domains of development, disaster and climate change adaptation in the rural areas. Vulnerabilities are multi-dimensional and include physical, locational, social and economic vulnerabilities. Vulnerabilities and capacities to cope with disaster related emergencies are intimately inter-linked.

This learning unit will help examine different policy approaches to addressing the relationship between vulnerabilities and coping capacities from a rural development perspective. This will aim at the following: one, to encourage the participants to examine the relative merits and demerits of different policy options in terms of their potential to offset disaster related vulnerabilities on the ground, in the light of their own work experience; two, to trigger them to think through and find solutions in terms of what kind of development measures could possibly pre-empt and mitigate disasters and disaster related risks.

This learning unit will seek to locate the discussion within the specific context of the policies and programmes of the Ministry of Rural Development, Government of India. However, this will be done against the overall backdrop of evolving policy approaches and implementation frameworks and strategies for addressing vulnerabilities and enhancing coping capacities of communities at risk globally.

Learning Unit 2: Disaster Management and Rural Development

This learning unit will seek to unpack the critical connections between disaster management and rural development particularly in terms of their implications for policy and practice.

Disaster management is being increasingly recognised as a development issue and sustainable development as a function of good governance. While issues of growth, equity and inclusion are central to development, issues of participation, transparency and accountability are critical to good governance. Managing disasters with all the accompanying risk of damage and loss of lives, livelihoods, property, infrastructure, services, resources and assets falls at the intersection of governance and development.

Effectiveness of disaster management functions and results are critically dependent on the nature of governance and development approaches adopted at the national and sub-national levels. In view of the increasing focus and emphasis on decentralised delivery and management of development programmes, an effective way to manage disasters is to mainstream disaster risk reduction into implementation of these development programmes at the local level.

Despite fast growing urbanisation in the country, India still remains a predominantly rural society. More than 60% of the people in India live in rural areas. Indian villages are home to around 400 million poor people with lack of employment opportunities, income and access to basic infrastructure and services. Most of the investment in the rural development sector in India is in terms of livelihoods, employment and housing, all of which are critical to the well-being of people.

Disasters pose serious threat to the lives and livelihoods of people in the villages of India, particularly those in the coastal regions, flood plains, desert and mountainous tracts. People in the hills lose cultivable land to landslides, which knock off the very basis of their livelihoods. People from fishing communities in the coastal villages lose their nets and boats to cyclones. People in flood plains such as in North Bihar, Assam and other places live under the constant threat of losing their houses, crops and fields during floods, which have become increasingly more unpredictable and problematic apparently due to the impact of climate change.

Learning Unit 3: Risk to Resilience: Policy Issues and Challenges

This learning unit will aim at examining the potential of integrating resilience building strategies within mainstream development policies, plans and programmes.

Resilience building of countries and communities is one of the stated aims of Hyogo Framework for Action (HFA). Resilience is essentially the capacity of a country or community to withstand the impact of a disaster and recover from it effectively by way of building back better. A resilience building approach to disaster risk reduction represents a shift in focus from risk to resilience.

This has significant implications for policy choices and programme design options and implementation strategies aimed at mainstreaming disaster risk reduction (DRR) into development. This will determine the role of different stakeholders and actors and the kind of activities that could be undertaken by them jointly or separately, along with their sequencing and time line. It is important to recognise that risk reduction and resilience

building approaches are, in fact, mutually inclusive, but they do represent a significant variation in terms of orientation and focus.

Risk reduction implies knowing the risks, identifying their sources, working out risk mitigation measures and ensuring their effective execution on the ground. Resilience building entails enhancing the capacities of communities to be able to identify and mitigate their risks and deal with disasters effectively in response and recovery phases.

Learning Unit 4: Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA)
Inclusive Development: Perspective and Practice

This learning unit will aim at identifying good practices on DRR/CCA inclusive development and articulating their implications for policy and practice.

In view of the fact that development, disasters and climate change are intimately inter-linked, it is imperative that development processes are inclusive and are designed to address disaster risk reduction and climate change adaptation concerns as a part of their overall developmental agenda. While the need to do this is very well recognised globally, ways to do it effectively have yet to be tried out on scale across different countries and contexts. But there are good practices and exceptional cases from which one can learn to try and do things on scale.

All the key stakeholders including governments, NGOs, donors and academic institutions are on a learning curve on ways to make the development process increasingly more DRR and CCA inclusive.

Learning Unit 5: Mainstreaming DRR and CCA in Planning and Policy Making

The last learning unit of this learning unit aims at examining the key issues and challenges in mainstreaming DRR and CCA in development planning and policy making. Extensive deliberations and discussions during the earlier sessions would have already helped identify many of these issues and challenges. This session intends to firm up the key issues and challenges that the participants think need to be addressed upfront in order to ensure effective mainstreaming of DRR and CCA in development planning and policy making.

Role of evidence is crucial in helping the policy makers make up their mind to seek and choose appropriate policy options for mainstreaming DRR and CCA in development planning and policy making processes. Hence, the lead facilitator of this learning unit has to try and find out latest evidence on mainstreaming initiatives delivering the desired results. This evidence could be from any sector in the development domain, but preferably from the rural development domain.

TOT Sub-Module

Learning Unit 6: Systematic Approach to Training (SAT)

The objective of this learning unit is to equip the participants with basic knowledge about the key issues to be addressed in the course of designing a training intervention/programme.

Learning Unit 7: Learning and Facilitation Skills

The objective of this learning unit is to equip the participants with basic facilitation skills that help the trainers conduct training/learning sessions with efficiency and effectiveness.

Training Schedule

	Overall Theme	Specific Sessions
Day 1	Opening session Learning Unit 1: Development, Disaster and Climate Change: In the context of rural development Learning Unit 2: Disaster Management and Rural Development	Morning Opening session (40 minutes) Session 1.1: Development, disasters and climate change (75 minutes) Session 1.2: Disaster risk reduction and climate change adaptation in the context of rural development (75 minutes) Afternoon Session 2.1: Disaster management approaches at the national level (60 minutes) Session 2.2: Disaster management cycle: Stages and interrelations.(60 minutes) Session 2.3: Rural development: Disaster management issues and challenges (60 minutes) End of the day evaluation (10 minutes)
Day 2	Learning Unit 3: Risk to Resilience: Policy Implications Learning Unit 4: Disaster Risk reduction and Climate Change Adaptation Inclusive Development: Perspective and Practice	Morning Recap of the previous day (10 minutes) Session 3.1.: Disaster risk climate change & rural development: A policy perspective (90 minutes) Session 3.2: Resilience building as pathway to sustainable development (90 minutes) Afternoon Session 4.1: Disaster risk reduction and climate change adaptation inclusive development: A conceptual overview (90 minutes) Session 4.2: DRR and CCA inclusive development planning: institutions, instruments and incentives (90 minutes) End of the day evaluation (10 minutes)
Day 3	Learning Unit 5: Mainstreaming DRR and CCA in Planning and Policy Making	Morning Recap of the previous day (10 minutes) Session 5.1: Mainstreaming DRR & CCA: approaches & methods (90 minutes) Session 5.2: Key policy issues & challenges in effective mainstreaming of DRR and CCA (90 minutes) End of the day evaluation (10 minutes) Afternoon Self study and interactive learning

Day 4	Learning Unit 6: Systematic Approach to Training (SAT)	Morning Recap of the previous day (10 minutes) Session 6.1: Assessing training needs (90 minutes) Session 6.2: Defining training aim and objectives (90 minutes) Afternoon Session 6.3: Deciding the content, methodology, and resource persons (90 minutes) Session 6.4: Deciding the monitoring and evaluation indicators and processes (90 minutes) Evaluation of day (10 minutes)
Day 5	Learning Unit 7: Learning and Facilitation Skills Monitoring and evaluation Wrap-up session	Morning Recap of the previous day (10 minutes) Session 7.1: Art of facilitation 1 (90 minutes) Session 7.2: Art of facilitation 2 (90 minutes) Afternoon Session 7.3: Sharing, Listening and Learning (60 minutes) Session 7.4: Learning to listen and listening to learn (60 minutes) Workshop summary, next steps, evaluation, and closure (60 minutes)

Facilitators might also like to consider adding in some time to the schedule for participants to read suggested resources or for free discussion.

Guidance Note for trainers and facilitators

Who can facilitate this workshop?

The facilitator will ideally have practical experience and a good conceptual understanding of DRR and climate change adaptation, including knowledge of mainstreaming issues and challenges. One way to do this is to have two facilitators working together, one with experience of DRR, and the other of climate change adaptation issues and one of them with required familiarity with PRI functioning. Or alternatively there is one facilitator with required domain expertise in DRR/CCA and the other with expertise in policy level issues. Facilitators need to be experienced and competent trainers, with a good track record and with working knowledge of monitoring and evaluation practices. They need to have flexibility, willingness to learn, and passion for promoting learning.

Group size and composition

The ideal group size for the workshop is 15, but it should not be more than 20 in any case. A gender balance among the participants is highly desirable. It is advisable to have at least equal number of women participants in the programme, if not more. As it is hard to achieve these numbers for a variety of reasons, it is important to initiate the process of seeking nominations fairly in advance.

What preparation is needed in advance?

The participants: A limited amount of relevant background reading is suggested for each session, usually one or two documents. It is helpful if participants can read this in advance of

the session, particularly if they are not familiar with the subject area. 'Further readings' are suggested for many sessions, and a list of these should be handed to participants at the end of the session.

The facilitator: will need to do background reading, and prepare the following:

Two months before the workshop

Decide on the criteria for selection of participants and the broad focus and objectives for the training and write to the concerned organisations and departments requesting them to nominate equal number of women and men participants as per the shared criteria for selection of participants for the programme.

One month before the workshop

Send nominated participants an outline of the workshop, including titles of modules and Learning Units and sessions to be covered, and background reading to be done before the workshop. Ask the participants about their work experience, what they hope to gain from the workshop and any specific needs they have (e.g. translation). This could be in the form of a simple questionnaire to check the level of their knowledge and experience. The same questions could be used at the end of the course as part of the evaluation of the event. This could be formalized into a training needs assessment. Use this to guide your preparation of the workshop. Ensure the training room is of sufficient size for the whole group and has suitable areas for small groups to work independently.

Also decide on and get in touch in advance with the panellists to be invited for the panel discussion scheduled as a part of session 4.2 titled 'DRR and CCA inclusive development planning: institutions, instruments and incentives' on day 2 of the workshop. A list of 5-6 identified panellists has to be drawn in advance and their consent obtained to participate in the discussion. 3-4 external panellists should be selected on the basis of their experience and expertise in DRR, CCA and development domains and their availability on that day. Care should be taken to ensure that all the four external panellists are from different backgrounds and represent government, civil society and academia respectively. Gender balance among the panellists must be ensured with at least 50% of the panellists being women.

One week before the workshop

Review the completed questionnaires you have received back in order to understand the participants' profile in terms of their background, level of knowledge and their expectations from the workshop. Use this to guide your preparation. Prepare presentations, slides, hand-outs, a workshop timetable, flip charts, and lists of 'further resources' accordingly. Prepare a learning folder for each participant to hold all documents. At the start of the course this should contain the workshop agenda and timetable, any logistical information (accommodation, meals, transport, local maps), and a list of the names of all participants.

Two days before the workshop

Check to make sure that lighting, adaptors, extensions leads, plugs, as well as IT equipment are all working. Remember to test that you can open all the documents you will be using

during the training, and that the equipment is compatible. If possible, use your own laptop and LCD projector.

What equipments will be needed?

Given the participatory nature of the workshop, much of the workshop can be conducted using flip charts, markers, pens, sticky notes (post-its), sticky tack (blue tack), and meta/flash cards (sheets of coloured paper, about half the size of regular A4 printer paper). Some of the sessions require a laptop and data projector to show PowerPoint presentations. Alternatively, PowerPoint slides can be printed on to acetates for use with an overhead projector, or as posters. A printer and photocopier would be useful, if available.

How to use the technical notes?

Technical notes are basically meant for the use of the trainers using this training module to train the participants of the programme and potential master resource persons. These would need to be suitably simplified and modified by the trained master resource persons for organising training of resource persons or direct training of district and sub-district level functionaries to be trained by the trained resource persons.

Opening the course

As opening session is going to set the tone of the workshop to follow, it has to be planned and conducted carefully. The opening session on the first day should ideally be of 30-40 minutes, but not more than one hour in any case. This session is to be used to share the purpose and objectives of the workshop, lay out the agenda, and set ground rules. It is also an opportunity for the participants to introduce themselves and their experience, explain their motivation for joining the workshop, and state their expectations from the course. You may want to use an 'ice-breaker' exercise like the one below to help participants get to know each other, and to put them at ease and get them talking.

Milling Around and Knowing Each Other

Ask the participants to leave their seats and assemble in the middle of the training hall. Ask them to be quiet and listen to you carefully. Once the participants are totally silent and are fully with you, ask them to start walking inside the training hall in any direction they wish. After about 60 seconds, ask them to increase the pace of their walk. After another 60 seconds, ask the participants to walk as fast as they can without hurting anyone or bumping into each other. This milling around loosens people up both physically and mentally.

End the milling around by telling people to group into pairs of twos by identifying the person having a date of birth closest to theirs. This process has to be facilitated a bit, as some may not remember their birthdays or could be vague about it. Those who do not recall their dates of birth could be grouped on the basis of gender, colour of their attire or any other distinguishing characteristic as decided by the facilitator.

Partners in each pair are advised to know the following about each other and write it out on a flash card provided for the purpose:

- Name and current assignment
- Educational background
- Work Experience
- Expectations from the workshop.

Ask everyone to stick their written flash cards on the space on the wall earmarked for the purpose. After all the pairs have stuck their cards, invite each one of them to introduce their partners and their expectations from the workshop to the entire group. This entire exercise can be completed in 40 minutes, if facilitated well.

Concurrent and End-of-Learning Unit feedback from participants

Feedback is the way to learn about the workshop sessions and their efficacy from the participants' perspective. This has to be done both in the form of concurrent i.e end of the day and end-of-learning unit feedback from the participants.

Concurrent feedback is for learning about participants' reactions and responses practically in real time as different sessions are unfolding. End-of-learning unit feedback offers a quick check on its perceived relevance, effectiveness and usefulness by the participants. It should be communicated to the participants at the very outset that their feedback is valued as it helps improve the delivery strategy of the Learning Units in future workshops and of the subsequent Learning Units in the same workshop.

Feedback received should be thoroughly reviewed and responded to. Facilitators can assess the strengths and weaknesses of the sessions and the process, and make adjustments accordingly. At the end of each day, spend at least ten minutes for feedback.

Suggested methods for concurrent and end-of- Learning Unit feedback are as follows:

1. One method for capturing feedback in real time is to create a space within the training hall and call it 'parking lot'. This is a method to ensure that all the comments and suggestions of the participants are posted for everyone's review and reference on a daily basis. 'Post it' stick pads are made available on each table of the participants with the instructions that the participants are free to write out their comments and feedback on different sessions of the Learning Unit and stick it up on the 'parking lot' as and when convenient during breaks. This facilitates feedback by the participants in real time as per their convenience. Training facilitators should get the posted comments and feedback typed out on a daily basis for review, reflection and sharing with the participants as to how their comments and feedback are proposed to be addressed within the training programme.
2. Another method will be to administer an end-of-the- Learning Unit feedback form to be filled up by the participants at the end of each Learning Unit after all the sessions of that Learning Unit have been conducted. This will be a relatively more structured feedback and will seek to draw the feedback of the participants in the form of their responses to specific questions asked.

Both these methods together are likely to yield a very comprehensive feedback on the relevance, effectiveness and usefulness of different Learning Units. These would be particularly helpful in sharpening the delivery strategy of these Learning Units in subsequent training programmes on the one hand and of subsequent Learning Units in the on-going training programme on the other.

For further reference a sample evaluation form for session and module evaluation respectively is attached as annexure 1.

LEARNING UNIT 1: DEVELOPMENT, DISASTER AND CLIMATE CHANGE: IN THE CONTEXT OF RURAL DEVELOPMENT

Objective

Examine critical linkages across development, disasters and climate change in the context of rural development.

Sessions

- Development, disasters and climate change
- Disaster risk reduction and climate change adaptation in the context of rural development

Estimated time: 150 minutes

Expected Outcome

Participants would have acquired an informed understanding of the critical linkages across development, disasters and climate change and their implications for policy and practice of rural development in India.

Session1.1: Development, disasters and climate change

Duration: 75 minutes

Objectives:

- Examine the linkages across development, disasters and climate change
- Examine the inter-related nature of disaster risk reduction (DRR) and climate change adaptation (CCA) in the light of their own work experience
- Articulate the role of DRR/CCA in sustainable development

Method(s):

- Interactive lecture presentation
- Questions and Answers
- Group work
- Presentation in the plenary

Materials needed

Markers , A4 size sheets and flip charts.

Handouts

Handout 1: Basic terms of disaster risk reduction (DRR), UNISDR (2009)

Handout 2: DRR and CCA: Differences and Signs of Convergence

Handout 3: Hyogo Framework for Action

Handout 4: Potential Impact of Climate Change on the Millennium Development Goals

Session Plan

The facilitator should start the session with an informal interaction with the participants seeking their views on development, disaster and climate change. Invite them to share their views and make a note of the points made either on a flip chart or white board. Identify commonalities and differences in the views expressed. (10 minutes)

Make a brief presentation of around 5-10 minutes highlighting the critical linkages across development, disasters and climate change. This presentation should cover the evolution of the discourse and action on all the three inter-related domains of development, disasters and climate change globally over the years. Focus should be on mapping out the conceptual field and outlining various policy approaches, particularly with reference to the inter-connections across development, disasters and climate change. Also distribute Handout 1 which gives an overview of the basic terminologies used in disaster risk reduction, they may read it as and when they get time during the sessions. (10 minutes)

Follow it up with an open house discussion inviting comments and questions. Come up with facts, analysis and arguments to respond to the doubts and divergent opinions expressed during the discussion. (10 minutes)

Wrapping up the discussion, form 4-5 working groups of participants and ask them to examine the inter-related nature of disaster risk reduction (DRR) and climate change adaptation (CCA) in the light of their own work experience as senior policy makers and programme managers. They need to carry this out as a group work (20 minutes)

Ask the working groups to share their findings and analysis in a presentation in the plenary. Groups will have the freedom to use power point, flip charts, cards, or just speech for making this presentation. Give 5 minutes at the end for some questions and answers, at least one on each presentation. (20 minutes)

Distribute Handout 2 (DRR and CCA: Differences and Signs of Convergence) and discuss it briefly and close the session with a presentation summing up the key learning from the session and highlighting the role of DRR/CCA in sustainable development. (5 minutes)

Distribute handout 3 and 4 as reference readings to the participants.

Technical Notes

Introduction

Development, disasters and climate change are essentially about people, their vulnerabilities and capacities that shape their lives, livelihoods and well-being. If development is 'good change', disasters are 'bad change' threatening to upset the process of development. Climate change introduces the elements of uncertainty and unpredictability in the occurrence of disasters.

Disasters damage or destroy development gains. Moreover, development choices made by governments and donors increase or reduce the risk of disasters, almost inadvertently, if not based on an informed understanding of disaster and climate related risks and their mitigation measures. But disasters are not totally discrete events.

With growing technology and scientific advances the possibility of occurrence, time, place and severity of the strike can be reasonably and in some cases accurately predicted. Like in case of cyclones and typhoons, their genesis, growth and pathway can be tracked for hours and days in advance. But extreme weather events such as unprecedented precipitation, clout bursts, flash floods and landslides all at once as in the case of Uttarakhand disaster of June 2013 underline the element of uncertainty and unpredictability about the time and scale of disasters, as introduced by the incidence of climate change

Climate change is arguably the most important underlying disaster risk factor and is implicated in the increase in disasters worldwide. Drought, desertification, flooding and environmental degradation, (such as deforestation, erosion and loss of biodiversity) are all affected by climate change and have far-reaching consequences in terms of food and water security.

According to the United Nations Development Programme's (UNDP's) 2011 Human Development Report, "environmental degradation stunts people's capabilities in many ways, going beyond incomes and livelihoods to include impacts on health, education and other dimensions of well-being."¹

Key Concepts

Disaster Risk Reduction: disaster risk can be significantly reduced through strategies that seek to decrease the vulnerabilities and exposure to hazards within a larger development framework to address poverty and inequality.

Disaster risk reduction was placed on the global agenda through the Hyogo Framework for Action, launched at the World Conference on Disaster Reduction held in Kobe, Hyogo, Japan. The Hyogo Framework, adopted by 168 governments, is a global blueprint for disaster risk reduction efforts during 2005-2015. Its goal is to substantially reduce disaster losses by 2015 – to save not only lives, but also the social, economic and environmental assets of communities and countries.

¹ UNDP (2011). Human development report 2011: Sustainability and equity – a better future for all. New York: UNDP.

Since the HFA was agreed, many governments have introduced legislative and policy frameworks for disaster risk reduction, established early warning systems and increased their level of preparedness to respond to disasters. For example, in India after HFA Disaster Management Act came about in 2005 and following that in 2009 the Policy on Disaster Management was introduced, India witnessed massive institutional development for disaster management right from the national to the district level. However, the goals of the HFA are still far from being achieved, particularly in terms of addressing the causes of risk and ensuring full participation of at-risk populations in risk assessments, planning processes and programs.

A massive effort is needed to bring about change at the heart of each country's 'development system' through the involvement of all sectors and all stakeholders—from local to national—in disaster risk reduction.

Climate Change

Climate is the average weather conditions experienced over a long period. This includes temperature, wind and rainfall patterns.²

Recent scientific findings clearly point to the very significant impacts of climate change on our planet. In 2007, the IPCC issued its Fourth Assessment Report which presented the most convincing assessment to date on the science of climate change and its implications. It concluded that immediate and sustained action is required to stop climate change, if irreversible and potentially catastrophic damage is to be avoided.³

As per one of the many definitions of climate change, it can be defined as “a change in the state of the climate that can be identified ... by changes in the mean and or the variability of its properties, and that persists for an extended period, typically decades or longer”.⁴

According to the Intergovernmental Panel on Climate Change, the impacts of climate change will manifest themselves in various ways. These include:

- **Rising temperatures, droughts and desertification** leading to diminishing water resources, malnutrition and increased levels of waterborne diseases such as diarrhoea and vector-borne diseases such as malaria.
- **Heavy precipitation, flooding and loss of water security**, leading to severe mental and physical trauma and an increase in injuries and deaths by drowning.
- **Extreme weather events** leading to cyclones, floods and droughts.
- **Rising sea levels** that will primarily affect communities living in small island developing states (SIDS), settlements alongside major river deltas and low-lying coastal areas.

² Definition by the US Department of Energy and Climate Change.

³ Intergovernmental Panel on Climate Change, Working Group 1 (2007). Fourth assessment report: Climate change – The physical science basis. Cambridge, UK: Cambridge University Press.

⁴ IPCC Fourth Assessment Report, Working Group I, Glossary of Terms: http://ipcc-wg1.ucar.edu/wg1/Report/AR4WG1_Print_Annexes.pdf

Climate Change Adaptation

Climate change adaptation is a practice covering actions by a range of actors to manage and reduce the risks associated with changes in the climate. Varying technical and scientific definitions exist to best serve the purposes of different actors involved in the climate change sphere. For the purposes of this guide the following simplified working definition of climate change adaptation is used: ⁵

- Adapting development to gradual changes in average temperature, sea-level and precipitation; and,
- Reducing and managing the risks associated with more frequent, severe and unpredictable extreme weather events.

People have always adapted to climate variability through a variety of means including, for example, planting late-transplant rice or switching to other, faster growing crops. However climate change is pushing at-risk populations beyond their capacity to cope and adapt to the changes they have traditionally dealt with, as well as making more people vulnerable due to their increased sensitivity and exposure to climate change impacts.

Complex environmental conditions – including the unfolding of diverse and widespread climatic changes, environmental degradation and increasing threats of disasters – pose formidable challenges to present and future generations of children and to the achievement of their rights.⁶

Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA)

Disaster risk reduction (DRR) and climate change adaptation (CCA) are intimately linked. More than 80% of the natural disasters occurring globally are reported to be hydro-meteorological in nature, which are believed to be subject to the impact of climate change.

Climate change will generally increase disaster risks – not only through the increased frequency and magnitude of extreme weather events and sea-level rise, but also through increasing stress on water and food production systems. As water becomes scarcer, agriculture is strained, ecosystems are degraded, and societies will become more vulnerable to hazards.

Disaster risk reduction (DRR) and climate change adaptation (CCA) share the common goal of managing uncertainty, reducing vulnerability and building resilience for communities at risk. The main overlap between the two is the management of hydro-meteorological hazards, where DRR seeks to take account of changing hazards, and adaptation seeks to build resilience to their impacts.

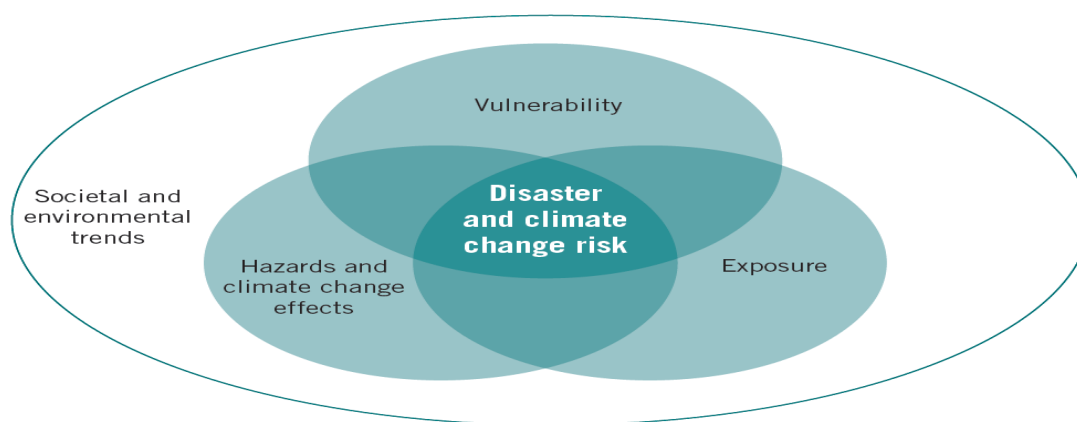
⁵ UNISDR (n.d.) Briefing Note 03, Strengthening climate change adaptation through effective disaster risk reduction.

⁶ UNICEF (2008). Our climate, our children, our responsibility: The implications of climate change for the world's children. London: UNICEF. Retrieved from <http://www.crin.org/docs/climate-change.pdf>.

Disaster risk reduction and climate change adaptation also share a common conceptual understanding of the components of risk and the processes of building resilience. The two approaches regard risk as the product of exposure and vulnerability, either to hazard(s) or effect(s) of climate change, or both. The greater the vulnerability, exposure and magnitude or likelihood of the hazard/climate change effect, the greater the risk.

Thus, to reduce disaster and climate change risk, exposure needs to be minimized, vulnerability reduced, and capacities for resilience strengthened in ways that address both disaster and climate change risk simultaneously, neither approach compromising the other. This is a dynamic process requiring continual effort across economic, social, cultural, environmental, institutional and political spheres to move from vulnerability to resilience.

Figure 1: Overlapping concerns of Disaster and Climate Change Risk



Source: First Regional Training Course of the RCC on Mainstreaming disaster risk reduction into National Development Processes, ADPC

As an approach, climate change adaptation is a dynamic process and not an end state, given the uncertainty in climate change impacts and the need to support at-risk populations to: address current hazards, increased variability and emerging trends; manage risk and uncertainty; and build their capacity to adapt.⁷

‘Traditional knowledge’ is an important starting point for developing DRR & CCA strategies. However, its effectiveness may be limited when dealing with an exacerbation of existing problems, or with ‘non-traditional’ problems, such as those experienced for the first time owing to climate change.

Key Learning Points

- Disaster risk reduction (DRR) and climate change adaptation (CCA) share the common goal of reducing the vulnerability of people and communities at risk and enhancing their coping and adapting capacities.
- As an approach, climate change adaptation is a dynamic process and not an end state
- ‘Traditional knowledge’ is an important starting point for developing DRR & CCA strategies

⁷ Pettengell, C. (2010) *Climate Change Adaptation: Enabling people living in poverty to adapt*. Oxford, UK: Oxfam International.

Session1.2: Disaster risk reduction (DRR) and climate change adaptation (CCA) in the context of rural development

Duration: 75 minutes

Objective(s):

At the end of this session participants will be able to:

- Explain the concept of DRR/CCA mainstreaming into developmental planning
- Identify challenges in establishing the linkages
- Articulate various approaches for mainstreaming
- Identify the factors contributing to an enabling environment for mainstreaming DRR/CCA

Methods

- Interactive lecture presentation
- Question and answer session and discussion
- Group work
- Case study

Materials Needed

Handouts, flipcharts, markers

Handouts

Handout 5: Trade-offs Between Climate Change and Development

Handout 6: Examples of (likely to very likely) impacts from projected changes in extreme climatic events

Handout 7: Protecting Development from Disasters: UNDP's Support to the Hyogo Framework for Action.

Handout 8: Putting Climate Change Adaptation in Development Mainstream, Policy Brief

Session Plan with Facilitator Notes

Starting the Session (5 mins)

Explain the purpose and process of the session and its intended learning outcomes including a brief overview of the contents to be covered and the overall flow of the session.

Interactive Lecture Presentation and Discussion: (35 minutes)

This session starts with the introduction of the inter relation of DRR, CCA and development. One way to do this is to look at disasters as ‘unresolved problems of development’. Development programmes and projects that inadvertently end up increasing the vulnerability of people and fail to enhance their coping capacity to disasters and climate related emergencies are the interventions where disaster risk reduction (DRR) and climate change adaptation (CCA) elements are not mainstreamed.

Distribute Handout 5 (Trade offs between climate change and development) and discuss it briefly to put across the point that investment in development without a DRR and CCA perspective may result in unsafe and unsustainable development outcomes. This may also adversely impact the future ability of the concerned stakeholders, particularly communities at risk to adapt to the impact of disasters and climate change and at times even increase their vulnerability.

Also distribute Handout 6 (Examples of (likely to very likely) impacts from projected changes in extreme climatic events) to put in perspective the simple extreme and complex extreme scenarios to be generated due to climatic changes.

Introduce the concept of sustainable development and share the popular definitions with participants. Following that discuss the different key elements that interact with each other to result in sustainable development as shown in Figure 1.3.

Move on to the next section on development induced hazard and vulnerability and discuss how unsustainable development can lead to increased vulnerability in a variety of ways.

Before closing second section of this session on development induced hazard and vulnerability engage the participants in Group Work 1. (30 minutes)

Invite participants to share their work experience, particularly in the context of development programmes and projects increasing the vulnerability of people. Follow it up by engaging the participants in a discussion on how disasters can provide windows of opportunity for DRR sensitive development in social, economic and environmental spheres. Discuss this theme with the help of real life examples. Also highlight the challenges in linking disasters with development and ask the participants to share their experiences on the same.

Introduce the concept of mainstreaming DRR and discuss some of the common definitions. Discuss in the plenary about some of the major advantages of mainstreaming DRR and CCA and then close the discussion by highlighting some of the key ways of mainstreaming DRR and CCA.

Before summing up distribute Handout 7 & 8 as reference readings to the participants.

Summing up: (5 minutes)

Group Work 1: 30 min

Distribute the participants into four or five groups and ask them to discuss within themselves for 10 minutes and come up with some examples of development activities in their areas which have increased the vulnerability of people. They can present their examples in the following suggested matrix:

Developmental Activity	Hazard/Vulnerability Induced
Example: construction of highway	Flooding in villages close to the highway

Technical Notes

Introduction

Mainstreaming DRR/CCA in development implies doing development differently i.e. doing development with an eye on reducing disaster and climate related risks. Development is not only about providing goods and services to people. It is also and more so about empowering people and enabling them to engage in analysis and strategic action planning at the local level. Instead of undertaking DRR as a separate activity not organically linked to mainstream development programmes and projects, there is a need to make DRR an essential feature of the design and delivery of development programmes.

In the specific context of disasters, it also implies making a shift in focus from disaster response and relief to risk reduction and mitigation approach to disaster management. In order to do this, hazards, risks, vulnerabilities and capacities of communities at risk need to be mapped out and factored in into the programme design and delivery strategy.

Conventional focus has been on response oriented disaster management approaches. Current shift in focus is in terms of an increased emphasis on risk reduction and mitigation approaches to disaster management. Purpose of mainstreaming DRR in development is to ensure the following:

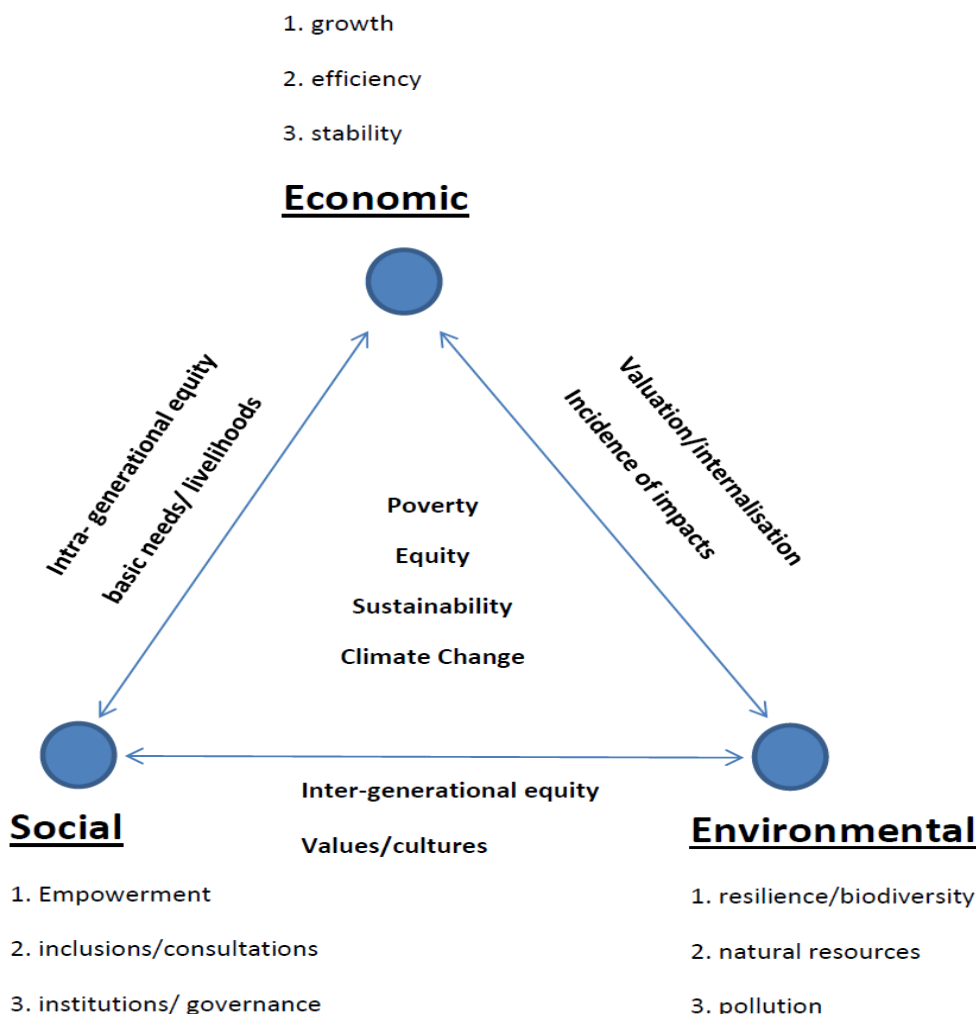
- Development policies, programmes and projects do not create new vulnerabilities
- Development policies, programmes and projects enhance the coping capacities of communities living with disaster and climate risk.

In view of the above, effective and sustainable development is essentially a risk free and safe development. This understanding in planning and implementation will ensure effective disaster risk reduction (DRR) on the ground.

Key Concepts

Sustainable development: To understand how disasters and development inter-relate it is first important to understand sustainable development. "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The idea of sustainable development is centred on three key factors, economy, society and environment" (Munasinghe 2007).

Figure 2: Sustainable Development Triangle



Source: Munasinghe 2007

The figure above shows that how social, economic and environmental are the three key dimensions of development and how they interact with each other. In order to make development and its outcomes sustainable, all these dimensions have to be addressed in unison with each other. While growth is considered an important measure of development, benefits of growth do not reach everyone equally. People, particularly the poor and the marginalised, are often left out. They need to be empowered and included in the development processes.

Along with social and economic factors, environmental degradation as manifested in deforestation, loss of water sources, erosion of top soil etc increases the vulnerability of poor people and affects their lives and livelihoods adversely.

In view of the above, a sustainable development initiative is the one that empowers people, protects the environment and leads to productivity, growth and equity. Disaster risk reduction (DRR) and climate change adaptation (CCA) measures have to be in built into the mainstream development programmes and processes on the ground.

Development Induced Vulnerability

Development projects which are poorly planned and executed without any prior consideration to DRR and CCA aspects can in some cases increase the vulnerability of people facing climate and disaster risks.

Many infrastructure projects such as construction of highways have been reported to have increased the hazard of floods in many neighbouring villages in Gujarat, Bihar and Odisha. Indiscriminate exploitation of ground water resources for irrigation and industrial purposes have resulted in scarcity of water and drought like conditions in many states including Andhra Pradesh, Bihar, Maharashtra, and Rajasthan.

Thus, development projects can lead to increased vulnerability in a multitude of ways. Lack of basic services such as health care and education facilities makes people vulnerable in very specific ways. A population that is under nourished and unhealthy would be likely to contract diseases in the aftermath of a hazard event much more than others. Equally non educated people would have less hazard awareness and risk perception that would otherwise decrease their vulnerability. Poor, as a result, usually have high vulnerability and low coping capacity.

A common example of how vulnerability can be increased through unsustainable development is that rapid urban development frequently leads to the migration of relatively low-income groups to urban areas. Due to poor land use planning, these groups construct large scale, high density settlements, which generally consist of poor quality housing with little or no infrastructure. The settlements, due to poor development planning, are frequently situated on marginal land in hazardous areas such as flood plains or earthquake faults (Stephenson & DuFrane 2002).

Disasters and Development

Disasters can provide a specific window of opportunity for all areas of development, social, economic and environmental. Although most disasters bring large scale damage and loss affecting the social, economic and environmental aspects of human life, they also offer an opportunity to engage in long term recovery and reconstruction which can help build back better. This can be done by reducing the vulnerabilities of people at risk and enhancing their coping capacities.

During the reconstruction and recovery phase that would follow a disaster, DRR strategies can be implemented where it may not have been possible or practical to do so before.

Examples of implementing DRR strategies in this stage include:

- Implementation of building codes and land use regulations
- Adoption of new technologies so that new constructions are adequately disaster resistant to future events.
- Relocation of dwellings, office buildings, or infrastructure to less hazardous locations.
- Diversification of economy leading to employment generation

The reconstruction phase will be helped financially by foreign aid, insurance pay-outs, and debt relief, which would provide further incentive to re-develop the affected area in a sustainable way considering hazard assessments (Stephenson & DuFrane 2005).

Post disaster situations can also offer opportunities for social development and capacity building. In the aftermath of an event a community's perception of risk and hazard awareness is high, therefore community preparedness programs would be effective, as long as they are sustained throughout post disaster reconstruction. Opportunities will also be available to use more environmental friendly building methods and construction techniques to work towards greater energy efficiency and ecological security.

Disasters and Development: issues and challenges

Some of the common challenges in linking disasters and development can be summarized as follows:

- Conceptual and Perceptual issues, misguided perceptions that disasters are simply an 'act of god' and cannot be stopped have been common for long, but the human hand in making of disasters is now being increasingly recognised. The concept that a disaster is not simply a result of a natural hazard but a complex process involving various other natural, social and economic processes needs to be implicit so that the link between disasters and development can be better understood.
- Incentives are stacked against DRR. It is a long-term, low-visibility process, with no guarantee of tangible rewards in the short term, either for politicians in affected countries or for donors.
- Disaster risk reduction falls into the gap between donor's humanitarian and development wings.
- Assumptions such as poverty-focused development will automatically reduce disaster risk.
- Inadequate exposure to and information on disaster issues.

What is Mainstreaming DRR?

Mainstreaming DRR means significantly expanding and enhancing DRR so that it becomes normal practice, and fully institutionalised within the national and sectoral development agenda of nations at risk from natural hazards (Trobe & Davies 2005).

Trobe & Davies (2005) outline three key purposes of mainstreaming DRR:

- To make certain that all national and sectoral development programs and projects are designed with evident consideration for potential disaster risk and to resist hazard impact
- To make certain that all national and sectoral development programs and projects do not inadvertently increase vulnerability to disaster in all sectors: social, physical, economic and environment
- To make certain that all national and sectoral development programs and projects are designed to contribute to developmental aims and to reduce future disaster risk

"Mainstreaming risk reduction should result in appropriate measures being taken to reduce disaster risk and ensure that development plans and programmes do not create new forms of vulnerability" |(ProVention consortium 2009). Mainstreaming is not, however, an end in itself but an approach or a means to achieve the overall objective of reducing risks to natural disaster (OSAGI 2009).

While the need for mainstreaming DRR/CCA in development is widely recognised, there is a clear dearth of practical ideas, approaches and practices that can help mainstream DRR concerns into development planning and administration effectively. Mainstreaming has been largely there more as a concern than as a tangible approach to engaging in development action on the ground.

There is an urgent need to engage with people and communities at risk as agents of change and not merely as beneficiaries of development programmes. Focus on delivery of goods and services is not enough. There is a need to empower people to take charge of their own lives and livelihoods. This underlines the need to make a shift from a focus on response and relief to a risk reduction and mitigation approach to dealing with disasters and climate risks using a sustainable development perspective and framework.

National Development Programmes (NDPs) such as National Rural Livelihoods Mission (NRLM), National Rural Health Mission (NRHM), Indira Awas Yojana (IAY) and others seek to empower people and communities by helping them organise and facilitate their access to housing, health and sustainable livelihoods opportunities.

Identifying entry points into the development planning framework for mainstreaming DRR

Some of the entry points for mainstreaming DRR are:

- National flagship programmes such as MGNREGA, NRLM, IAY, NRHM, NBA, NRDWP and other national policies and plans
- Physical framework/land use plans
- Processes related to implementation of plans; investment programming, budgeting and financing, project appraisal, implementation, monitoring and evaluation
- Project cycle of individual projects
- Environmental policies and plans
- Sectoral policies, plans and programs

Key Learning Points

- Development projects can lead to increased vulnerability in a multitude of ways
- Mainstreaming DRR/CCA in development implies doing development with an eye on reducing disaster and climate related risks.
- Resilient and sustainable development is essentially an inclusive, risk free and safe development.
- Disasters can provide a specific window of opportunity for all areas of development, social, economic and environmental.
- National flagship programs of the Ministry of Rural Development, Government of India including MGNREGA, IAY etc. offer a huge opportunity to mainstream DRR and CCA into the rural development sector in India.
- Development policies, plans, programs and projects offer entry points for mainstreaming DRR/CCA into development planning and administration

LEARNING UNIT 2: DISASTER MANAGEMENT AND RURAL DEVELOPMENT

Objective(s): are to help the participants

- Examine the disaster management approaches adopted at the national level over the years.
- Engage in an analysis of different stages of the disaster management cycle and their interrelations.
- Identify the key issues and challenges of disaster management in the specific context of rural development in India.

Sessions

- Disaster management approaches at the national level
- Disaster management cycle: stages and interrelations.
- Rural development: disaster management issues and challenges

Estimated time: 180 minutes (3 hours)

Expected Outcome

Participants would have acquired fresh insights into the linkages between disaster management and rural development and acknowledged the need to build in disaster management approaches as a part of the larger rural development agenda in the country.

Session 2.1: Disaster management approaches at the national level

Duration: 60 minutes (1 hour)

Objective(s):

- Help participants engage in an analysis of the various disaster management approaches adopted at the national level in India so far and draw the resultant learning for policy and practice.

Methods:

- Interactive lecture presentation
- Discussion in the plenary

Materials needed

Flip charts, markers, handouts

Handouts:

Handout 9: National Disaster Management Framework (NDMF)

Handout 10: Legislative and Policy Framework for Disaster Management in India: An overview

Session Plan with Facilitator Notes

Starting the Session: (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes including a brief overview of the contents to be covered and the overall flow of the session.

Interactive Lecture Presentation (25 minutes)

Give an overview of the evolution of disaster management approaches in India over the years. Begin with the Latur earthquake of 1993 and how it led to policy recognition of the need for proactive disaster management resulting in the creation of disaster management centres at state Administrative Training Institutes (ATIs) across several states.

Similarly, following the super cyclone of 1999 in Orissa, a national disaster management framework (NDMF) was developed that laid out a framework for action at the national level. This was followed up by the enactment of the Disaster Management Act of 2005 and adoption of the National Policy on Disaster Management in 2009.

This presentation could be made using the power point or flip charts as decided by the facilitator and must highlight the different approaches to disaster management starting with a primarily response and reconstruction orientation to a policy shift to risk reduction and mitigation approach.

Discussion in the plenary (25 minutes)

Distribute the Handout 9 and 10 and give participants some time to go through it and then engage them in a participatory discussion on the disaster management framework and legislative policy framework on disaster management in India and their implications for practice on the ground.

This will set the tone for examining the implications of the existing policy regime on disaster management for integrating it into rural development policies, plans and programmes.

Summing Up (5 minutes)

Wrap up the session with closing remarks summarising the key learning from the session.

Technical Notes

Disaster Management Framework⁸

The institutional and policy mechanisms for carrying out response, relief and rehabilitation after disasters in India had been well-established since Independence. The increasing frequency and ferocity, the rising extent and sweep as well as the mounting human and economic toll due to disasters necessitated a reappraisal of institutional and policy frameworks and development of new frameworks for holistic disaster management of disasters. Heralding this paradigm shift in public policy, the Tenth Five-Year Plan (2007-12) stated:

The traditional perception relating to the management and mitigation of natural disasters has been limited to the idea of “calamity relief,” which is seen essentially as a non-plan item of expenditure. However, the impact of major disasters cannot be mitigated by the provision of immediate relief alone, which is the primary focus of calamity relief efforts. Disasters can have devastating effects on the economy; they cause huge human and economic losses, and can significantly set back development efforts of a region or a State. With the kind of economic losses and developmental setbacks that the country has been suffering year after year, the development process needs to be sensitive towards disaster prevention and mitigation aspects. There is thus a need to look at disasters from a development perspective as well.

The Plan also laid down a blue-print for the future:

The future blue-print for disaster management in India rests on the premise that in today’s society while hazards, both natural or otherwise, are inevitable, the disasters that follow need not be so and the society can be prepared to cope with them effectively whenever they occur. The need of the hour is to chalk out a multi-pronged strategy for total risk management, comprising prevention, preparedness, response and recovery on the one hand, and initiate development efforts aimed towards risk reduction and mitigation, on the other. Only then can we look forward to ‘sustainable development’.

In view of this, a holistic **National Disaster Management Framework** was developed in 2004, which highlights the interdependence of economy, environment, and development. This framework also links the issues of poverty alleviation, capacity building, community empowerment and other structural and non-structural issues of prevention and preparedness, response and recovery for effective disaster risk mitigation and management. A comprehensive legal and institutional framework for disaster management has been set up through the **Disaster Management Act** passed by the Indian Parliament in 2005 and the **National Policy on Disaster Management** that was approved in 2009.

Institutions

The Disaster Management Act 2005 has provided the legal and institutional framework for disaster management in India at the national, state and district levels. In the federal polity of India the primary responsibility of disaster management vests with the State Governments. The Central Government lays down policies and guidelines and provides technical, financial and logistic support while the district administration carries out most of the operations in

⁸ <http://www.simplydecoded.com/2013/10/21/india-disaster-profile-and-management/>

collaboration with central and state level agencies.

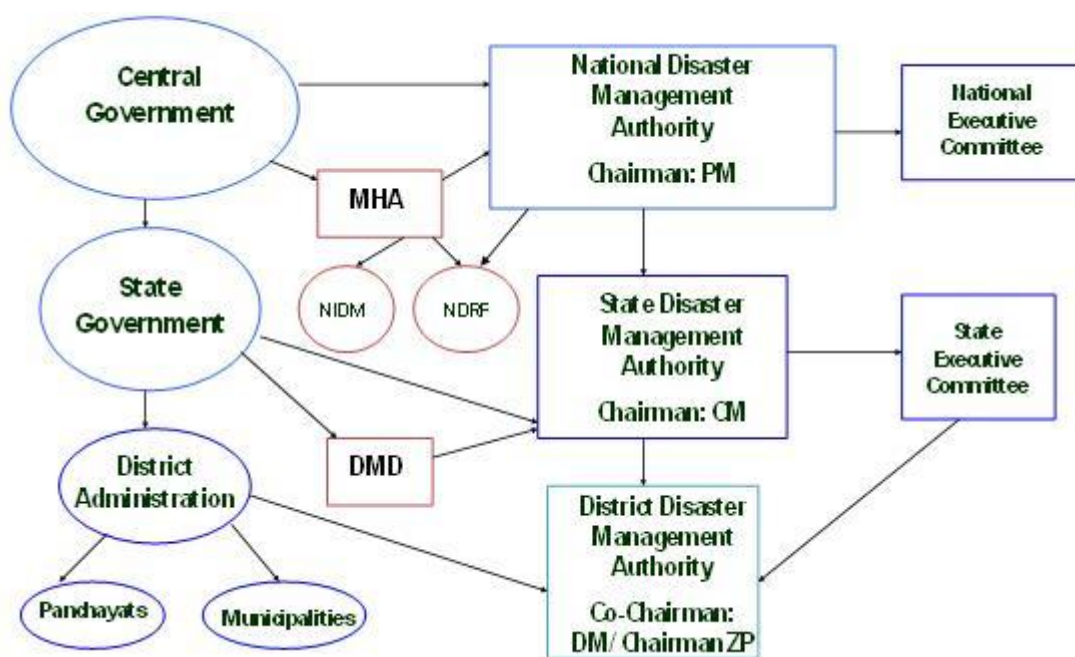
In the Central Government there are existing institutions and mechanisms for disaster management while new dedicated institutions have been created under the Disaster Management Act of 2005.

The Cabinet Committee on Management of Natural Calamities (CCMNC) oversees all aspects relating to the management of natural calamities including assessment of the situation and identification of measures and programmes considered necessary to reduce its impact, monitor and suggest long term measures for prevention of such calamities, formulate and recommend programmes for public awareness for building up society's resilience to them. The Cabinet Committee on Security (CCS) deals with the matters relating to nuclear, biological and chemical emergencies

The National Crisis Management Committee (NCMC) under the Cabinet Secretary oversees the Command, Control and Coordination of the disaster response.

The Disaster Management Act, 2005 has created new institutions at the national, state, district and local levels. The new institutional framework for disaster management in the country is as under:

Figure 3: Institutional Framework for Disaster Management in India



The National Disaster Management Authority (NDMA) under the Chairmanship of the Prime Minister is the apex body responsible for laying down policies, plans and guidelines for disaster management and for coordinating their enforcement and implementation throughout the country. The policies and guidelines will assist the Central Ministries, State Governments and district administration to formulate their respective plans and programmes. NDMA has the power to approve the National Plans and the Plans of the respective Ministries and Departments of Government of India. The general

superintendence, direction and control of National Disaster Response Force (NDRF) are vested in and will be exercised by the NDMA.

The National Executive Committee (NEC) is mandated to assist the NDMA in the discharge of its functions and further ensure compliance of the directions issued by the Central Government. The NEC comprises of the Union Home Secretary as the Chairperson, and the Secretaries to the GOI in the Ministries/Departments of Agriculture, Atomic Energy, Defence, Drinking Water Supply, Environment and Forests, Finance (Expenditure), Health, Power, Rural Development, Science and Technology, Space, Telecommunications, Urban Development, Water Resources and the Chief of the Integrated Defence Staff of the Chiefs of Staff Committee as members. Secretaries in the Ministry of External Affairs, Earth Sciences, Human Resource Development, Mines, Shipping, Road Transport & Highways and Secretary, NDMA are special invitees to the meetings of the NEC. The National Executive Committee is responsible to prepare the National Plan and coordinate and monitor the implementation of the National Policy and the guidelines issued by NDMA.

The Ministry of Home Affairs (MHA) in the Central Government has the overall responsibility for disaster management in the country. For a few specific types of disasters the concerned Ministries have the nodal responsibilities for management of the disasters, as under:

Table 1: Concerned Ministries for Specific Disasters

Sl. No.	Disaster	Disaster Management by	Nodal Ministry	Mitigation efforts Member Ministries on Mitigation Plan Committee (MPC)
1	Earthquake	MHA	Ministry of Earth Sciences	Ministries of Science and Technology, Urban Development; Rural Development; HRD; Health & Family Welfare; Panchayati Raj; Youth Affairs & Sports; Women & Child Development; IT & Telecommunication; I & B; and Space
2	Flood	MHA	Ministry of Water Resources	Space; Telecommunication
3	Drought, Hailstorm and Pest Attack	A&C	Deptt. of Agriculture and Cooperation, Ministry of Agriculture	
4	Landslide	MHA	Ministry of Mines	Road Transport and Highways and Shipping
5	Avalanche	MHA	Ministry of Defence	Road Transport and Highways and Shipping
6	Forest Fire	E&F	Ministry of Environment and Forests	
7	Nuclear Disaster	MHA/AE	Deptt. of Atomic Energy	Defence; Health and Family Welfare
8	Industrial and Chemical Disasters	E&F	Ministry of Environment and Forests	

9	Biological Disaster	H&FW	Ministry of Health and Family Welfare	Defence, Environment and Forests, Agriculture and Co-operation, Animal Husbandry, Dairying & Fisheries; and Chemicals & Fertilizers
10	Rail Accidents	Rly	Ministry of Railways	
11	Road Accidents	RTH&S	Ministry of Road Transport and Highways and Shipping	
12	Aviation Accidents	CA	Ministry of Civil Aviation	
13	Cyclone/ Tornado/ Hurricane	MHA	India Metrological Deptt. under Ministry of Earth Sciences	
14	Tsunami	MHA	Ministry of Earth Sciences	

Source: Disaster Management in India, MHA, 2011

The National Institute of Disaster Management (NIDM) has the mandate for human resource development and capacity building for disaster management within the broad policies and guidelines laid down by the NDMA. NIDM is required to design, develop and implement training programmes, undertake research, formulate and implement a comprehensive human resource development plan, provide assistance in national policy formulation, assist other research and training institutes, state governments and other organizations for successfully discharging their responsibilities, develop educational materials for dissemination and promote awareness among stakeholders in addition to undertake any other function as assigned to it by the Central Government

The National Disaster Response Force (NDRF) is the specialized force for disaster response which works under the overall supervision and control of the NDMA.

At the State Level the State Disaster Management Authority (SDMA), headed by the Chief Minister, lays down policies and plans for disaster management in the State. It is also responsible to coordinate the implementation of the State Plan, recommend provision of funds for mitigation and preparedness measures and review the developmental plans of the different departments of the State to ensure integration of prevention, preparedness and mitigation measures.

The State Disaster Management Department (DMD) which is mostly positioned in the revenue and relief Department, is the nodal authority for disaster management at the state level. At the district level the District Disaster Management Authority (DDMA) is headed by the District Magistrate, with the elected representative of the local authority as the Co-Chairperson. DDMA is the planning, coordinating and implementing body for disaster management at district level. It will, inter alia prepare the District Disaster Management Plan and monitor the implementation of the National and State Policies and the National, State and the District Plans. DDMA will also ensure that the guidelines for prevention, mitigation, preparedness and response measures laid down by the NDMA and the SDMA are followed by all departments of the State Government at the district level and the local authorities in the district.

The Local Authorities both the rural local self-governing institutions (Panchayati Raj Institutions) and urban local bodies (Municipalities, Cantonment Boards and Town Planning Authorities). These bodies will ensure capacity building of their officers and employees for managing disasters, carry out relief, rehabilitation and reconstruction activities in the affected areas and will prepare DM Plans in consonance with guidelines of the NDMA, SDMAs and DDMAAs

Key Learning Points

- The Disaster Management Act 2005 has provided the legal and institutional framework for disaster management in India.
- The National Disaster Management Authority (NDMA) under the Chairmanship of the Prime Minister is the apex body responsible for laying down policies, plans and guidelines for disaster management and for coordinating their enforcement and implementation throughout the country.
- The National Executive Committee (NEC) is mandated to assist the NDMA in the discharge of its functions and further ensure compliance of the directions issued by the Central Government.
- The Ministry of Home Affairs (MHA) in the Central Government has the overall responsibility for disaster management in the country

Session 2.2: Disaster management cycle: stages and interrelations

Duration: 60 minutes (1 hour)

Objectives: At the end of the session the participants will be able to identify the key policy issues and challenges related to different stages of the disaster management cycle and their interrelations.

Methods:

- Group work
- Group presentation and discussion
- Summing up

Materials needed

Flip charts, markers

Session Plan with Facilitator Notes

Starting the Session (10 minutes)

Explain the purpose and process of the session and its intended learning outcome/s including a brief overview of the content to be covered and the overall flow of the session.

Group work (20 minutes)

Form four working groups on the basis of their work experience and their expressed interest to work on a particular phase of the disaster management cycle. Four groups will work on response, recovery, mitigation and preparedness phases of disaster management cycle respectively and their interrelations.

The task will be to share individual experiences of a given phase of the disaster management cycle within one's group and carry out a quick analysis of that experience to identify key policy issues and challenges in that particular phase.

After all the groups are finished with their initial round of sharing and discussion, team leaders of all the four groups will meet to discuss on the interrelations across all the four phases of the disaster management cycle.

Group presentation and discussion (25 minutes)

Each working group will prepare the presentation using power point, flip charts or cards. After all the group presentations are made, hold an open house discussion using questions and answers.

Summing up (5 minutes)

Summarise the key learning points from this session.

Technical Notes

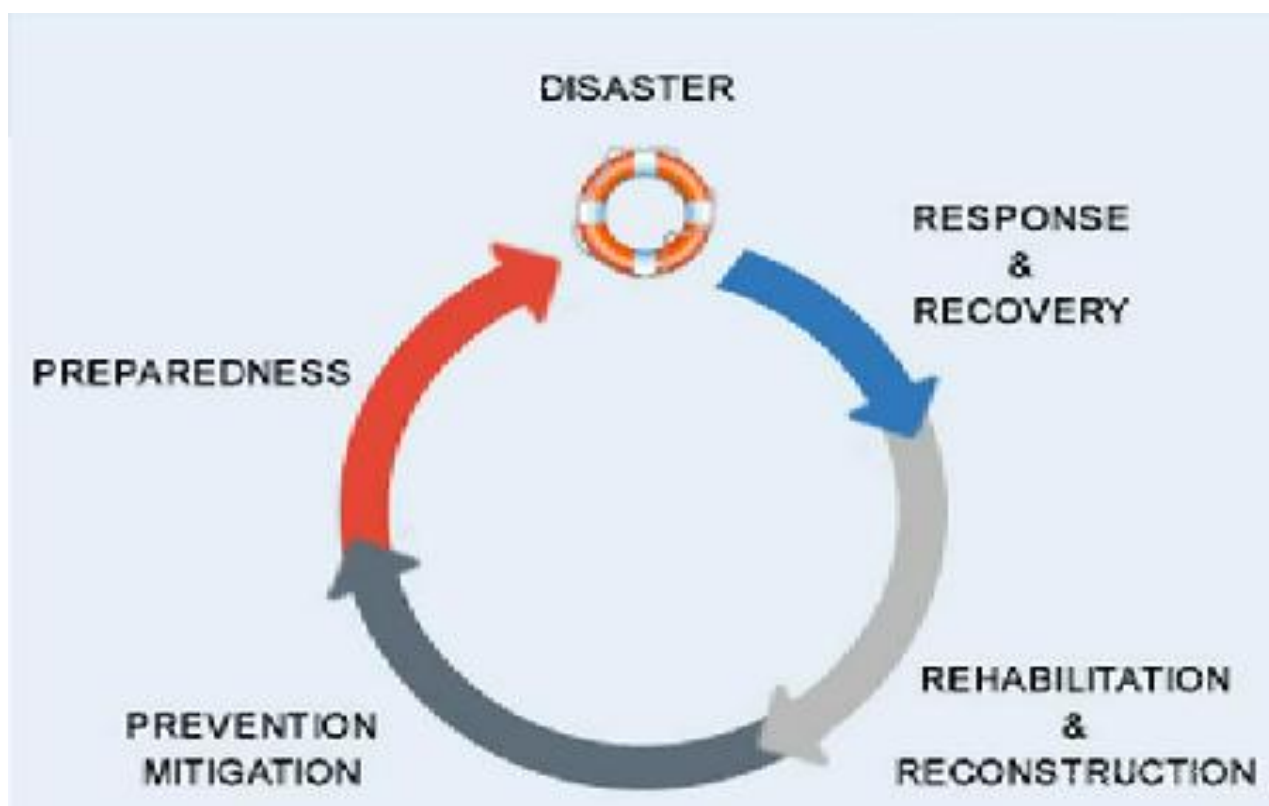
Phases of Disaster Management:

Disaster management has four distinct, but inter-related phases. These are:

- Prevention and mitigation phase (pre-disaster)
- Preparedness phase (pre-disaster)
- Response and recovery phase (during and post disaster)
- Rehabilitation and reconstruction phase (post-disaster)

In each of these phases various activities take place which are shown in the diagram below

Figure 4: Disaster Management Cycle



Source : nidm.gov.in

- Before a disaster (pre-disaster). Pre-disaster activities those which are undertaken to reduce human and property losses caused by a potential hazard. For example, carrying out awareness campaigns, strengthening the existing weak structures, preparation of the disaster management plans at household and community level, etc. Such risk reduction measures taken under this stage are termed as mitigation and preparedness activities.
- During a disaster (disaster occurrence). These include initiatives taken to ensure that the needs and provisions of victims are met and suffering is minimized. Activities taken under this stage are called emergency response activities.
- After a disaster (post-disaster). There are initiatives taken in response to a disaster with a purpose to achieve early recovery and rehabilitation of affected communities,

immediately after a disaster strikes. These are called as response and recovery activities.

The process from response to long term recovery and reconstruction is cyclical in nature. To begin with, if long term recovery is not planned keeping in the mind the principle of “build back better” it can again lead to avoidable disasters. Each phase in the cycle has a bearing on the following phase. For example the preparedness of the event will determine the scale and effectiveness of the response operation. In a situation where people, systems and institutions are well prepared, it will reduce the damage and loss of lives, livelihoods, infrastructure and property due to disasters. This will accordingly impact on the subsequent phases of the disaster management cycle.

The key to effective disaster management in general and disaster risk reduction (DRR) in particular lies within the interrelationships across different phases of the DM cycle. Hence, focus only on one phase to the exclusion of others is not going to work. Preparedness phase activities, which are undertaken before a disaster strikes, aims at building the capacities of all the stakeholders, particularly the communities at risk, for reducing their vulnerabilities and enhancing their coping capacities to deal with disasters effectively. It may not be possible to have a level of preparedness where no occurrence of a hazardous event results into any kind of damage or loss. But it is certainly possible to have a level of preparedness that results into minimum possible damage and loss in the event of a disaster and enables the communities at risk to be resilient enough to bounce back into normalcy on their own.

Similarly, recovery, rehabilitation and reconstruction phases offer a huge opportunity to engage in long term inclusive, resilient and sustainable development planning and administration at the local level.

Some of the key terms discussed in this diagram are defined below:

- Preparedness aims to reduce to the minimum level possible, the loss of human lives and damage to built and natural infrastructure through the prompt and efficient actions to response and rehabilitation. Effective preparedness allows communities and institutions to provide a quick, organised response to disasters and include early warning systems, planned evacuation routes and sites etc.
- Disaster prevention expresses the concept and intention to completely avoid potential adverse impacts through action taken in advance. Examples include dams or embankments that eliminate flood risks, land-use regulations that do not permit any settlement in high risk zones, and seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake. It is however not always possible to prevent a hazard event from taking place, in this case the task transforms to that of mitigation which aims to minimize the hazard impact. (UNISDR, 2009)
- Mitigation is the lessening or limitation of the adverse impacts of hazards and related disasters. The adverse impacts of hazards often cannot be prevented fully, but their scale or severity can be substantially lessened by various strategies and actions. Mitigation measures encompass engineering techniques and hazard-

resistant construction as well as improved environmental policies and public awareness. It should be noted that in climate change policy, “mitigation” is defined differently, being the term used for the reduction of greenhouse gas emissions that are the source of climate change. (UNISDR, 2009)

- Response: The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduce health impacts, ensure public safety and meet the basic subsistence needs of the people affected” (UNISDR,2009)
- Recovery is the activity that returns humans and built infrastructures to minimum living/operating standards and guides long-term efforts designed to return life to normal levels after a disaster. This includes building temporary housing and provision of basic household amenities.

Key Learning Points

- Response/recovery, rehabilitation/reconstruction, prevention/mitigation and preparedness are the four major stages/phases of the disaster management cycle.
- These stages and phases are inter-related and have considerable bearing on each other’s activities and outcomes: for example, recovery phase offers a big opportunity to build in mitigation measures feeding into rebuilding and reconstruction programs in the subsequent phase.

Session 2.3: Rural development: disaster management issues and challenges

Duration: 60 minutes (1 hour)

Objectives: At the end of the session the participants will be able to identify and examine key disaster management issues and challenges in the context of rural development.

Methods:

- Group work
- Group presentation and discussion
- Summing up

Materials needed

Flip charts, markers

Hand outs

Handout 11: National Flagship Programs of the Ministry of Rural Development, Government of India

Session Plan with Facilitator Notes

Starting the Session (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes including a brief overview of the contents to be covered and the overall flow of the session.

Group work (20 minutes)

Form 4-5 working groups of participants and ask them to identify the key policy issues and challenges related to disaster management in the specific context of rural development in India.

Distribute the Handout 11 (National Flagship Programs of the Ministry of Rural Development, Government of India) and ask the participants to have an in-depth discussion within their respective groups to examine issues and challenges related to disaster management in general and disaster management during different phases of the disaster management cycle in particular in the context of existing policies given in the handout.

Group presentation and discussion (25 minutes)

All the working groups will make their presentations in the plenary, which will be followed up by a question and answer session.

Summing up (10 minutes)

Summarise the key learning points from the session.

Technical Notes

Ministry of Rural Development, Government of India has one of the largest sector budgets involving massive amount of investment in the rural development sector in the country. Traditionally the primary focus of the rural development ministry has been on reducing the incidence of poverty in the country. Poverty reduction within rural development is sought to be achieved through enhancing access of poor people to housing, employment, income and sustainable livelihoods opportunities.

As disasters impact the poor most adversely, disaster management approaches need to be integrated into the programme design and implementation strategies of these programmes. For instance, housing for the poor has to take into account the specific hazard proneness of the below poverty line (BPL) households while considering the location and design of the house to be built under Indira Aawas Yojana (IAY).

Similarly, disaster risk profile of the poor households including their identified vulnerabilities and capacities has to be drawn in order to feed into the planning and implementation of other programmes such as National Rural Livelihoods Mission (NRLM) and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).

A review of the guidelines of all the development programmes of the Ministry of Rural Development needs to be undertaken in order to run the reality check of their sensitivity to disaster management issues, particularly with reference to the design features and implementation strategies of these programmes.

Key Learning Points

- As disasters impact the poor most adversely, disaster management approaches need to be integrated into the programme design and implementation strategies of these programmes.
- Disaster risk profile of the poor households including their identified vulnerabilities and capacities has to be drawn in order to feed into the planning and implementation of national flagship programmes such as National Rural Livelihoods Mission (NRLM) and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).
- A review of the guidelines of all the development programmes of the Ministry of Rural Development needs to be undertaken in order to run the reality check of their sensitivity to disaster management issues, particularly with reference to the design features and implementation strategies of these programmes.

LEARNING UNIT 3: RISK TO RESILIENCE: POLICY IMPLICATIONS

Objectives

Examine the shift in focus and perspective from risk to resilience within disaster management approaches, particularly in terms of their policy implications.

Sessions:

- Disaster risk, climate change and rural development: a policy perspective
- Resilience building as pathway to sustainable development

Estimated time: 180 minutes (3 hours)

Expected Outcome

Participants would have identified the major policy implications of the shift in perspective from risk reduction to resilience building.

Session 3.1: Disaster risk, climate change and rural development: a policy perspective

Duration: 90 minutes (1.5 hours)

Objectives

Examine the issues related to disaster risk and climate change from a policy perspective in order to identify the available policy options to integrate risk reduction elements into policy perspective and processes.

Methods:

- Experience sharing by participants
- Discussion in the plenary
- Closing remarks

Materials needed

Flip charts, markers

Hand outs

Handout 12: National Action Plan on Climate Change, Government of India⁹

Handout 13: Pakistan's Climate Change Policy

Handout 14: Viet Nam Policy Statement on Climate Change and Disaster Risk Reduction
Decision Approving the National Target Program on Response to Climate Change

Handout 15: Case Study: Tonga's joint national action plan for climate change adaptation and disaster risk management

⁹ <http://www.c2es.org/docUploads/India%20National%20Action%20Plan%20on%20Climate%20Change-Summary.pdf>

Session Plan with Facilitator Notes

Starting the session (5 mins)

Explain the purpose and process of the session and its intended learning outcomes including a brief overview of the contents to be covered and the overall flow of the session.

Experience sharing by participants (60 minutes)

Participants will be asked to volunteer to share their work experience to handle policy formulation, programme design, strategy development, or monitoring and evaluation related to rural development programmes. 5-6 participants will be allowed to share their experiences on a first come first serve basis. Each volunteer will be given 8-10 minutes for their sharing. Participants will be requested to keep their focus on different policy options emerging from different experiences shared.

Discussion in the plenary (20 minutes)

After all the selected volunteers have shared their respective experiences, the floor will be thrown open for an open house discussion.

In order to guide the discussion distribute handout 12,13 and 14 on National Action Plan on Climate Change in India, Pakistan's climate change policy and Viet Nam policy statement on climate change and disaster risk reduction and use it to flag the issue whether a separate policy is required to address the issue of climate change or existing policies and plans need review to address these concerns.

Distribute Handout 15(Case Study: Tonga's joint national action plan for climate change adaptation and disaster risk management) and discuss their opinion on the key features that could be adopted for creating an action plan for India and what can be the probable issues and challenges in implementing such an action plan.

It will be the responsibility of the session facilitator to keep the discussion focussed on available and possible options to address disaster risk and climate change related concerns within rural development programmes.

Closing remarks (5 minutes)

Close the session with a succinct summary of all the experiences shared and their resultant learning and with an analytical perspective.

Technical Notes

In the specific context of India, rural development represents one of the largest development investments in the country. Poverty reduction and equitable, inclusive and sustainable development are the larger developmental objectives of the Ministry of Rural Development, Government of India. Housing for the poor, employment and sustainable livelihoods are some of the focus areas of the programmes of rural development ministry in the country.

There are broadly two types of policy approaches to address disaster risks in the context of climate change in the development sector. One is that of disaster risk reduction by integrating it as a part of the implementation strategy of the rural development programmes. The other approach is to focus on building resilience building elements focused more on appropriate adaptation strategies into the design and delivery of these development programmes.

From a policy perspective, the adaptation approach to development centres around mainstreaming adaptation into the planning process itself: this essentially means taking into account climate change concerns in social, institutional and infrastructural development planning. Bilateral and multilateral organisations and policymakers in the UNFCCC context have embraced the concept of mainstreaming adaptation into the existing development agenda. Even the Adaptation Policy Framework, developed by the UN Development Programme/Global Environmental Facility (Lim et al., 2005) emphasises the mainstreaming approach, as do the National Adaptation Programmes of Action guidelines for least developed countries (UNFCCC, 2001). But mainstreaming is not likely to be effective if existing development trajectories are inconsistent with the objectives of adaptation, i.e. if they explicitly contribute to vulnerability. This is particularly the case as adaptation remains to be seen as an outcome and an objective, rather than as a process.

The promotion of sustainable social and economic development may be a less conceptually problematic way to achieve adaptation eventually, particularly as the policy frameworks for such development are more explicitly elaborated and less dependent on uncertainties regarding climate change than for adaptation. This is also relevant as adaptation needs to confront the same constraints as those faced by development, and therefore an adaptation process is only possible if there is successful sustainable development to support it. However, for this to be successful, an awareness of climate change impacts and the needs for successful vulnerability reduction are imperative within the development process. This also implies that a sustainable development process will be inclusive of risk reduction and adaptation approaches by intent and design.

However, policies and plans require enabling conditions in order to be effective. Focusing on adaptation before aligning development processes through the creation of enabling conditions for adaptation is like putting the cart before the horse. This is of critical importance, as climate change is expected to exacerbate the existing disaster risks by adding the elements of uncertainty and unpredictability regarding the nature and scale of likely disasters.

It is important to understand that often the reasons that people are vulnerable to climate change have nothing to do with the climate – and herein lies the crux of the vulnerability reduction approach: while the adaptation approach necessarily focuses on adjusting to

reduce the specific impacts of climate change, the vulnerability reduction approach addresses the much more fundamental, underlying series of issues that cause these impacts to be difficult to address, which mostly have little or nothing to do with climate.

Watson and Ackermann underscore that the onset of climate change “does not call for a different or new strategy” for development, because the existing development problems will be the same as those problems created by climate change in general (2000: 24). Addressing risk, such as that related to food or nutrition security, is not a new aspect of development, either in planning or practice. Thus, “invulnerable development”, as suggested by David McEntire (2000), is an appropriate paradigm.

Table 2: Different Approaches to Linking Adaptation and Development

Adaptation Approach

Adaptation to Climate Change Impacts → Vulnerability Reduction → Development

In this view, adaptation is carried out in response to the observed and experienced impacts of climate change on society (including ecosystems). These responses ensure that the vulnerability to the impacts is reduced. This in turn ensures that less is lost each time a climate-related hazard takes place, which means risk is reduced. With reduced risk, development can be more sustainable.

Vulnerability Reduction Approach

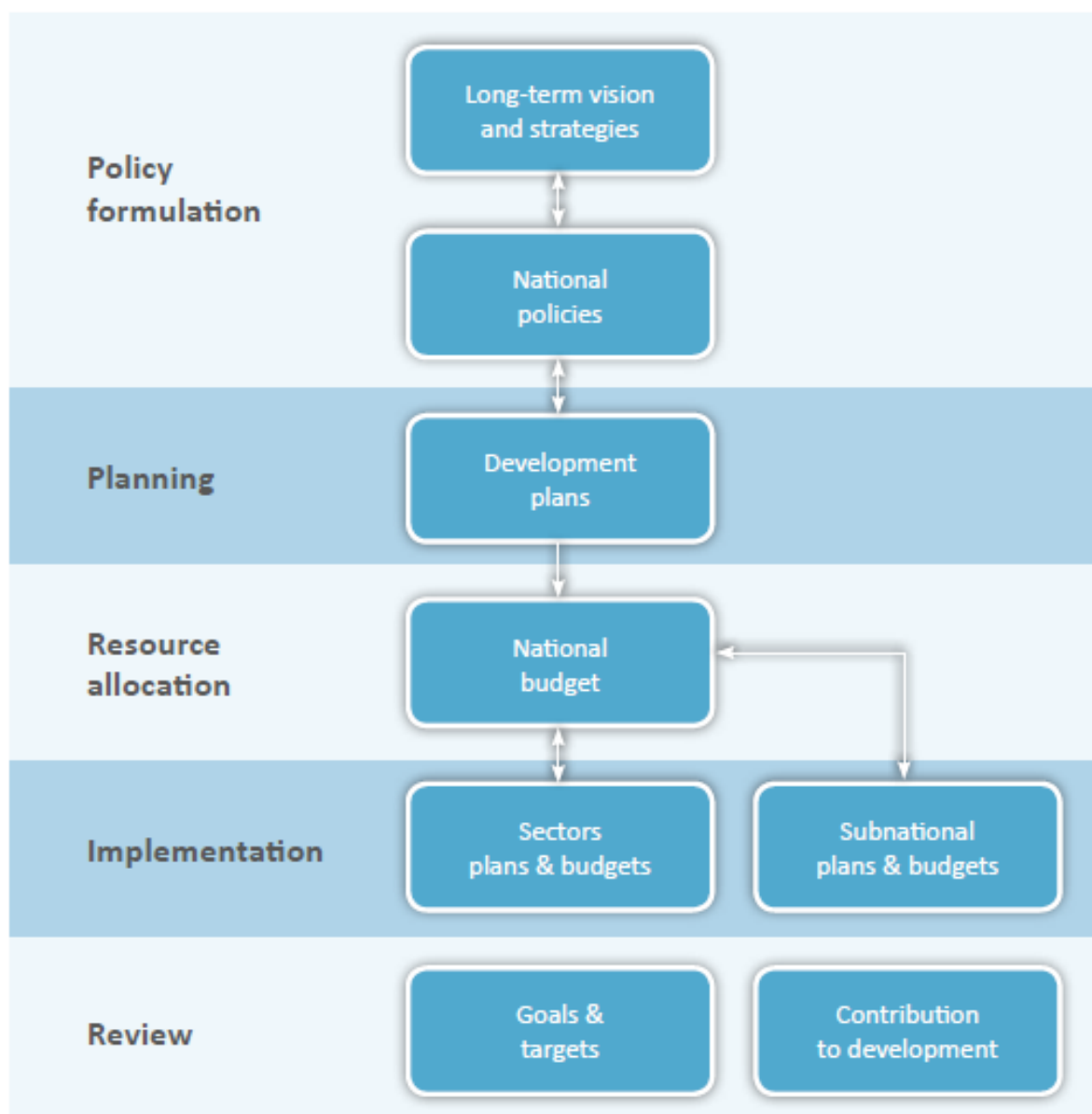
Development → Vulnerability Reduction → Impact Reduction → Adaptation

In this view, development processes help reduce vulnerability to climate change. By reducing the vulnerability, impacts of climate hazards are also reduced, as there is less sensitivity and exposure to the hazards. This translates into a process of adaptation to climate change.

Planning at the national level is critical, as national government provides the framework within which other levels operate and the coordination of sector-specific policies. The national level is where the policy goals from long-term visions and national development strategies are translated into actions plans and budgets. The national level is also important for international diplomacy and dealing with partners and donors. Key interventions at the national level include applying a climate and risk lens to sectoral plans and initiating new programmes to enable adaptation. Plans are the basis for budget decisions that reallocate funds to more vulnerable sectors or regions (AKP, 10b:4,6).

To deal with climate change and disaster risk, new and/or more flexible funding mechanisms should be established to foster longer-term thinking and help cover the cost of integrating adaptation and risk reduction into development planning (OECD, 2009).

Figure 5: Generalised scheme of national development planning system (modified after OECD, 2009)



Key Learning Points

- From a policy perspective, the adaptation approach to development centres around mainstreaming adaptation into the planning process itself.
- The promotion of sustainable social and economic development may be a less conceptually problematic way to achieve adaptation eventually
- Focusing on adaptation before aligning development processes through the creation of enabling conditions for adaptation is like putting the cart before the horse.

Session 3.2: Resilience building as pathway to safe and sustainable development

Duration: 90 minutes (1.5 hours)

Objectives:

Examine alternative resilience building strategies as possible pathways to safe and sustainable development.

Method:

- Case study
- Critical reflection

Materials needed

Flip charts, markers

Hand outs

Handout 16 : A Case Study of the "Afat Vimo" Disaster Insurance Scheme, All India Disaster Mitigation Institute (AIDMI)¹⁰

Handout 17: A case study on building community resilience at state level¹¹

Handout 18: Baseline Indicators for Disaster Resilience¹²

¹⁰ Building Disaster Resilient Communities Good Practices and Lessons Learned, A Publication of the "Global Network of NGOs" for Disaster Risk Reduction, UNISDR, 2007

¹¹ Building climate resilience at state level: Disaster risk management and rural livelihoods in Orissa Merylyn Hedger, Ashok Singha and Mohan Reddy, Strengthening Climate Resilience Discussion Paper 5

¹² This list is dated 25.02.2009 and was developed by Nisheeth Kumar in the context of community disaster resilience fund (CDRF) initiative and was intended to be a draft for further debate, reflection, and refinement in the light of inputs from the ground. This is more from a DRR perspective but applicable to a CCA context as well.

Session Plan with Facilitator Notes

Starting the Session (5 min)

Explain the purpose and process of the session and its intended learning outcomes including a brief overview of the case studies to be used for the group work..

Group work on case study (60 min)

A set of 2-3 case studies is selected in advance and shared with the participants as part of their background material. A set of two case studies are provided as samples with this document. But the facilitators are encouraged to choose their own case studies, which are more context specific depending on the profile of the participants. These case studies will be about alternative resilience building strategies contributing to safe and sustainable development in the specific context of India.

Form 2-3 groups and distribute one case study each to all the groups. Ask the group members to first go through the case study assigned to their group and highlight the important portions and sections of the case study for discussion within their respective groups. After everyone has read their respective case studies, groups discuss within their respective groups about the implications of the case study for developing sustainable development models based on a resilience building approach.

Each group prepares a presentation on their analysis of the case study using power point, flip charts, cards or multi media.

Critical reflection (20 minutes)

Organise a critical reflection session to help the participants think through their own experience and analyse the basic facts, assumptions and values at work in those specific work contexts.

Critical reflection will aim at examining prevalent assumptions and practices in order to arrive at fresh ideas and insights for developing resilience building strategies for ensuring safe and sustainable development.

Closing remarks (5 minutes)

Close the session by summarising the key learning points from the session.

Technical Notes

Resilience building approach to safe and sustainable development offers a point of convergence to rights based and development approaches to good change. Resilience building includes and expands the empowerment approach by engaging in comprehensive capacity assessment in order to identify the major resilience building factors in a given community context. This has to be done in the context of an informed understanding of the existing disaster and climate related risks so as to offset them with appropriate resilience building measures at the local level.

There is enough emerging evidence to the effect that resilience building approach can be the pathway to safe and sustainable development. It is a well-established fact that vulnerability reduction and adaptation are fundamental elements of sustainable development.

This vulnerability reduction approach appears more effective in impelling and facilitating a process of adjustment to climate change and disaster risk reduction, because it avoids explicit measures that may be counteracted by parallel development processes. Rather than be viewed as mainstreaming, this approach is described as a new development paradigm.

Importantly, this approach also avoids seeing risk reduction and adaptation as an alternative to mitigation, because it focuses not on the specific impacts of climate change and disasters, but on the processes that are necessary to achieve sustainable adjustment to all factors contributing to risk. In this way, it represents a more holistic approach than is currently taken.

Climate change adaptation and disaster risk reduction should not be seen as a solution to existing development problems, or as an alternative path towards sustainable development. Instead, it aims at guiding development successfully in light of increased risk from global environmental, social and economic change. To this end, policy calls urging funding for adaptation and disaster risk reduction to be directed at development can instead be met through channels that already exist. It does not appear helpful to design a new policy model as a way to fund sustainable development – if that is indeed the goal. Instead, development activities should be concerned with reducing vulnerability and achieving sustainable development. This will ultimately provide the necessary structures for an effective adaptation and risk reduction process that will then overcome challenges posed by poverty and globalisation.

Key Learning Points

- Resilience building approach to safe and sustainable development offers a point of convergence to rights based and development approaches to good change.
- It is a well-established fact that vulnerability reduction and adaptation are fundamental elements of sustainable development.
- DRR and CCA aims at guiding development successfully in light of increased risk from global environmental, social and economic change.

LEARNING UNIT 4: DISASTER RISK REDUCTION AND CLIMATE CHANGE ADAPTATION INCLUSIVE DEVELOPMENT: PERSPECTIVE AND PRACTICE

Objectives

Examine the current policy perspectives and practice to make the development process DRR and CCA inclusive

Sessions

- Disaster risk reduction and climate change adaptation inclusive development: a conceptual overview
- DRR and CCA inclusive development planning: institutions, instruments and incentives

Estimated time: 180 minutes (3 hours)

Expected Outcome

Participants would have acquired some practical insights into making the rural development process in the country DRR and CCA inclusive.

Session 4.1: Disaster risk reduction (DRR) and climate change adaptation (CCA) inclusive development: a conceptual overview

Duration: 90 minutes (1.5 hours)

Objectives: At the end of the session participants will be able to map out the conceptual framework of DRR and CCA inclusive development.

Methods:

- Case study discussion
- Experience sharing by the participants
- Reflection and discussion
- Summing up

Materials needed

Flip charts, markers, Handouts

Handout

Handout 19: Tracing how climate conditions and development decisions increased flood risk in Pakistan

Handout 20: Understanding Vulnerability due to Current Policy Measures: The Case of Paddy Rice in Andhra Pradesh, India

Session Plan with Facilitation Notes

Introduction (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes.

Case Study Discussion (30 minutes)

Distribute the Handout 19 (Tracing how climate conditions and development decisions increased flood risk in Pakistan) and Handout 20 (Understanding Vulnerability due to Current Policy Measures: The Case of Paddy Rice in Andhra Pradesh, India). Give the participants 15 minutes to go through the cases. Ask the willing participants to share their key learning from these case studies.

Experience sharing (30 minutes)

The purpose of this experience sharing session is to help the participants share their relevant work experience that presents new ideas and insights about making development DRR and CCA inclusive. It is based on the assumption that some policy makers and senior programme managers carry some prior experience of trying out things in their work which have significant implications for DRR and CCA inclusive development.

Invite 4-5 selected (on first come first serve basis) volunteers for sharing their experiences one by one.

Reflection and discussion (20 minutes)

After all the scheduled experiences are shared, initiate a round of reflection and discussion on the experiences shared in the plenary. Steer the discussion to help crystallise all the key learning points from the experiences shared.

Summing up (5 minutes)

Sum up the key learning points from the session using the conceptual framework of DRR/CCA inclusive development.

Technical Notes

Climate change adaptation and disaster risk reduction entails adjusting ecological or social systems in order to minimise damage and loss to disaster and climate related emergencies. Although CCA and DRR do not completely prevent the adverse impacts of climate change (Füssel, 2007), it can reduce those impacts and take advantage of opportunities to achieve positive outcomes. Yet, not all are equally well prepared to adapt: as adaptive capacity varies considerably depending on multiple variables, including socio-economic conditions, state and availability of resources, and the integrity and quality of governance.

CCA and DRR efforts can therefore focus on building adaptive capacity, or on transforming that capacity into specific actions. An important part of CCA and DRR is the strengthening of social and ecological systems, and fostering them to be more resilient. Another is investing in innovations with the potential to transform systems along more sustainable pathways. While some of the threats from climate change may be new, such as unprecedented climate conditions, many aspects of CCA and DRR build on longstanding efforts, such as to reduce the risk of disaster. Accordingly, it is clear that CCA and DRR has the potential to align closely with major development objectives (Klein, Schipper, and Dessai 2005; Schipper 2007; Schipper, Cigaran, and Hedger 2008).

Mainstreaming CCA and DRR means acknowledging this insight and capitalising on it at the policy level mainstreaming can be done by integrating considerations of climate change and disaster risks into policy-making, budgeting, implementation and monitoring processes at national, sector and subnational levels. The process is seen as on-going, involving multiple stakeholders and contributing to human well-being.

Mainstreaming can also be a form of cross-sectoral policy integration (Dovers and Hezri, 2010). For example, there is a recognised need to take into account the potential long-term effects of climate change when making decisions concerning investments in long-lived infrastructure, or when providing development assistance that will shape future patterns of human settlement and livelihoods (Agrawala and van Aalst, 2008; World Bank, 2006). Similarly, mitigation strategies can and should be aligned with CCA and DRR strategies, and vice-versa .

The expected benefits of mainstreaming climate change adaptation and disaster risk reduction into development activities include avoided policy conflicts; reduced risks and vulnerability; greater efficiency compared to managing CCA and DRR separately, and; leveraging the much larger financial flows in sectors affected by climate risks than the amounts available for financing CCA and DRR separately (Agrawala, 2004; Srinivasan and Uchida, 2008). CCA and DRR policies need not develop specific and detailed response options, but rather facilitate their development and implementation as part of existing sectoral policies (Dovers, 2009; Klein, Schipper, and Dessai 2005).

Key Learning Points

- CCA and DRR efforts can focus on building adaptive capacity and transforming that capacity into specific actions.
- An important part of CCA and DRR is the strengthening of social-ecological systems, and fostering them to be more resilient
- Mainstreaming is a form of cross-sectoral policy integration

Session 4.2: DRR and CCA inclusive development planning: institutions, instruments and incentives

Duration: 90 min

Objectives: At the end of the session participants will be able to identify various institutions, instruments and incentives for making development planning DRR and CCA inclusive in the rural development sector in India.

Methods:

- Panel discussion

Materials needed

Flip charts, markers

Session Plan with Facilitator Notes

Starting the Session (5 minutes)

Invite the panellists for the panel discussion and explain the purpose and process of the session.

Panel discussion (80 minutes)

A list of 5-6 identified panellists is drawn in advance and their consent obtained to participate in the discussion. This should include at least 2 panellists from among the participants. 3-4 external panellists should be selected on the basis of their experience and expertise in DRR, CCA and development domains. Care should be taken to ensure that all the four external panellists are from different backgrounds and represent government, civil society and academia respectively. Gender balance among the panellists must be ensured with at least 50% of the panellists being women.

Appoint the chairperson for the session in consultation with the other panellists in advance and announce the same at the inception of the panel discussion. Some of the participants are given the responsibility of being discussants and rapporteurs for the panel discussion.

Panellists would be given 10 minutes each to share their ideas and views on different pre-identified aspects or themes related to DRR and CCA inclusive development planning. Three panellists should be identified and briefed to speak on institutions, instruments and incentives for DRR and CCA inclusive development planning.

Chairperson of the panel discussion has to be a known expert of DRR/CCA inclusive development and should be briefed to highlight the key points from all the presentations in his concluding remarks.

20 minutes should be the time earmarked for questions from the floor to various panellists and their responses by them.

Summing Up (5 minutes)

Summarise the key learning points of the session and its linkage with the up-coming session on mainstreaming DRR and CCA in planning and policy making.

Technical Notes

It is almost universally acknowledged that development planning and policy making processes need to be DRR and CCA inclusive. However, one needs institutions, instruments and incentives to facilitate the process of mainstreaming DRR and CCA concerns into planning processes. This is an area that is still evolving and has yet to deliver replicable models that can be tried out on scale. But it is commonly agreed that mainstreaming requires political will, institutional arrangements, budgetary allocations and monitoring and evaluation in order to function effectively.

From the perspective of both DRR and CCA, the real objective is effective development planning and programming capable of reducing disaster and climate related risks. In view of mounting evidence that disasters are hampering development and poverty alleviation, there is a compelling need to create the required political will and financial incentives to invest resources in empowering people and building their resilience to ensure that something does not happen, rather than investing in poorly designed and implemented visible infrastructure or social programs, which are politically more attractive, but with very low returns in the long run.

The incentives always run the risk of being skewed given the general trend of more money pouring in from donors following disasters than before them. This trend in funding carries an inherent donor bias in emphasis on post-disaster response and recovery as opposed to pre-disaster risk reduction and mitigation measures. Attention to incentives, institutions and instruments to promote good risk-aware development by mainstreaming DRR and CCA into actual planning and policy making processes is the key requirement.

Table 3: Entry points for mainstreaming at different planning levels (modified after UNDP-UNEP, 2011)

Planning level	Entry points
National	Poverty reduction strategy paper National development plan MDG-based national development strategy Budget allocation processes or reviews
Sector	Sector strategies, plans and policies Sector budgets Public expenditure reviews
Subnational	Decentralisation policies District plans Sub national budgets

National Development Programs

The medium and longer-term national development plans could be key strategy documents in which to incorporate adaptation and risk reduction concerns. Yet, to date, such integration has been rare.

Key Learning Points

- The real objective of both DRR and CCA is their effective mainstreaming into development planning and programming capable of reducing disaster and climate related risks.
- The incentives always run the risk of being skewed given the general trend of more money pouring in from donors following disasters than before them.
- The medium and longer-term national development plans and key strategy documents could be used as the primary sites for incorporating adaptation and risk reduction concerns to begin with.

LEARNING UNIT 5: MAINSTREAMING DRR AND CCA IN PLANNING AND POLICY MAKING

Objective(s)

Examine different conceptual frameworks and models for mainstreaming DRR and CCA into rural development and identify key policy issues and challenges for effective mainstreaming.

Session(s)

- Mainstreaming DRR and CCA: approaches and methods
- Key policy issues and challenges in effective mainstreaming of DRR and CCA

Estimated time: 180 minutes (3 hours)

Expected Outcome

Participants would generate practical ideas for mainstreaming DRR and CCA in planning and policy making in the rural development sector in India.

Session 5.1: Mainstreaming DRR & CCA: approaches & methods

Duration: 90 minutes

Objectives: At the end of the session the participants would be able to articulate different conceptual frameworks and models available for mainstreaming DRR and CCA into development planning and policy making.

Methods:

- Interactive lecture presentation
- Discussion in the plenary
- Closing remarks

Materials needed

Flip charts, markers

Handouts:

Handout 21: Example: Outcome Indicators for Mainstreaming Climate Change Adaptation

Handout 22: Progress Checklist for Climate Change Adaptation Mainstreaming

Handout 23: Possible Entry Points for Mainstreaming into National Development Planning

Session Plan with Facilitation Notes

Introduction (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes. Give a brief overview of the contents to be covered and the flow of the session.

Interactive lecture presentation (20 minutes)

Start this interactive lecture presentation by inviting the participants to share the key learning points of different sessions of the workshop so far. It is quite likely that there will be references to the issue of mainstreaming DRR and CCA into development. Use it as your entry point into giving a comprehensive overview of conceptual frameworks and models available for mainstreaming DRR and CCA into planning and policy making processes.

In the power point presentation discuss the suggestive outcome indicators and the progress checklist for mainstreaming CCA and through a participatory process make this list more exhaustive so that this can be shared with the participants as a handout at the end of the session.

Discuss the key components of the conceptual frameworks by OCEP and UNDP for mainstreaming risk reduction and adaptation into development policies, plans and programmes

End the presentation by discussing the possible entry points for mainstreaming into national development planning.

Follow a conversational style to the extent possible and be open to comments and questions from the participants as you go along.

Discussion in the plenary (60 minutes)

The interactive lecture presentation will be followed up by an open house discussion in the plenary. This session will aim at eliciting all the doubts and questions that the participants may have and at clarifying them with evidence based arguments using facts and analysis. It is envisaged that by the end of the session the participants would have raised most of the possible questions on policy implications of DRR/CCA mainstreaming efforts within rural development planning, policy making and programming processes.

Closing Remarks (5 minutes)

Close the discussion with your concluding remarks by pulling together all the points made by the participants during the session and by summarising the key learning points from the session.

Technical Notes

Development faces a growing threat from a changing climate, particularly through the impact of more extreme events causing disasters. OECD estimates show that up to 50% of development assistance may be at risk because of climate change.

In managing such risks to development, there is significant overlap between disaster risk reduction (DRR) and climate change adaptation (adaptation). However, these agendas have evolved independently until now. DRR can deal with current climate variability and be the first line of defence against climate change, being therefore an essential part of adaptation.

Conversely, for DRR to be successful, it needs to take account of the shifting risks associated with climate change and ensure that measures do not increase vulnerability to climate change in the medium to long-term.

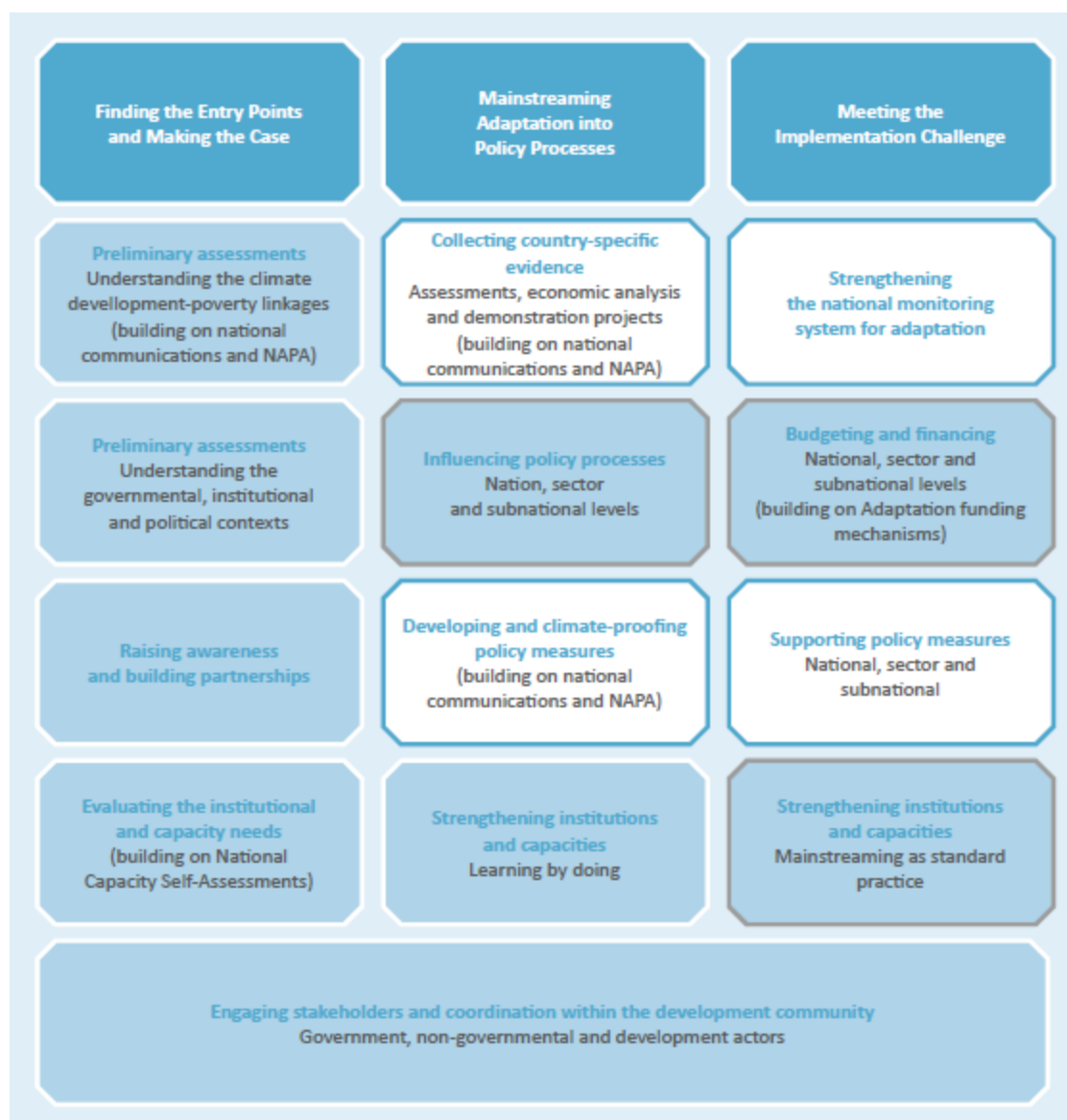
So far there has been limited integration of DRR and adaptation despite the two agendas sharing similar goals and conceptual overlaps, and both struggling to be mainstreamed into regular development planning. At stake is policy coherence and effective use of resources, as continued separation results in administrative inefficiencies, duplication of efforts and damaging competition between different inter-sectoral coordination mechanisms.

A number of conceptual frameworks for mainstreaming risk reduction and adaptation into development policies, plans and programmes have been developed by different agencies and are available in the public domain for reference and use. Here are a couple of them from UNDP and OECD respectively.

The Poverty-Environment Initiative guide for practitioners, UNDP-UNEP, 2011, proposes a framework with three main components: 1) finding the entry points and making the case; 2) mainstreaming adaptation into policy processes, and; 3) meeting the implementation challenge. Stakeholder engagement is emphasised throughout the policy cycle, and the process is assumed to be iterative and integrative. The framework builds on experiences with poverty-environment mainstreaming, and this emphasis is apparent in the framework's sub-components, checklists and assessment questions.

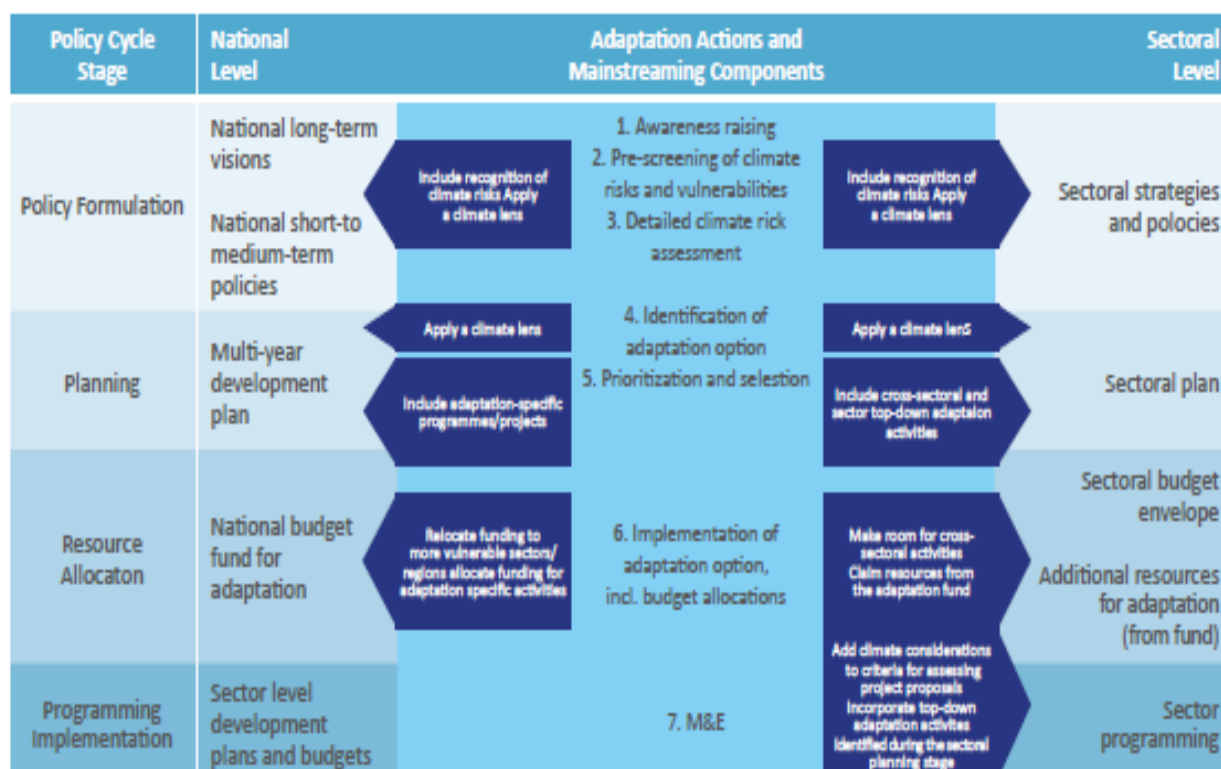
The first component of the framework identifies where to start mainstreaming and how to prepare for it. At the national level, the framework places an emphasis on key strategy documents and budget allocation processes. Evidence from impact, vulnerability and adaptation assessments, analyses of the costs and benefits of adaptation options, and lessons learned from demonstration projects, should all be used to inform decisions on modifying policies or initiating new interventions.

Figure 6: Poverty-Environment Initiative framework for mainstreaming (UNDP-UNEP, 2011)



Another framework has been developed by the Organisation for Economic Co-operation and Development (OECD, 2009). This framework is comprehensive and oriented towards national policy and planning systems (Figure 3). It is also relatively complex. Under the framework, resource allocation is distinguished from planning. At the national level, the “whole of government” approach is recommended. This requires the involvement of key stakeholders, the improvement of coordination, and the implementation of related multilateral and regional environmental agreements. Relevant regulations and standards are reviewed and adjusted to reflect or take into consideration the impacts of climate change.

Figure 7: OECD framework for mainstreaming (OECD 2009; Olhoff and Schaer, 2010)



How to mainstream DRR in development planning process at policy level?

In order to mainstream DRR in the development planning process at the sub-national level the following broad steps would need to be followed:

- Analyze the risk from natural hazards the area faces (risk on the physical framework and land-use planning)
- The risk identified should be factored in formulating the development goals, objectives and targets and which would be reflected in the development plan
- The development plan should correspondingly identify the measures to reduce the risk
- Implementation of the plan should ensure DRR is mainstreamed in all stages; investment programming, budgeting, project appraisal, implementation, monitoring and evaluation.

Key Learning Points

- In order to mainstream DRR in the development planning process at the sub-national level the following broad steps would need to be followed:
 - Analyze the risk from natural hazards the area faces (risk on the physical framework and land-use planning)
 - The risk identified should be factored in formulating the development goals, objectives and targets and which would be reflected in the development plan
 - The development plan should correspondingly identify the measures to reduce the risk
 - Implementation of the plan should ensure DRR is mainstreamed in all stages; investment programming, budgeting, project appraisal, implementation, monitoring and evaluation.

Session 5.2: Key policy issues and challenges in effective mainstreaming of DRR and CCA in rural development in India

Duration: 90 minutes

Objectives: At the end of the session, the participants would be able to identify the key policy issues and challenges for mainstreaming DRR and CCA in rural development in India.

Methods:

- Presentation
- Discussion in the plenary
- Closing remarks

Materials needed

Flip charts, markers

Handouts:

Handout 24: Guiding Questions for Engaging in the Budgeting Process

Handout 25: Developing an integrated approach

Session Plan with Facilitation Notes

Presentation (15 minutes)

The facilitator will make a presentation summarising the key learning from the workshop so far. This will include the key policy issues, challenges and opportunities identified for mainstreaming DRR and CCA into development planning, policy making and programming processes.

The facilitator will make a presentation on key areas of mainstreaming and some of the specific issues to be considered while designing mainstreaming interventions. While discussing specific sectors ask the participants to share the challenges and issues which they have faced while designing and implementing interventions in these areas.

Distribute the Handout 24 (Developing an integrated approach) and discuss the various components outlined in that and the ways in which any planning initiative can incorporate all the features as mentioned in the handout.

Before closing the presentation leave the participants with Handout 25 (Guiding Questions for Engaging in the Budgeting Process). These can be taken up later in a plenary.

Discussion in the Plenary (60 minutes)

After this initial presentation, the floor will be thrown open for discussion in the plenary. A panel of 3-4 participants will be inducted as resource persons to sit on the panel for conducting the discussion. One of the participants will chair the discussion and one of them will function as the moderator of the discussion.

Purpose of this discussion will be to raise all critical policy issues and take a stock of the diversity of approaches and practices available to address those issues. Ensuing discussion must examine the efficacy of available approaches and practices in view of the available evidence.

Closing Remarks (15 minutes)

Chosen chairperson of the discussion will conclude the discussion with her closing remarks. She will be expected to pull together all the key points made by different participants during the discussion and highlight the most significant ones in terms of their implications for policy and practice.

Technical Notes

Development takes place within the context of specific sectors but disaster risk management (DRR) and climate change adaptation (CCA) are not stand-alone sectors or programmes. Both DRR and CCA are cross-cutting and involve multiple sectors. Both DRR and CCA are multi-sectoral and inter-institutional processes. Hence, mainstreaming DRR and CCA essentially means integrating it into specific development sectors across a wide variety of institutions and stakeholders.

Integrating risk assessment in development sectors involves considering three generic issues:

- how the activities of the sector impact disaster risks;
- how to apply risk assessment in planning the sector's development;
- any sector-specific considerations in mainstreaming disaster risk assessment in development strategies and programmes.

Key areas for mainstreaming:

- **Poverty reduction**

Effective mainstreaming of risk reduction in poverty reduction interventions involves regulating those interventions to avoid or minimize their contribution to disaster and other development risks. This integration depends on adopting risk-sensitive development policies. This is facilitated by determining, during the risk assessment process, how poverty reduction interventions can cause or exacerbate disaster risks, as well as identifying constraints to adopting poverty risk assessment in development planning.

Decision-making in poverty risk assessment involves identifying what the poor do to deal with disaster risks they face, including the strengths and weaknesses of their survival and coping strategies. In addition, it is necessary to determine what levels of risk are acceptable for the poor and the suitability of measures and options for addressing unacceptable risks for the poor. Effective participation of the poor in the process is essential in identifying risks in their relevant context and in evaluating and selecting appropriate measures to prevent or reduce those risks.

- **Agriculture and rural livelihoods**

Agricultural and rural livelihoods depend significantly on the natural resource base. Consequently, several effects of natural hazards and climate change affect agriculture and rural development. Natural hazards and disasters impact agriculture through three main pathways, namely (1) input systems (including biological inputs), (2) services (such as processing and marketing infrastructures) and (3) management practices (such as water use and disease control). In turn, negative agriculture and rural development practices exacerbate some hazards. Therefore, mainstreaming disaster risk reduction in agriculture and rural livelihoods should aim to reduce the impact of disasters on the sector and the negative effects of sectoral practices on disaster risks.

- **Environmental Management**

In terms of disaster risks that can be caused by a development sector, environmental degradation damages the natural resource base and severely alters the natural ecosystem processes underlying environmental outcomes. The former effect compounds the impacts of disasters and reduces the ability of people and ecosystems to absorb those impacts, while the latter contributes to environmental change and variations in the patterns of natural hazards.

Mainstreaming disaster risk assessment in environmental management requires assessment of disaster risks arising from environmental factors. Environmental risk assessment (ERA) offers an approach that can be adapted to country and local circumstances. This is essentially an environmental impact assessment (EIA) that incorporates risk assessment with decision outputs on alternative risk management solutions. Risk-based environmental impact assessment is best conducted early in the cycle of developing environmental management interventions and during the implementation review stage.

Specific issues in the relationship between environment, poverty and sustainable development to be analyzed during environmental risk assessment include the following:

- environmental consequences of disaster reduction interventions;
- how environmental management interventions can cause or exacerbate disaster risks;
- environmental policies and practices that reduce disaster and livelihood risks;
- extent of use of environmental valuation in development decision-making.

- **Land use Planning**

Mainstreaming disaster risk assessment in land use planning implies applying integrated land use management to reduce disaster risks and to meet land management objectives at the same time. This also implies using land resources as a risk-reducing factor through risk-sensitive land use planning.

In land use risk assessment, the planning background stage includes identifying the risks to be assessed, analyzing the resource profile of target communities, establishing the regulatory context for land use planning, and reviewing existing land use plans.

- **Infrastructure**

Development investments in infrastructure are physical risk reduction measures that contribute to reducing structural vulnerability. Hence, the design and construction of hazard-resistant buildings and infrastructures is an effective way of reducing disaster risks. This depends on applying risk assessment in infrastructure development. At the problem identification stage, issues to consider include the status of present infrastructure protection programmes and procedures to determine the criticality of infrastructure assets.

Challenges in mainstreaming

Lack of awareness of climate change within the development community and limitations on resources for implementation are the most frequently cited reasons for difficulties in mainstreaming adaptation to climate change within development activity. These explanations may hold true in many situations, but there is also a more complex web of reasons underlying them:

- **Barriers within governments:** Climate change and disaster risk expertise is typically the domain of environment departments in governments and donor agencies, and such departments have limited leverage over sectoral guidelines and projects. Sectoral managers and country representatives may also face “mainstreaming overload”, with issues such as gender, governance and environment also vying for integration in development activities. Moreover, as many development projects are funded over three to five years, they may not be the best vehicle for long-term climate and disaster risk reduction. Adaptation to climate change *ex ante* may also have more difficulty attracting resources than more visible *ex poste* activities such as emergency response and post-disaster recovery.
- **Insufficient relevance of available information to development-related decisions:** Development activities are sensitive to a broad range of variables, only some of which can be reliably projected by various models for climate change and disaster risk. Temperature, for example, is typically easier to project than rainfall. Climate extremes, which are often critical for many development-related decisions, are much more difficult to project than mean trends. There is also a mismatch between the time and space scales of climate change projections and the information needs of development planners. For example, the primary sensitivity of development activities to climate is at a local scale (such as that of a watershed), for which credible climate change projections are often lacking.
- **Effective mainstreaming of DRR in the development planning processes at the sub-national level** would require having in place the various stages of the planning process. Though in most countries the planning process is well defined, the actual implementation on the ground is not always up to date. For example, due to lack of resources and capacity sometimes sub-national development plans are not updated. This is particularly true for land-use and physical plans, and in case of mainstreaming DRR this is an essential starting point.
- **The linkages between development planning and investment planning** sometimes have little correlation due to various factors and thus increases the difficulty in prioritizing DRR from goals and strategies to implementable programs and projects with available finances.
- **The linkages between sectoral planning and socio-economic development planning** is not sufficient and this leads to inconsistency and overlaps between different types of planning and particularly impacts cross sectoral issues such as DRR.

- In some cases there are specific guidelines for each stage of the planning process; therefore the challenge remains in deciding if a separate stand-alone guideline on mainstreaming DRR is required, or whether DRR should be integrated into the existing guideline documents.

Key Learning Points

- Development takes place within the context of specific sectors but disaster risk management (DRR) and climate change adaptation (CCA) are not stand-alone sectors or programmes, but are cross-cutting in nature and span multiple sectors and programmes.
- Lack of awareness of climate change within the development community and limitations on resources for implementation are the most frequently cited reasons for difficulties in mainstreaming adaptation to climate change within development activity.
- Integrating risk assessment in development sectors involves considering three generic issues:
 - how the activities of the sector impact disaster risks;
 - how to apply risk assessment in planning the sector's development;
 - any sector-specific considerations in mainstreaming disaster risk assessment in development strategies and programmes

LEARNING UNIT 6: SYSTEMATIC APPROACH TO TRAINING (SAT)

Objective (s)

The objective of this Learning Unit is to equip the participants with basic knowledge and skills about the key issues to be addressed in the course of designing a training intervention/programme

This Learning Unit has four sessions:

- Session 1: Assessing Training Needs
- Session 2: Defining Training Aim and Objectives
- Session 3: Deciding the content, methodology and resource persons
- Session 4: Deciding the monitoring and evaluation indicators and processes

Estimated time: 6 hours

Expected Outcome

Participants are able to effectively adapt the base sub module of this training module for training resource persons or organising direct training programmes.

Session 6.1: Systematic Approach to Training (SAT) and Assessing Training Needs

Duration: 90 minutes (1.5 minutes)

Objectives

At the end of the session participants will be able to:

- Explain the systematic approach to training (SAT)
- Articulate the relevance of training needs assessment
- Undertake training needs assessment exercise

Methods

- Brainstorming
- Group work
- Presentation and discussion in the plenary

Materials needed

Flip charts, markers, hand outs

Handouts:

Handout 26: Systematic Approach to training

Handout 27: Capacity Needs and Training Needs Assessment

Session Plan and Facilitator Notes

Starting the Session (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes including a brief overview of the overall flow of the session.

Brainstorming (40 minutes)

Initiate a quick brainstorming on capacity needs in general and training needs in particular. Ask them to give some examples of both capacity and training needs.

Make a free list of all the examples shared by the participants by recording them on a flip chart with the help of volunteers from among the participants. Get all the points grouped in three categories of knowledge, skills and attitude.

Conclude the brainstorming by highlighting the notion of gap in current and desired levels of knowledge, skills and attitude to undertake a task and achieve a pre-specified goal. It is important to underline that training gaps and needs are a sub-set of larger capacity gaps that a target group may be having.

Group work (40 minutes)

Distribute cards to all the participants and request them to write about their experience and learning related to assessing training needs, if any, or their ideas about training needs assessment as a trainer. Ask them to write it out in bullet points than sentences. Give 10 minutes for this individual exercise.

After the card exercise is done by the participants, ask them to share it in the plenary. Wrap this up in 10 minutes by inviting those who want to share. Ask each of the willing ones to share ideas which are not shared by others. If more people want to share than can be accommodated in 10 minutes, ask them to paste all the cards on the wall for everyone to see and discuss. Cards will have to be placed in knowledge, skills and attitude (KSA) categories as would have emerged during initial few sharings.

Summing up (5 minutes)

Summarise the key learning points from the session.

Technical Notes

Training needs are a sub-set of larger capacity needs. Training needs are essentially learning needs that can be addressed through a training intervention. Training works on knowledge, skills and attitude of people that form a part of the human capacity. Other dimensions of capacity include infrastructure, policy, institutions, strategy, structure and culture, which often call for non-training solutions to capacity gaps related to these dimensions.

It is universally agreed that an effective training intervention has to be based on identified training needs. It is also recognised that participatory assessment involving active participation of those whose needs are being identified is crucial to a fair assessment of the training needs. As training is a time and cost intensive activity, identified needs have to be prioritised in order to make sure that training targets only most important and relevant needs so as to achieve maximum focus and impact.

Moreover, training needs have to be identified and articulated in view of the assigned roles and responsibilities of the functionaries whose needs are being identified. It is quite likely that roles of some functionaries are not clearly defined and communicated and what they do in their work situation is largely determined by established norms, conventions and practices. In a situation like this these norms and practices have to be mapped out in order to identify the capacity gap areas in general and training needs in particular.

As training needs relate to knowledge, skills and attitude, identified training needs have to be grouped in these three categories. This helps in firming up the overall orientation of the training program. While there are usually inputs related to all the three categories of knowledge, skills and attitude in a training program, one of them or a couple of them could constitute the focus of the training to be imparted.

Training needs often help determine the training objectives, but the reverse could also be true in certain cases. It is possible that training objectives are defined in advance and needs assessment exercise is carried out in view of certain pre-agreed objectives.

Training needs could be prioritised in the following manner:

Table 4: Format for Prioritisation of Training Needs

Capacity Need	Training Need	Knowledge	Skill	Attitude
Example: Lack of informed participatory planning	How to facilitate participatory planning	Basic principles and processes of participatory planning	How to use available methods and tools to engage in participatory planning	Making the planning process participatory and community led

Key Learning Points

- Training needs are a sub-set of larger capacity needs.
- Effective training intervention has to be based on identified training needs.
- Training needs have to be identified and articulated in view of the assigned roles and responsibilities of the functionaries whose needs are being identified.
- Training needs often help determine the training objectives

Session 6.2: Defining Training Aim and Objectives

Duration: 90 minutes

Objectives: At the end of the session participants will be able to:

- Articulate the role and relevance of defining training aim and objectives
- Define training aim and objectives of the adapted base sub module for resource persons and direct training programmes.

Methods:

- Individual exercise
- Group work
- Interactive Lecture Presentation and discussion in the plenary
- Summing up

Materials needed

Flip charts, markers, hand outs

Handouts:

Handout 28: Training/Behavioural Objectives: Verbs to Describe Complexity Of Behaviour

Session Plan with Facilitator Notes

Starting the Session (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes.

Individual exercise (20 minutes)

Distribute flash cards to all the participants and ask them to write out the aim and objectives of the base sub module that they attended over last three days. Ask them to read it out to the entire group and post the written cards on the space provided for the purpose.

Group work (30 minutes)

Ask the working groups of the needs assessment exercise to define the training aim and objectives in the light of identified training needs in the previous sessions. Underline that aim and objectives have to be SMART meaning: specific, measurable, attainable, realistic and time bound

Share the design of the base sub module of this training module and ask them to critically examine the aim and objectives of the base sub module that they have received over last 3 days in the light of their own immediate experience as a participant. Ask them to share their ideas and insights in the plenary.

Presentation and discussion in the plenary (30 minutes)

Ask all the working groups to make their respective presentations in the plenary. Follow it up with an open house discussion on the subject.

Summarise the key learning (5 minutes)

Technical Notes

Defining training aim and objectives is the key to a sound training design and its subsequent delivery strategy. Aim refers to the overall goal that a training intervention seeks to achieve. Objectives are more specific outputs and outcomes that are sought to be achieved through a training exercise. Clarity in objectives helps in doing a smart and sharp training design. Objectives have to be SMART; meaning specific, measurable, attainable, realistic and time bound.

Training needs identified in terms of specific gaps in knowledge, skills and attitude form the basis for different types of training objectives. Objectives have to be written in terms of expected action outcomes that a training intervention is intended to lead to. Thus, training objectives are often written in terms of what the trained person would be able to do at the end of the training program.

In the process of finalising the aim and objectives of a training programme, the following three types of objectives have to be defined:

Training objectives (TOs): TOs refer to the immediate outcomes of a training programme that can be ascertained at the end of the programme evaluation using structured or semi-structured questionnaire and feedback forms.

Performance objectives (POs): POs refer to the visible change in the work behaviour of the trained personnel in her/his real work environment, following training. This can be found out through qualitative investigation methods such as interviews and discussions after some lapse of time post training, preferably during a period of 6-12 months after training.

Enabling objectives (EOs): EOs refer to the specific expected outcomes of different sessions across different modules, learning units or events. These can be verified through formal or informal feedback sessions at the end of each session. Feedback forms could also be used to assess whether enabling objectives of a particular session are achieved.

It is important to understand that defining the different kinds of objectives at the very outset can help the trainers and facilitators maintain the focus and orientation of the training programme in the right direction. This is also of great help in selecting the right resource persons for different sessions and in choosing the appropriate training method for different topics and themes.

Key Learning Points

- Defining training aim and objectives is the key to a sound training design and its subsequent delivery strategy.
- Objectives have to be written in terms of expected action outcomes that a training intervention is intended to lead to.
- Defining the different kinds of objectives at the very outset can help the trainers and facilitators maintain the focus and orientation of the training programme

Session6.3: Deciding the content, methodology and resource persons

Duration: 90 minutes (1.5 hours)

Objectives: At the end of the session participants will be able to

- Decide the content, methodology and resource persons for the training programs

Methods:

- Group work
- Presentation and discussion in the plenary
- Summing up

Materials needed

Flip charts, markers,

Session Plan with Facilitation Notes

Starting the Session (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes.

Group work (40 minutes)

Ask the working groups to re-assemble to decide on the content, methodology and resource persons. Based on the training needs identified and the aim and objectives of the training programme agreed, the working groups will be required to list out the topics and themes that are proposed to be covered during the training programme.

Methods have to be decided on the basis of the principles of adult learning as applied to specific themes and contexts. Methods such as brainstorming, experience sharing, group work, presentation and discussion, case studies and good and best practices provide a lot of room for participatory and interactive learning.

Selection of resource persons should be not on the basis of who is available, but on the basis of the experience and expertise required to do justice to the chosen topics and themes in terms of inducing the desired learning.

Presentation and discussion in the plenary (40 minutes)

Ask the working groups to make their respective presentations in the plenary. Follow it up with an open house discussion to sharpen the understanding on the ways to decide on the contents, methods and resource persons.

Summing up (5 minutes)

Summarise the key learning from the session.

Technical Notes

Agreed objectives of the training dictate the content and methodology to be adopted to deliver the content. Content is basically the themes and topics related to the chosen subject matter.

As adults learn more from experience, content has to be delivered using methods of experiential learning. This could involve brainstorming, experience sharing, exploratory discussions, case studies, and role plays.

Resource persons need to be selected on the basis of two key criteria: one, their domain knowledge and expertise; two, their training and facilitation skills.

Key Learning Points

- Methodology of the training should be decided on the basis of the principles of adult learning as applied to specific themes and contexts.
- Selection of resource persons should be not on the basis of who is available, but on the basis of the experience and expertise required to do justice to the chosen topics and themes in terms of inducing the desired learning.

Session 6.4: Deciding the monitoring and evaluation indicators and processes

Duration: 90 minutes

Session Objectives: At the end of the session participants will be able to:

- Articulate the relevance of developing monitoring and evaluation indicators
- Develop monitoring and evaluation indicators on their own.

Methods:

- Interactive Lecture Presentation
- Group work
- Presentation and discussion in the plenary
- Summing up

Materials needed

Flip charts, markers

Session Plan

Starting the Session (5 min)

Explain the purpose and process of the session and its intended learning outcomes.

Interactive Lecture Presentation (25 min)

One way to begin this is to initiate a discussion on the role of monitoring and evaluation indicators in assessing the efficacy of the training interventions designed and delivered.

Indicators, as objectively verifiable measures of change, can tell about the changes taking place as a result of the training imparted. Sharper the indicator, sharper will be the understanding of the changes taking place.

A good indicator is the one that can capture a lot of qualitative information and feedback within a single measurable change. For example, 'the number of participants that have been able to successfully adapt and deliver the base sub module for training resource persons' contains the following qualitative information:

- Capacity of the participants in terms of their knowledge and skills to design and deliver training programme has increased.
- Understanding of the participants on DRR/CCA mainstreaming issues and challenges is of an advanced level.
- Participants are keen to volunteer their time and effort to organise downstream training programmes as proposed and planned

Differences between monitoring and learning indicators have to be highlighted and explained.

Group work (30 min)

Ask the working groups to develop a set of monitoring and learning indicators for the adapted base sub module.

Presentation and discussion in the plenary (25 min)

Ask the working groups to make their respective presentations in the plenary. Follow it up with an open house discussion to sharpen the understanding of the key points involved.

Summing up (5 min)

Summarise the key learning from the session

Technical Notes

Monitoring and evaluation are often the weakest links in most of the training interventions. It is generally hard to know the outcomes of a training program other than the ones focussed on some specific skill building involving motor skills such as cooking and driving.

It is important to have a robust monitoring and evaluation system in place in order to track the efficacy of the training intervention being designed and delivered. This helps ensure the effectiveness of the training both in terms of the quality of process and outcomes achieved.

Indicators are objectively verifiable measures of change. These indicators are generally related to processes, inputs, outputs, outcomes, and impact. Monitoring as a concurrent exercise in learning during the life cycle of an intervention is generally about process, input and output indicators. Evaluation which is a periodic (mid-term, end term and post intervention) exercise in learning about an intervention requires outcome and impact indicators.

Indicators have to be SMART meaning: specific, measurable, attainable, realistic and time bound

Identification of these indicators in advance and their use and application to generate the required data has to be built in into the training design and delivery.

Key Learning Points

- Monitoring and evaluation need to be built into training intervention in order to make them more effective.
- Indicators for monitoring and evaluation are objectively verifiable measures of change
- Indicators may relate to processes, inputs, outputs, outcomes and impact.
- Indicators have to be specific, measurable, attainable, realistic and time bound.

LEARNING UNIT 7: LEARNING AND FACILITATION SKILLS

Objectives

The objective of this Learning Unit is to equip the participants with basic learning and facilitation skills that help the trainers conduct training/learning sessions with efficiency and effectiveness.

Sessions

- Art of facilitation I
- Art of facilitation II
- Sharing, Listening and Learning
- Learning to listen and listening to learn

Estimated time: 5 hours

Expected outcome

Participants are able to practice learning and facilitation skills effectively.

Session 7.1: Art of Facilitation I

Duration: 90 minutes (1.5 hours)

Objectives:

- Articulate the importance of understanding self and others for effective facilitation
- Articulate ways to promote trust and sharing between the participants and the facilitator
- Use active listening as a key facilitation strategy

Methods:

- Individual exercise
- Group work
- Presentation and discussion in the plenary
- Summing up

Materials needed

Flip charts, markers, hand outs

Handouts:

Handout 29: Johari Window

Handout 30: Stephen Covey's seven habits of highly effective people

Session Plan with Facilitation Skills

Starting the Session (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes.

Individual exercise (20 minutes)

The individual exercise is designed to trigger experiential learning about the concepts of self, self-image and self-esteem. Distribute cards to participants and ask each participant to write one sentence about herself/himself (that s/he thinks describes her/him the best) on the card provided for the purpose. Invite those willing to share with others in the plenary.

What they share would mostly be about what they think who they are. Idea and description of who they are is their self-image. How they feel about themselves constitutes their self-esteem. High self-esteem means that the person generally feels good about oneself and others. Low self-esteem means that the person generally does not feel so good about oneself and others. Having high self-esteem is a primary pre-condition for being an effective trainer and facilitator. A person with low self-esteem is bound to be a poor facilitator.

After this individual exercise, as a part of the summing up, the facilitator should present the Johari Window to explain the ways to understand oneself and develop a critical awareness about oneself as a person and facilitator.

Group work (30 minutes)

The group work is designed to promote an experiential learning about the ways to work on sharpening one's facilitation skills. Ask people to engage in a group discussion within their respective groups about the skills and attitude of an effective trainer and facilitator for presentations in the plenary.

Presentations and Discussion in the plenary (30 minutes)

Ask the working groups to make their respective presentations in the plenary. Follow it up with an open house discussion.

Summing up (5 minutes)

Summarise the key learning from the session and present the key points from Stephen Covey's seven habits of highly effective people, which can help enhance the facilitation orientation and skills of the participants.

Technical Notes

Having an intuitive and fair understanding of self and others is the key to the art of facilitation. Understanding self involves an awareness of one's own strengths and weaknesses, hopes and fears, and values, assumptions, needs and interests (VANI). Understanding others is being aware of their values, attitudes, needs and expectations (VANE).

Johari Window and Seven Habits of Highly Effective People will constitute the core of this session and will aim at creating an enhanced awareness of one's self and others among the participants.

An improved understanding of the self and others forms the basis for a relationship of trust and sharing between the facilitator and the learner.

Listening is the basic skill required for understanding self and others on the one hand and for promoting trust and sharing on the other. Listening has to be active and empathetic and not passive and sympathetic. Active listening means listening with an active interest in learning and empathetic listening means listening from the point of view of the speaker and not the listener's.

Key Learning Points

- Knowing self and others is the key to being an effective facilitator.
- An improved understanding of the self and others forms the basis for a relationship of trust and sharing between the facilitator and the learner.
- Listening is the basic skill required for understanding self and others on the one hand for promoting trust and sharing on the other.
- 'Learning to listen and listening to learn' is the hallmark of an effective facilitator

Session 7.2: Art of Facilitation II

Duration: 90 minutes

Objectives:

- Handle questions
- manage expectations
- manage conflicts
- nurture the eco-system of learning

Methods:

- Interactive Lecture Presentation
- Role Play

Materials needed

Flip charts, markers

Session Plan

Starting the Session (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes.

Interactive Lecture Presentation (20 minutes)

Begin the presentation with a set of key questions by way of illustration. Illustrative questions should be able to demonstrate how questions are the key to learning. Hence, raising and handling questions is the most critical activity in the process of learning and facilitation of learning.

After the art of asking and answering questions is covered, the facilitator should move on to the knowledge and skills related to managing expectations and conflicts.

The presentation should end with pointers for nurturing the eco-system of learning as a part of the art of facilitation.

Role Play (60 minutes)

This role play aims at promoting experiential learning on the art of handling questions, and managing expectations and conflicts. In order to ensure maximum participation, this could be organised as two or more different role plays.

Divide the group of participants into facilitators, learners, observes. Ask the facilitator group of 2-3 members to plan a session on a theme of their choice. Brief the group of learners to ask difficult questions, express high expectations from the session and voice conflicting opinions and views on the theme chosen. Group observers are briefed about observing the entire process carefully and document it without any bias and with total objectivity and fairness.

At the end of the role play/s, ask the observer group to share their observations in the plenary. Ask the other groups to respond, ask questions and offer clarifications.

Summing up (5 minutes)

Summarise the key learning from the session.

Technical Notes

Questions are the key to learning. They are the basic tools of inquiry to generate learning in any field. Hence, it is important to encourage the participants to ask questions and respond to those questions with honesty and understanding. Questions are generally of the following four types:

- Questions for seeking information or/and clarification
- Questions for showing that one knows more than others
- Questions for simply asking questions, in other words for registering one's presence
- Questions for making a serious inquiry and learning

Handling questions in a manner that maximises learning for all is a key facilitation skill. This involves appreciating the true nature and intent of the question being asked to begin with. Questions can be answered immediately or later at the end of the session as decided by the facilitator with or without consultation with the participants as required.

All questions need not be answered by the facilitator. It is a good strategy to ask other participants if they would like to respond to the questions posed by someone from amongst them. Many a time the questions will satisfactorily get answered by someone from among the participants themselves. This not only promotes participation and interactive learning, but provides more opportunity to the facilitator to understand the gaps in learning and address them effectively without being didactic.

Managing expectations is an aspect that is often missed out by the facilitators. Expectations need to be managed in time and well, as unmet expectations can hamper and block learning. Hence, it is important to identify and address expectations of the participant's right at the outset of the training program. Expectations of the participants could be vast and varied and it may not be possible to meet all the expectations given the scope and design of the training program. It is good to tell the participants upfront about what part of their expectations are going to be addressed during the program and how and what part of the expectations are not going to be addressed and why not.

Conflicts of ideas, views and interests are bound to crop up during different training sessions, especially when the participants are coming from a diverse background with diverse needs and interests. Managing conflicts well and in time is crucial to creating a healthy eco-system of learning. Conflicts in themselves are not necessarily unhealthy. They are often opportunities for new and unintended learning, as they help surface varying perceptions, perspectives, ideas, views and opinions on theme/s under discussion. Hence, conflicts can also be seen and approached as opportunities for learning and change.

All the preceding topics related to handling questions and managing expectations and conflicts will logically lead to the closing topic of nurturing the eco-system of learning. Major success of the trainer/facilitator lies in creating a favourable climate for learning for all the participants. This can be achieved only by making everyone feel that they are active participants in and contributors to the process of learning.

Key Learning Points

- Questions are the key to learning. They are the basic tools of inquiry to generate learning in any field. Hence, it is important to encourage the participants to ask questions and respond to those questions with honesty and understanding.
- Handling questions in a manner that maximises learning for all is a key facilitation skill. This involves appreciating the true nature and intent of the question being asked to begin with.
- Managing expectations is an aspect that is often missed out by the facilitators. Expectations need to be managed in time and well, as unmet expectations can hamper and block learning.
- Managing conflicts well and in time is crucial to creating a healthy eco-system of learning.
- Major success of the trainer/facilitator lies in creating a favourable climate for learning for all the participants.

Session 7.3: Sharing, Listening and Learning

Duration: 60 minutes (1 hour)

Objective(s):

- create a learning event and environment open to sharing, listening and learning

Methods:

- Experience sharing
- Group exercise
- Summing up
- Interactive Lecture presentation

Materials needed

Flip charts, markers

Session Plan with Facilitation Notes

Starting the Session (5 minutes)

Explain the purpose and process of the session and its intended learning outcomes.

Experience sharing (20 minutes)

Ask the working groups to share their experiences as a trainer and facilitator in the past including what they learnt from those experiences and how they applied that learning in their subsequent training and facilitation work.

Draw the major learning from these experiences and highlight the amount and quality of learning that have taken place as a result of this sharing.

Discuss the role of listening in this sharing and learning and highlight the role of active listening as the most significant facilitation skill.

Group exercise (20 minutes)

Ask for 5 volunteers from among the participants. Ask 4 of the 5 volunteers to go out of the training hall and wait for their names to be called. After they have left the hall, tell a message of 3-4 sentences to the only remaining volunteer in the training hall.

This could be as follows: 'Tomorrow there is a solar eclipse. All of you are requested to assemble in the parade ground to witness this rare phenomenon. In case it rains, we will meet in the auditorium where an eminent scientist will give us a lecture presentation on the subject.'

Invite one of the 4 volunteers into the hall and ask the first one to tell him the message that you have told her/him. In the next round, the second volunteer will pass on the received message to the third volunteer. This will go on till the 5th volunteer has shared the received message with the entire group.

This group exercise invariably results in the last message delivered to be very different from the original message shared. This results in experiential learning about how we all listen selectively and establishes the need to work on learning so as to engage in active and maximum listening.

Interactive Lecture Presentation (15 minutes)

Present the role of sharing in learning and the role of active listening in learning as a key feature of the art of facilitation. Summarise the key learning from the session

Technical Notes

Training professionals entails a situation of adult learning. Adults learn through experience and their learning is determined by the nature of their values, attitudes, needs and interests (VANI). Experience sharing offers an opportunity for the participants to look at and examine their experience with the intention to learn from it. A structured and well facilitated experience sharing session can result in a lot of significant and practical learning.

Listening without judging and interpreting promotes learning. It is important for the facilitator and learner to recognise that it is in their mutual benefit not to judge each other and be open to learning from each other's experiences.

Experience sharing and learning accompanied with critical reflection is expected to result in learning about new ideas and insights that can help achieve not only the enabling objectives of different sessions during the training program but also the training and performance objectives of different Learning Units and the overall training program.

Major responsibility of the facilitator is to create a learning event and environment. Each session has to be designed and delivered as a veritable learning event for all concerned. A learning environment is an essential attribute of a learning event and refers to an environment where everyone is willing to share their experiences, engage in a critical reflection in the light of new information, ideas and insights and learn from each other in an atmosphere of mutual trust, respect and understanding. Creating this kind of an environment at the very outset and maintaining it throughout the duration of the training event is essential for the success of the training program.

Key Learning Points

- Adults learn through experience and their learning is determined by the nature of their values, attitudes, needs and interests (VANI).
- Listening without judging and interpreting promotes learning. It is important for the facilitator and learner to recognise that it is in their mutual benefit not to judge each other and be open to learning from each other's experiences.
- Experience sharing and learning accompanied with critical reflection is expected to result in learning about new ideas and insights that can help achieve not only the enabling objectives of different sessions during the training program but also the training and performance objectives of different Learning Units and the overall training program.
- Major responsibility of the facilitator is to create a learning event and environment. A learning environment is an essential attribute of a learning event and refers to an environment where everyone is willing to share their experiences, engage in a critical reflection in the light of new information, ideas and insights and learn from each other in an atmosphere of mutual trust, respect and understanding.

Session 7.4: Learning to listen and listening to learn

Duration: 60 minutes (1 hour)

Objectives:

- Articulate the importance of receiving and giving feedback; consolidating learning;

Methods:

- Interactive Learning Presentation
- Role play
- Summing up

Materials needed

Flip charts, markers

Session Plan with Facilitator Notes

Introduction (5 minutes)

Explain the purpose and process of this session and its intended learning outcomes.

Interactive Lecture Presentation (15 minutes)

The facilitator should present the conceptual framework underlying different learning styles of adults and their relative merits and limitations. It will be good to administer individual and group exercises that can bring this out at an experiential level in the following session.

As adults learn through observation, reflection and action and are trained to talk more than listen, this often comes as a handicap in the process of effective facilitation. Encourage the participants to ask questions and share their experiences related to gaps in listening leading to disruption or/and distortion in inter-personal communication.

Role play (25 minutes)

Ask a couple of volunteers from among the participants to organise impromptu sessions on training themes of her/his choice. Keep the session by the volunteers of not more than 10 minutes with additional 5 minutes for preparation.

After the session by the volunteers, ask other participants to share what they listened to and what they have learnt from the session.

Consolidation of learning (15 minutes)

This will be the final wrap-up session organised at the end of the TOT sub module, which also happens to be the end of the training module. This must summarise all the key learning from the entire module.

Technical Notes

Listening is caring and learning to listen is learning to care. Listening takes place not only at the level of words, but also and more so at the level of feelings and emotions. Values, attitudes, needs and expectations (VANE) of participants with varied and diverse backgrounds is also a major determinant in how one listens and with what effect.

Learning is expanding the boundaries of knowledge and understanding. Listening to learn is to look for information, ideas and insights that can help expand the boundaries of knowledge and understanding. This requires appropriate orientation and training.

Most of the conventional training on communication focuses on talking than listening. This session seeks to underline the seminal significance of listening in communication and learning.

Receiving and giving feedback is an important site and occasion for listening and learning. Everyone likes good feedback and dislikes bad feedback. This is a part of human nature. People like to hear good and not bad things about themselves. But those who want to learn for making improvements in their work behaviour have to learn the art of receiving and giving feedback.

While giving feedback is a lot easier, receiving feedback calls for openness and a willingness to learn about one's own gaps and weaknesses. The best way to give feedback is to share good and encouraging feedback first. Feedback that points to gaps and shortcomings should be presented in the form of suggestions for improvement in order to make them less offensive and relatively more user friendly. Receiving both positive and negative feedback calls for a lot of trust, understanding, and courage. While it is important to receive positive feedback with humility, it is all the more important to receive negative feedback with openness and willingness to learn from others about one's own weaknesses in order to make efforts to remove them for improved performance and results.

It is the primary responsibility of the facilitator to consolidate learning at the end of each specific session, Learning Unit and event in order to make sure that all the agreed enabling, training and performance objectives are being achieved as intended.

Key Learning Points

- Listening is caring and learning to listen is learning to care.
- Learning is expanding the boundaries of knowledge and understanding. Listening to learn is to look for information, ideas and insights that can help expand the boundaries of knowledge and understanding.
- Receiving and giving feedback is an important site and occasion for listening and learning.

Annexure 1: Evaluation Form

Evaluation Form for Sessions:

Please indicate your level of agreement with the statements listed below:

Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
The Objectives of the session were clearly defined.				
Topics covered were relevant to me.				
The content was organized and easy.				
The materials distributed were helpful.				
Instructions were clear and understandable.				
The presentation was effective.				

1. What did you learn during this session that you anticipate using in your work?
2. Was there anything you did not understand during this session? Please provide specific examples.
3. Please provide feedback for the trainer.

Evaluation Form for Module:

Please indicate your level of agreement with the statements listed below:

Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
I was personally interested in taking this training.				
I had the necessary prerequisite knowledge for completing this training.				
Training was relevant to my needs.				
The time allotted for each session and whole training was sufficient.				

- 1) How will this training benefit you at your workplace?
- 2) Things that you learned from this training are
- 3) How do you rate the training overall?
 - Excellent
 - Good
 - Average
 - Poor
- 4) What aspects of the training could be improved?

Annexure 2: Handouts

Handout 1: Basic terms of disaster risk reduction (DRR), UNISDR (2009)

Acceptable risk: The level of potential losses that a society or community considers acceptable given existing social, economic, political, cultural, technical and environmental conditions.

Adaptation: The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.

Biological hazard: Process or phenomenon of organic origin or conveyed by biological vectors, including exposure to pathogenic micro-organisms, toxins and bioactive substances that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Building code: A set of ordinances or regulations and associated standards intended to control aspects of the design, construction, materials, alteration and occupancy of structures that are necessary to ensure human safety and welfare, including resistance to collapse and damage.

Capacity: The combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals.

Capacity Development: The process by which people, organizations and society systematically stimulate and develop their capacities over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions.

Climate change: (a) The Inter-governmental Panel on Climate Change (IPCC) defines climate change as: —a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcing or to persistent anthropogenic changes in the composition of the atmosphere or in land use||.

(b) The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as —a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

Contingency planning: A management process that analyses specific potential events or emerging situations that might threaten society or the environment and establishes arrangements in advance to enable timely, effective and appropriate responses to such events and situations.

Coping capacity: The ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters.

Critical facilities: The primary physical structures, technical facilities and systems which are socially, economically or operationally essential to the functioning of a society or community, both in routine circumstances and in the extreme circumstances of an emergency.

Disaster A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

Disaster risk: The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over some specified future time period.

Disaster risk management: The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

Disaster risk reduction: The concept and practice of reducing disaster risks through systematic efforts to analyse and manage the causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events.

Early warning system: The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

Ecosystem services: The benefits that people and communities obtain from ecosystems.

El Niño-Southern Oscillation phenomenon: A complex interaction of the tropical Pacific Ocean and the global atmosphere that results in irregularly occurring episodes of changed ocean and weather patterns in many parts of the world, often with significant impacts over many months, such as altered marine habitats, rainfall changes, floods, droughts, and changes in storm patterns.

Emergency management: The organization and management of resources and responsibilities for addressing all aspects of emergencies, in particular preparedness, response and initial recovery steps.

Emergency services: The set of specialized agencies that have specific responsibilities and objectives in serving and protecting people and property in emergency situations.

Environmental degradation: The reduction of the capacity of the environment to meet social and ecological objectives and needs.

Environmental impact assessment: Process by which the environmental consequences of a proposed project or programme are evaluated, undertaken as an integral part of planning and decision-making processes with a view to limiting or reducing the adverse impacts of the project or programme.

Exposure People, property, systems, or other elements present in hazard zones that are thereby subject to potential losses.

Forecast Definite statement or statistical estimate of the likely occurrence of a future event or conditions for a specific area.

Geological hazard: Geological process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Greenhouse gases: Gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation of thermal infrared radiation emitted by the Earth's surface, the atmosphere itself, and by clouds.

Hazard: A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Hydro meteorological hazard: Process or phenomenon of atmospheric, hydrological or oceanographic nature that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Land-use planning: The process undertaken by public authorities to identify, evaluate and decide on different options for the use of land, including consideration of long term economic, social and environmental objectives and the implications for different communities and interest groups, and the subsequent formulation and promulgation of plans that describe the permitted or acceptable uses.

Mitigation: The lessening or limitation of the adverse impacts of hazards and related disasters.

National platform for disaster risk reduction: A generic term for national mechanisms for coordination and policy guidance on disaster risk reduction that are multi-sectoral and inter-disciplinary in nature, with public, private and civil society participation involving all concerned entities within a country.

Natural hazard: Natural process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Preparedness: The knowledge and capacities developed by governments, professional response and recovery organizations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions.

Prevention The outright avoidance of adverse impacts of hazards and related disasters.

Public awareness The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.

Recovery: The restoration, and improvement where appropriate, of facilities, livelihoods and living conditions of disaster-affected communities, including efforts to reduce disaster risk factors.

Residual risk: The risk that remains in unmanaged form, even when effective disaster risk reduction measures are in place, and for which emergency response and recovery capacities must be maintained.

Resilience: The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

Response: The provision of emergency services and public assistance during or immediately after a disaster in order to save lives, reduces health impacts, ensures public safety and meet the basic subsistence needs of the people affected.

Retrofitting: Reinforcement or upgrading of existing structures to become more resistant and resilient to the damaging effects of hazards.

Risk: The combination of the probability of an event and its negative consequences.

Risk assessment: A methodology to determine the nature and extent of risk by analysing potential hazards and evaluating existing conditions of vulnerability that together could potentially harm exposed people, property, services, livelihoods and the environment on which they depend.

Risk management The systematic approach and practice of managing uncertainty to minimize potential harm and loss.

Risk transfer The process of formally or informally shifting the financial consequences of particular risks from one party to another whereby a household, community, enterprise or state authority will obtain resources from the other party after a disaster occurs, in exchange for ongoing or compensatory social or financial benefits provided to that other party.

Socio-natural hazard: The phenomenon of increased occurrence of certain geophysical and hydro meteorological hazard events, such as landslides, flooding, land subsidence and drought that arise from the interaction of natural hazards with overexploited or degraded land and environmental resources.

Structural measures: Any physical construction to reduce or avoid possible impacts of hazards, or application of engineering techniques to achieve hazard-resistance and resilience in structures or systems;

Non-structural measures: Any measure not involving physical construction that uses knowledge, practice or agreement to reduce risks and impacts, in particular through policies and laws, public awareness raising, training and education.

Sustainable development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

Technological hazard: A hazard originating from technological or industrial conditions, including accidents, dangerous procedures, infrastructure failures or specific human activities, that may cause loss of life, injury, illness or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Vulnerability: The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.

Handout 2: DRR and CCA: Differences and Signs of Convergence

Differences		Signs of Convergence
DRR	CCA	
Relevant to all hazard Types	Relevant to climate-related Hazards	N/A
Origin and culture in humanitarian assistance following a disaster event.	Origin and culture in scientific theory	CCA specialists now being recruited from engineering, watsan, agriculture. Health and DRR sectors
Most concerned with the present – i.e. addressing existing risks	Most concerned with the future – i.e. addressing uncertainty/new risks	DRR increasingly forward-looking. Existing climate variability is an entry point for CCA
Historical perspective	Future perspective	As above
Traditional/indigenous knowledge at community level is a basis for resilience.	Traditional/indigenous knowledge at community level may be insufficient for resilience against types and scales of risk yet to be	Examples where integration of scientific knowledge and traditional knowledge for DRR provides learning

	experienced.	opportunities.
Structural measures designed for safety levels modelled on current and historical evidence.	Structural measures designed for safety levels modelled on current and historical evidence and predicted changes	DRR increasingly forward-looking.
Traditional focus on vulnerability reduction	Traditional focus on physical exposure	N/A
Community-based process stemming from experience	Community-based process stemming from policy agenda	N/A
Practical application at local level	Theoretical application at local level	CCA gaining experience through practical local application
Full range of established and developing tools	Limited range of tools under development	None, except increasing recognition that more adaptation tools are needed
Incremental development	New and emerging agenda	N/A
Political and widespread recognition often quite weak	Political and widespread recognition increasingly strong	Political and widespread recognition increasingly strong
Funding streams ad hoc and insufficient	Funding streams sizeable and increasing	DRR community engaging in CCA funding mechanisms.

Source: <http://web.mit.edu/jcarmin/Public/For%20Nina/Mercer-DRR-CC-Reinventing%20the%20Wheel.pdf>

Handout 3: Hyogo Framework for Action

Hyogo Framework for Action

The Hyogo Framework for Action has five priorities for action:

1. Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.
2. Identify, assess and monitor disaster risks and enhance early warning.
3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels.
4. Reduce the underlying risk factors.
5. Strengthen disaster preparedness for effective response at all levels.

Source: UNISDR (2005) *Hyogo Framework for Action 2005-2015: Building the Resilience Of Nations and Communities to Disasters*.

Handout 4: Potential Impact of Climate Change on the Millennium Development Goals

Goal	Examples of climate change linkages
1. Eradicate extreme poverty and hunger	- Climate change is projected to reduce the value of the assets and degrade the livelihoods of many poor people, e.g. in terms of health, access to water, homes and infrastructure. - Climate change is expected to alter the path and rate of economic growth due to changes in natural systems and resources, infrastructure and labour productivity. A reduction in economic growth affects poverty through, e.g. reduced income opportunities. - Climate change is projected to alter regional food security. Particularly in Africa, food security is expected to worsen. Adverse impacts on food security could be seen in Latin America as well as in South and Southeast Asia.
3. Promote gender equality and empower women	- In the developing world in particular, women are disproportionately involved in natural resource-dependent activities, such as agriculture, which are particularly vulnerable to climate change. - Women's traditional roles as primary users and managers of natural resources, primary caregivers and labourers engaged in unpaid labour (i.e., subsistence farming) mean they are involved in and dependent on livelihoods and resources that are put most at risk by climate change.
4. Reduce child mortality 5. Improve maternal health 6. Combat major diseases	- Direct effects of climate change include increases in heat-related mortality and illness associated with heat waves (although fewer winter cold-related deaths may happen in some regions). - Climate change may increase the prevalence of some vector-borne diseases (e.g. malaria and dengue fever), and vulnerability to water-borne, food-borne or infectious diseases (e.g. cholera and dysentery). - Children and pregnant women are particularly susceptible to vector- and water-borne diseases. Anaemia, which results from malaria, is responsible for a quarter of maternal mortality. - Climate change will likely result in declining quantity and quality of drinking water in many locations. It will also exacerbate malnutrition—an important source of ill health among children—by reducing natural resource productivity and threatening food security, particularly in Sub-Saharan Africa, but also in many other low-latitude areas.
7. Ensure environmental sustainability	Climate change is likely to alter the quality and productivity of natural resources and ecosystems, some of which may be irreversibly damaged. These changes may also decrease biological diversity and compound existing environmental degradation.
8. Develop a global partnership for development	Climate change is a global issue and response to it requires global cooperation, especially in helping developing countries adapt to its adverse impacts.

Handout 5: Trade-offs Between Climate Change and Development

In certain cases, there are direct trade-offs between development priorities and the actions required to deal with climate change. Governments and donors confronting immediate challenges, such as poverty and inadequate infrastructure, have few incentives to divert resources to investments that are seen as not paying off until climate change impacts are full-blown.

Putting a real value on natural resources and deciding when not to develop coastal areas or hillsides may be seen as hampering development. At the project level, mainstreaming of adaptation may be perceived as complicating operating procedures or raising costs.

In addition, short-term economic benefits that often accrue to only a few in the community can crowd out longer-term considerations such as climate change. Shrimp farming, mangrove conversion and infrastructure development, for example, provide employment and boost incomes, but they may also reduce the future ability to adapt to the impact of climate change and increase the vulnerability of critical coastal systems.

Source: OECD 2006

Handout 6: Examples of (likely to very likely) impacts from projected changes in extreme climatic events

Projected changes in extreme climate phenomena during the 21st Century	Representative examples of projected impacts
Simple extremes Higher maximum temperatures, more hot days and heat waves over nearly all land areas	- Increased incidence of death and serious illness in older people and urban poor - Increased heat stress in livestock and wildlife - Increased risk of damage to several crops
Higher (increasing) minimum temperatures: fewer cold days, frost days and cold waves over nearly all land areas	- Decreased cold-related human morbidity and mortality - Decreased risk of damage to several crops - Extended range and activity of some disease vectors
More intense precipitation events	- Increased flood, landslide, avalanche and mud-slide damage - Increased soil erosion - Increased flood run-off
Complex extremes	
Increased summer drying over mid-latitude continental interiors and associated risk of drought	- Decreased crop yields - Decreased water resource quantity and quality - Increased risk of forest fire
Increased tropical cyclone peak wind intensities, mean and peak precipitation Intensities	- Increased risk to human life, risk of infectious disease epidemics - Increased coastal erosion - Increased damage to coastal ecosystems and coral reefs
Intensified droughts and floods associated with El Niño events in many different regions	Decreased agriculture and range-land productivity in drought-prone and flood-prone regions
Increased Asian summer monsoon precipitation variability	Increased flood and drought magnitude and damages in temperate and tropical Asia

Handout 7: Protecting Development from Disasters: UNDP's Support to the Hyogo Framework for Action. 13

¹³ UNDP, 2014

Disaster risk reduction makes development sustainable

A CALL FOR ACTION

KEY MESSAGE

The post-2015 development framework offers an unparalleled opportunity to ensure that disaster risk is significantly reduced all over the world, especially for those most vulnerable.

"Disaster risk reduction and building of resilience to disasters to be addressed with a renewed sense of urgency in the context of sustainable development and poverty eradication, and, as appropriate, to be integrated into policies, plans, programmes, and budgets at all levels and considered within relevant future frameworks."

UN General Assembly Resolution on Sustainable Development

"We must ensure that development strategies and programmes prioritise the building of resilience among people and societies at risk from shocks... Investing in resilience and risk reduction increases the value and sustainability of our development efforts."

Busan Partnership on Aid Effectiveness

"Natural disasters can be a serious impediment to poverty reduction and affect poor and vulnerable people the most, and their impact is on the rise."

World Bank Development Committee

We need effective adaptation strategies that "...help manage disaster risk now and offer near-term development benefits, while reducing vulnerability over the longer term."

Intergovernmental Panel on Climate Change

"We recognize the value of Disaster Risk Management tools and strategies to better prevent disasters, protect populations and assets and financially manage their economic impacts."

G20

"Integrating disaster risk reduction into sustainable development strategies — by strengthening risk assessment, disaster prevention and humanitarian responses — will be critical to protecting the gains of development, particularly among those most deprived."

United Nations Task Team

"Development cannot be sustainable if the disaster risk reduction approach is not fully integrated into development planning and investments... Development investment that does not consider disaster risk will lead to the accumulation of more risk."

UN Secretary General

"We must stop calling events like these [Typhoon Haiyan] as natural disasters. Disasters are never natural. They are the intersection of factors other than physical. They are the accumulation of the constant breach of economic, social and environmental thresholds."

Yeb Sano, Philippines Negotiator, UNFCCC



Empowered lives.
Resilient nations.



THE DEVASTATING IMPACT OF DISASTERS

KEY MESSAGE

Disasters big and small devastate families, communities and nations.

**In the last 20 years
the impact of disasters
has been devastating**

**4.4 billion
people affected**

**1.3 million
people killed**

**US\$2
trillion
in economic losses**

Disasters come in all sizes

**The last 10 years have seen some
of the largest disasters on record:**

Pakistan floods 2010: 20% of the country
underwater; 20 million people affected.

Haiti earthquake 2010: killed more than
200,000 people in seconds⁸.

East African drought 2010-11:
worst in decades; caused acute food crisis
in six countries; up to 258,000 killed in
Somalia alone⁹.

**But smaller, localized disasters
often go unnoticed:**

The attrition of small-scale disasters affects
the poorest families, and accounts for
significant disaster impact: 54% of houses
damaged, 80% of people affected, and 83%
of people injured¹⁰.

The uncounted
impact in low-income
households and
informal businesses,
outside of 'official'
indexes, could
increase total losses
by 50%¹¹.

**US\$3
trillion**

Disasters do not respect borders

Neighbors

In 2008 a breach in the Kosi
embankment in Nepal redirected 95%
of the river through rural communities,
affecting 54,000 people. The same
flood forced nearly 3 million people
from their homes in India.

Human Impact

The 2004 Indian-Ocean Tsunami killed
over 230,000 people in 15 countries,
including nationals from a further 46
countries.

Global Supply Chains¹²

The 2011 Great East Japan
Earthquake led to a 20% drop in
vehicle production in Thailand. The
Chao Phraya Thailand floods of 2011
closed 451 Japanese factories in
Thailand, as well as other factories in
Malaysia, North America and Japan
itself.

DISASTERS UNDERMINE DEVELOPMENT

KEY MESSAGE

Every aspect of sustainable development is undermined by disasters, whether social, economic or environmental.

Disasters affect countries in different ways

Low income countries

9% of disasters
3% of financial loss
39% of deaths

Lower-middle income countries

24% of disasters
25% of financial loss
42% of deaths

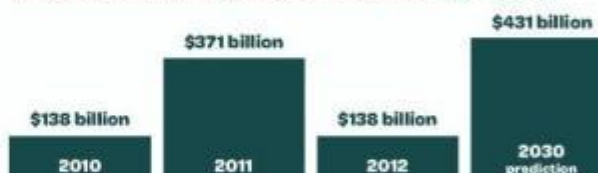
Upper-middle income countries

20% of disasters
8% of financial loss
12% of deaths

High income countries

47% of disasters
64% of financial loss
7% of deaths

The economic impact of disasters is growing¹³



In developed countries, growth cannot keep pace with disaster loss:

Superstorm Sandy: affected 24 states in the USA, cost US\$65 billion¹⁴.

Great East Japan Earthquake: US\$210 billion¹⁵ in damages, the costliest disaster on record.

In OECD countries, since 1980, the risk of economic loss due to floods has increased by over 160%; loss due to tropical cyclones has increased by 265%¹⁶.

Disasters in developing countries destroy gains built up over decades:

• Hurricane Ivan (2004) cost Grenada over 200% of gross domestic product (GDP) and the earthquake in Haiti (2010) reached costs close to 120%¹⁷.

• In larger economies, such as Bangladesh or Mozambique, the loss of 3 to 5% of GDP every five to ten years has a heavy cumulative impact on development¹⁸.

The social impact of disasters expose inequities and keep the poorest poor

Low-income and lower-middle income countries have accounted for only 33% of disasters, but 81% of all deaths.

In the 2004 Tsunami children made up a third of all deaths¹⁹.

Disasters trap people in poverty:

Haiti: Numbers of poor fell 8% between 2001 and 2010. After the 2010 earthquake it was back to 2001 levels²⁰.

Pakistan: The 2000-2001 drought in Sindh province increased poverty by up to 15%²¹.

Philippines: Typhoons Ondoy and Pepeng nearly doubled poverty in Rizal province in just three years, from 5.5% to 9.5%²².

The future for the poor is bleak without action:

Up to 325 million extremely poor people will be living in the 49 most hazard-prone countries in 2030²³.

Inadequate investments in DRR lead to massive levels of emergency response

Since 1991 the international community has spent US\$69.9 billion in response to disasters, and only US\$13.5 billion on risk reduction²⁴.

US\$69.9 billion in response to disasters

US\$13.5 billion on risk reduction

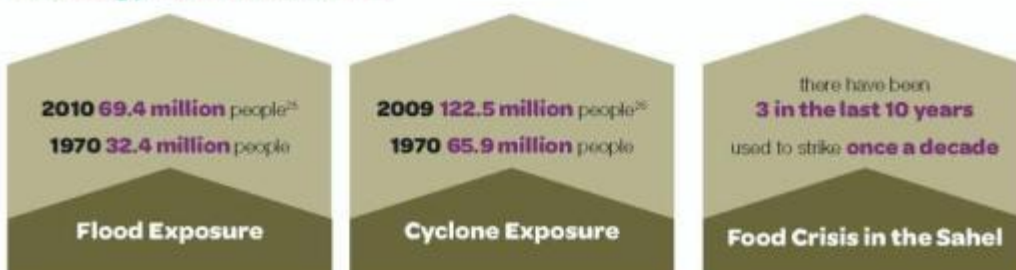
RISKS ARE GROWING

KEY MESSAGE

Unchecked by the integration of risk into development, the impact of disasters will grow and grow. Development must be risk-proofed now, so as to prevent massive losses of life, livelihoods and growth in the future.



The rising price of climate risk



Handout 8: Putting Climate Change Adaptation in Development Mainstream, Policy Brief¹⁴



Putting Climate Change Adaptation in the Development Mainstream

How does climate change affect development?

How much aid goes to climate-sensitive activities?

Do development activities take climate change adaptation into account?

What are the main barriers to mainstreaming adaptation to climate change?

How can climate change adaptation be better integrated in development?

For further information

For further reading

Where to contact us?

Introduction

Climate change poses a serious challenge to social and economic development. Developing countries are particularly vulnerable because their economies are generally more dependent on climate-sensitive natural resources, and because they are less able to cope with the impacts of climate change.

How development occurs has implications, in turn, for climate change and for the vulnerability of societies to its impacts. Climate change adaptation needs to be brought into the mainstream of economic policies, development projects, and international aid efforts.

Considerable analytical work has been done on how development can be made climate-friendly in terms of helping reduce greenhouse gas emissions which cause climate change, although implementation remains a challenge. Much less attention has been paid to how development can be made more resilient to the impacts of climate change. In a narrow engineering sense, this could involve taking climate changes into account in the siting and design of bridges and other infrastructure. At a policy level, it could involve considering the implications of climate change on a variety of development activities including poverty reduction, sectoral development, and natural resource management.

Bridging the gap between the climate change adaptation and development communities, however, is not easy. The two communities have different priorities, often operate on different time and space scales, and do not necessarily "speak the same language". Specific information is therefore needed on the significance of climate change for development activities along with operational guidance on how best to adapt to its impacts, within the context of other pressing social priorities.

This Policy Brief looks at how far current development policies and programmes are taking climate change risks into account, as well as at ways to improve the "mainstreaming" of adaptation to climate change in development planning and assistance. ■

Observer oecd

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¹⁴ OCED, March 2006

Policy Brief

PUTTING CLIMATE CHANGE ADAPTATION IN THE DEVELOPMENT MAINSTREAM

How does climate change affect development?

Climate is closely intertwined with development. For one thing, climate is a resource in itself, and it affects the productivity of other critical resources, such as crops and livestock, forests, fisheries and water resources. Natural fluctuations in climate such as those related to the El Niño phenomenon cause widespread disruptions in society's ability to harness resources and even to survive.

But human development choices also have a demonstrable impact on local and global climate patterns. Over-construction contributes to the formation of urban "heat islands"; deforestation and changes in land use can influence regional temperature and rainfall patterns; and increases in greenhouse gas concentrations as a result of industrial activity are responsible for global climate change.

In addition to natural climate variability, long-term climate trends and climate change are already having a discernible impact on development. A clear example is the close link between rising temperatures in the Himalayas and the incidence of glacier retreat and increased risk of potentially catastrophic glacial lake outburst flooding. A diverse range of development activities, from design of hydropower facilities to rural development and settlement policies, will need to adapt to such impacts.

Even where the impacts of climate change are not yet this obvious, scenarios of future impacts can, in many cases, justify ensuring that adaptation responses are built into planning. One reason is that it can be more cost-effective to implement adaptation measures early, particularly for long-lived infrastructure. Another reason is that current development activities may irreversibly affect future adaptation to the impacts of climate change. Examples include destruction of coastal mangroves and the building of human settlements in areas that are likely to be particularly exposed to climate change. In such instances, even near-term policies may need to consider the long-term implications of climate change.

The effects of climate change may be especially critical to the achievement of development objectives related to the most vulnerable groups and communities. The projected impact of climate change on access to natural resources, heat-related mortality and spread of vector-borne diseases such as malaria, for example, has direct implications for the achievement of several of the Millennium Development Goals. ■

Policy Brief

PUTTING CLIMATE CHANGE ADAPTATION IN THE DEVELOPMENT MAINSTREAM

How much aid goes to climate-sensitive activities?

An OECD analysis of Official Development Assistance (ODA) flows to six developing countries indicates that a significant portion of this aid is directed at activities potentially affected by climate risks, including climate change (Figure 1). Estimates range from 50-65% of total national official flows in Nepal, to 12-26% in Tanzania. In monetary terms, this represents half a billion US dollars of official aid flows in Bangladesh and Egypt, and about USD 200 million in Tanzania and Nepal. In Fiji, while the absolute amount may be low, it constitutes roughly one-third of all aid flows. Uruguay is the exception because it receives very little ODA: as it is an upper middle income developing country, most of its official flows are loans, primarily in activities not directly exposed to climate risk.

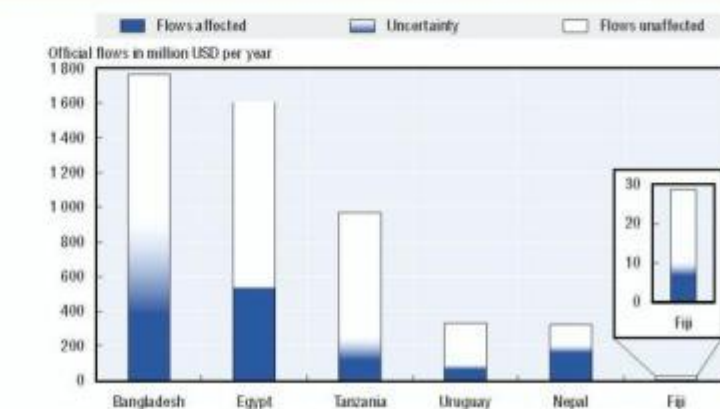
While there is a risk of oversimplification in any such classification, the analysis underscores the fact that taking climate risks (including climate change) into account is often important for development investments and projects. ■

Do development activities take climate change adaptation into account?

Some weather and climate considerations are routinely taken into account in a wide range of development activities, from crop selection to the design of highways and energy generation facilities. However, not all climate risks are being incorporated in decision making, even with regard to natural weather extremes. Moreover, practices that take into account historical climate are not necessarily suitable under climate change. Many planning decisions focus on shorter timescales and tend to neglect the longer-term perspective.

An analysis of national development plans, poverty reduction strategy papers, sectoral strategies and project documents in climate-sensitive sectors indicates that such documents generally pay little or no attention to climate change, and often pay only limited attention to current climate risk. Even when climate change is mentioned, specific operational guidance on how to take it into account is generally lacking. ■

Figure 1.
ANNUAL OFFICIAL
FLOWS AND SHARE OF
ACTIVITIES POTENTIALLY
AFFECTED BY CLIMATE
CHANGE



Source: Bridge Over Troubled Waters: Linking Climate Change and Development (Paris, OECD, 2005).

© OECD 2006 ■ 3

Policy Brief

PUTTING CLIMATE CHANGE ADAPTATION IN THE DEVELOPMENT MAINSTREAM

What are the main barriers to mainstreaming adaptation to climate change?

Lack of awareness of climate change within the development community and limitations on resources for implementation are the most frequently cited reasons for difficulties in mainstreaming adaptation to climate change within development activity. These explanations may hold true in many situations, but there is also a more complex web of reasons underlying them:

- *Barriers within governments and donor agencies:* Climate change expertise is typically the domain of environment departments in governments and donor agencies, and such departments have limited leverage over sectoral guidelines and projects. Sectoral managers and country representatives may also face “mainstreaming overload”, with issues such as gender, governance and environment also vying for integration in development activities. Moreover, as many development projects are funded over three to five years, they may not be the best vehicle for long-term climate risk reduction. Adaptation to climate change *ex ante* may also have more difficulty attracting resources than more visible *ex poste* activities such as emergency response and post-disaster recovery.
- *Insufficient relevance of available climate information to development-related decisions:* Development activities are sensitive to a broad range of climate variables, only some of which can be reliably projected by climate models. Temperature, for example, is typically easier to project than rainfall. Climate extremes, which are often critical for many development-related decisions, are much more difficult to project than mean trends. There is also a mismatch between the time and space scales of climate change projections and the information needs of development planners. For example, the primary sensitivity of development activities to climate is at a local scale (such as that of a watershed or a city), for which credible climate change projections are often lacking. ■

Box 1.

TRADE-OFFS BETWEEN CLIMATE CHANGE AND DEVELOPMENT

In certain cases, there are direct trade-offs between development priorities and the actions required to deal with climate change. Governments and donors confronting immediate challenges, such as poverty and inadequate infrastructure, have few incentives to divert resources to investments that are seen as not paying off until climate change impacts are full-blown.

Putting a real value on natural resources and deciding when not to develop coastal areas or hillsides may be seen as hampering development. At the project level, mainstreaming of adaptation may be perceived as complicating operating procedures or raising costs.

In addition, short-term economic benefits that often accrue to only a few in the community can crowd out longer-term considerations such as climate change. Shrimp farming, mangrove conversion and infrastructure development, for example, provide employment and boost incomes, but they may also reduce the future ability to adapt to the impact of climate change and increase the vulnerability of critical coastal systems.

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PUTTING CLIMATE CHANGE ADAPTATION IN THE DEVELOPMENT MAINSTREAM

How can climate change adaptation be better integrated in development?

Several opportunities exist for more effective integration of climate change adaptation within development activities. These include making climate change information more useful and easier to use, focusing more on implementing climate change and development strategies, and increasing co-ordination between development and climate change policies.

Making climate information more relevant and usable: Development practitioners need access to credible, context-specific climate information as a basis for decisions. This includes information on the cost and effectiveness of integrating adaptation measures within development planning. Perhaps even more fundamental is information on the likely impact of climate change and variability on particular development activities. While it would be naïve to call for a significant reduction in scientific uncertainty in climate model projections, more can be done to ensure that this uncertainty is made clear to development practitioners. Analysis of the costs and distributional aspects of adaptation could also assist sectoral decision makers in determining the degree to which they should integrate such responses within their core activities.

Developing and applying climate risk screening tools: In addition to improving the quality of climate information, tools and approaches are needed to assess the potential exposure of a broad range of development activities to climate risks and to prioritise responses. Also needed are more sophisticated screening tools at the project level, in order to identify the key variables of relevance to the project, how they are affected by climate change and what implications this has on the viability of the project. Field-testing such screening tools and using them in a wide range of project settings could greatly advance the integration of climate risks in development activities.

Using appropriate "entry points" for climate information: There is a need to identify the appropriate points at which to introduce climate change adaptation into development activities. Potential entry points include land use planning, disaster response strategies and infrastructure design. Environmental impact assessments could be another entry point for mainstreaming both climate change mitigation and adaptation. The implications of projects for greenhouse gas emissions could be included in checklists for such assessments. However, guidelines for environmental impact assessments would need to be broadened to include climate change impacts. Current guidelines consider only the impact of a project or activity on the environment, not the impact of the environment on the project. It is also important to incorporate climate change considerations in planning mechanisms and to ensure that the responsibility for co-ordination lies with appropriate implementation agencies. Furthermore, attention should be given not only to investment plans but also to legislation.

Policy Brief

PUTTING CLIMATE CHANGE ADAPTATION IN THE DEVELOPMENT MAINSTREAM

Shifting emphasis to implementation rather than developing new plans: In many instances, rather than requiring radically new responses, adaptation to climate change only reinforces the need to implement measures that already are, or should be, environmental or development priorities. Examples include water or energy conservation, forest protection and afforestation, flood control, building coastal embankments, dredging to improve river flow and protection of mangroves. Often, such measures have already been called for in national and sectoral planning documents but have not been successfully implemented. Reiterating these measures in elaborate climate change plans is unlikely to have much real effect unless barriers to effective implementation of the existing sectoral and development plans are confronted. Putting the spotlight on implementation, therefore, could put the focus on greater accountability in action on the ground.

Encouraging meaningful co-ordination and the sharing of good practices: Institutional mechanisms need to be developed to forge links between mainstreaming initiated under the international climate change regime and the risk management activities of national and sectoral planners. A corollary link could be between activities initiated to achieve development objectives, such as the Millennium Development Goals, and more bottom-up consideration of the impacts of climate change. Greater engagement of the private sector and local communities in mainstreaming efforts is also needed.

Another priority that has not received sufficient attention is transboundary and regional co-ordination. Most climate change action and adaptation plans are at the national level, although many of the impacts of climate change cut across national boundaries. Meaningful integration of a range of climate risks, from flood control to dry season flows to glacial lake hazards, would require greater co-ordination on data collection, monitoring and policies at the regional level. Finally, operational guidance on comprehensive climate risk management in development is needed to facilitate policy coherence, allow for joint building of experience and promote sharing of tools and experiences within and among governments and development co-operation agencies. ■

For further information

For more information about the links between climate change and development, and the OECD's work in this area, please contact:

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For further reading

- OECD (2005), **Bridge Over Troubled Waters: Linking Climate Change and Development**, OECD, Paris, ISBN 92-64-01275-3, 154 p., € 26.
- OECD (2004), **The Benefits of Climate Change Policies: Analytical and Framework Issues**, OECD, Paris, ISBN 92-6410831-9, 323 p., € 90.
- Inter Agency Report (2003), **Poverty and Climate Change: Reducing the Vulnerability of the Poor through Adaptation**, by AfDB, ADB, DFID (UK), BMZ (Germany), DGIS (The Netherlands), OECD, UNDP, UNEP, and the World Bank.

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Handout 9: National Disaster Management Framework¹⁵

NATIONAL DISASTER MANAGEMENT FRAMEWORK

**GOVERNMENT OF INDIA
MINISTRY OF HOME AFFAIRS**

¹⁵ <http://www.ndmindia.nic.in/letters/NDMF.pdf>

NATIONAL DISASTER MANAGEMENT FRAMEWORK **MINISTRY OF HOME AFFAIRS**

I. Institutional Structure

Expected outputs	Areas of intervention	Agencies/sectors to be involved and resource linkages
Nodal agency for disaster management at the national level with appropriate systems	1. Constitution of National Disaster Management Authority with appropriate legal, financial and administrative powers 2. Roles and responsibilities of the NDMA - All kinds of disasters (except drought) - Policies for disaster reduction and Mitigation - Preparedness at all levels. - Response coordination - Relief and rehab coordination - Amendment of existing laws, procedures, instructions.	Health, Water Resources, Environment and Forest, Agriculture, Railways, Atomic Energy, DRDO, Chemicals, Science and Tech, IMD etc.
Creation of state departments of disaster management and Authority, if necessary.	Same as above With state specific provisions and needs	Same as above With other state level institutions - capacity building of such departments/authorities.
Constitution of Disaster Management Committees under District Magistrate	State Govts. to set up District level DM committees.	

II. Disaster Prevention/Mitigation

Risk/Vulnerability assessment and dissemination	Disaster specific multi-hazard risk zonation at least up to district level on regular basis	Committee of BMTPC, CSIR, IITs, NIC, CWC, IMD to do it every 5 years
	Multi-hazard vulnerability mapping on regular basis	Lead sectoral institutions (Planning Commission, Ministry of Water Resources, Deptt. Of Science & Technology etc.) to do it every 5 years
	Risk and vulnerability awareness campaign	Universities & Research institutes need to undertake risk and vulnerability studies. DAVP-mass communication- print and electronic media, department of education-curriculum of schools and colleges Development of IEC resource materials and dissemination by MHA through all line ministries at state levels-local self Govt. bodies, National and State NGOs. Network of national and state NGOs to be involved
Preventive structural measures to be developed and incorporated in all public and private development initiatives	Development and enforcement of guidelines, earthquake, flood and warning manuals and codes for all zones	A committee of BIS, IITs, CSIR, HUDCO, BMPTC to develop these norms
	Safe housing atlas for the country-zone wise	Empower states, Local-self governments to develop and enforce codes/norms regulations.
	Dissemination of technological and legal provisions	User-friendly atlas with design details for various risk zones in vernacular

3

		languages DAVP-mass communication-print and electronic media, Dept. of Education-curriculum of schools, colleges, universities and technical institutes. Development of IEC resource materials and dissemination by MHA through all line Ministries, State Govts, local self-bodies. To be included in the basic (initial training curriculum) of all senior and middle civil services in the country.
Development of specific disaster precautions action plans for each zone.	Engagement of specialists for development of plan including alternate approaches Cost-benefit appraisal of these plans based on minimum losses criteria Financing of structural and non -structural (e.g. cyclone shelters, dams/barrages, flood shelters etc.)	National and international consultants to be entrusted with this task for high 'risk and vulnerability' zones. States teams to be constituted for drawing up plans for moderate risk/vulnerability zones. Financing of the viable plans with plan funding as well as external funding.
Community/village/Panchayat/Block/district, State and national disaster mitigation/reduction strategy and plans.	Strong social mobilization and awareness campaigns Increased participation in decentralized planning Disaster appraisal to be one of the integral components of the development plan	Ongoing central schemes to have "disaster mitigation" component-MORD, MOTA, MOWR, MOA MOHFW etc. Integrated Mitigation Approach in Development Plan. Support from donor

4

	Identify and prepare mitigation projects for inclusion in the development plans and implementation with earmarked allocation.	agencies and Banks.
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III. Early Warning System

National Level	Advanced hazard-tracking systems for climatological and geological hazards Application of state-of-the-art modelling techniques and systems for early warning. Hazard warning-vulnerability modelling for each state/district on GIS platform State-of-the-art Emergency Operations Centre (MHA) with full-time professionals Stand by EOC at another location 2 Mobile EOCs	Multi-disaster intelligence/ surveillance system. NDMA to take up multi disaster surveillance thru existing network of agencies, wherever necessary to get these upgraded. Dedicated MetSAT. Larger number of parameters taken into the modelling techniques used to minimize uncertainty element and to determine areas likely to be affected Better anticipation of Impending disaster and its impact as an integral part of "decision support system"-anticipation of impact levels to act as trigger for preventive action at different levels. Train a multi-disciplinary team in EOC operations All equipment: Computers with VSAT communication GPS SATPHONEs Large video screens Maps/bulletin boards/charts Risk and vulnerability assessment maps
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5

	Developing disaster inventories for analysis of trends and tendencies.	15-day stockpile of essential commodities/consumables in the EOC.
State level	Hazard warning-vulnerability modelling for each district State-of-the-art Emergency Operations Centre (EOC) at the state Hq with a stand by facility at another location Mobile EOCs with state nodal agency	Departments of Irrigation, Agriculture, IMD.
District level	District Emergency Operations Centre Communication strategy for early warning	Communications links with all revenue, police and Block offices -VHF/HF networks -promote HAM clubs Use of electronic and print media
Local (community) level	Panchayats/urban bodies to disseminate early warning thru DMT group in the village (s)	Capacity building of LSG members and DMTs Promote HAM in rural areas

IV. Disaster Preparedness, Mitigation and Response

Community based village preparedness mitigation and response plans	Enhance community capacity in all multi-hazard prone states and districts to respond effectively to disasters in future.	Setting up DMCs and DMTs in each village in hazard prone areas. Train them to develop their preparedness and response plans: -village inventory -safe shelters -stock piling of relief materials -evacuation plan Mainstream these plans with annual development plans of all Panchayats and local bodies
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		Train DMTs in all response functions such as early warning dissemination, search and rescue, first aid, trauma management, shelter and livelihood loss prevention techniques etc. Mainstream capacity building of the teams with extension programmes of line departments Mock drills of the community and Panchayats at regular intervals. (Local level NGOs/Institutions may be involved in the preparation of community level preparedness response plans).
District disaster preparedness and response plans	Enhance capacity of the district team to respond to disasters: -District preparedness and response plans -District inventory of resources and gaps -stockpiling strategy and warehousing -Constitution and training of District DMT -“local and district response teams for designated areas” for evacuation, search and rescue, road and debris clearance, health, trauma management etc.	Specialized training of the members of the DMT at district and sub-district levels Mock drills at regular intervals One company of the Armed Reserve Police to be trained as rapid response teams with other members drawn from Health, PWD, Fire -Water rescue -Collapsed structure rescue -Fire rescue
State preparedness and response plans	Enhance capacity of the state administration to respond to disaster	Constitution of State Disaster Rapid Action Force with one company

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	-State preparedness and response plans -State inventory of resources and gaps -Const of State DMT and training State response teams for evacuation, search and rescue, road and debris clearance, health, trauma management	of the Armed Reserve Police of all Btln to be trained as rapid response teams with other members drawn from health, PWD, Forest, Fire -Water rescue -Collapsed structure rescue -Fire rescue
National level preparedness and response plans		
Specialised and self-contained Search and Rescue Teams	Hydrological disasters (cyclones and floods) Nuclear/Radiological/Chemical Biological disasters Geological disasters (eq)	Special teams in central paramilitary forces (CPMF)- -do- -do-
Web-enabled and easy-to-access inventory of resources	Link all Inventories at all levels thru a web-link-to be designated as National Inventory of Disaster Equipments (NIDE)	NIC connectivity to be used for the purpose-or-a dedicated link between national and state DMAs could be used Periodical census of NIDEs including using secondary data

V. Human resource development

National capacity building plan as a national agenda	Development of capacity building plans including national training plan (NTP)--- need assessment of the skill sets and quantity and their availability	Bring all national training institutions including corporate sector training facilities together in a network . Mainstreaming disaster management training with all induction courses
Specialised training facilities set up	---- do ----	Identify existing specialised training institutes---NISA, NCDC, NFSC etc.- include corporate sector training facilities as well
Professional human resource available in the country for all DM operations		

Health professionals	Include crisis prevention response and recovery, and trauma management in MBBS curriculum	Working with AICME and ICMR
Engineers, Planners and Architects	Include hazard mitigation technologies including knowledge of all techno-legal provisions in degree and PG courses	Working with AICTE and CSIR.
Agriculture universities	Include crisis prevention response and recovery in livelihood sector in degree and PG course	ICAR
All Govt. functionaries at all levels receive basic training in basic preparedness and response functions	(1) Create centres for training of trainees (2) Create facilities in all post recruitment training institutions for categories of staff	NCDM/NIDM
All India Services	All IAS, IPS and IFS officers undergo basic training in DM after recruitment	Set up DM Cells in LBSNAA, SBPNPA, IGNFA
Central services	Services such as IRTS, IDES, ICCES also could be provided exposure to special orientation progs	Rail tragedy airport and seaport tragedy, defence ammunition storage hazard response etc.
State administrative services	Initial rectt training to include modules on DM in all ATIs, PTCs and other state trg institutes (SIRD, SLI, SIHFW etc.)	Include the same in refresher and promotion course
District cadres	All district cadre staff- village extension officers, health workers, agriculture extension workers, revenue functionaries etc. have to undergo training in DM functions at the time of their induction training.	State Training Institutes.
Local self-govt. representatives and staff	All elected representatives and staff of LSGs to be provided training in DM at the time of their	Need for refresher training programmes especially in high-risk zones.

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	assumption of office along with basic training.	
Youth Organisations/School/College students i.e. NCC/NSS/Scout & Guides	The members of youth organisations and the students should be provided training in the emergency response and public awareness generation	
Public awareness and community training.	Awareness generation of the local community. Capacity building of the community at local level by imparting skill training like mock drills, rehearsals etc.	Among various alternatives, visual media like television and film can be utilised in public awareness generation. Specific programmes on disaster management be telecast on various TV channels like Gyan Darshan, Discovery Channel etc. The media professionals of Doordarshan and private TV channels and film producers can be sensitised and encouraged to integrate DM components in different programmes for public awareness.

Handout 10: Legislative and Policy Framework for Disaster Management in India: An overview

Disaster Management Act, 2005

The Disaster Management Act, 2005 came into the statute book on 26 December 2005 by a Gazette notification, exactly on the first anniversary of the devastating tsunami of 2004, which killed nearly 13,000 people in India alone and affected 18 million people. The Act provides a legal and institutional framework for “the effective management of disasters and for matters connected therewith or incidental thereto.” It provides for establishment of National Disaster Management Authority (NDMA), State Disaster Management Authority (SDMA) and District Disaster Management Authorities (DDMA) at the National, State and District levels with adequate financial and administrative powers and creation of the National Institute of Disaster Management (NIDM) with the mandate of undertaking training and capacity building, Develop Training Modules on various aspects of Disaster management, Undertake Research and Documentation, Formulate and implement comprehensive HRD Plan covering all aspects of DM, Provide assistance in national level policy formulation and provide assistance to state governments and State Training Institutions. The act also provides guidelines for creation of National Disaster Response Fund, National Mitigation Fund, and Establishment of funds by State Government and Allocation of funds by Ministries and Departments for Emergency procurement. The act also provides for establishment of National Disaster Response Force (NDRF).

National Policy on Disaster Management 2009

The National Policy on Disaster Management was approved by the Government in November 2009. This comprehensive policy document lays down policies on every aspect of holistic management of disasters in the country. The policy has thirteen chapters as under:

1. Preamble
2. Approach and Objectives
3. Institutional and Legal Arrangements
4. Financial Arrangements
5. Disaster Prevention, Mitigation and Preparedness
6. Techno-Legal Regime
7. Response
8. Relief and Rehabilitation
9. Reconstruction and Recovery
10. Capacity Development
11. Knowledge Management
12. Research and development
13. Road Ahead

Salient Features of India’s National Policy on Disaster Management: India’s National Policy on Disaster Management was approved by the Union Cabinet of India on 22nd October, 2009 with the aim to minimize the losses to lives, livelihoods and property, caused by natural or manmade disasters with a vision to build a safe and disaster resilient India by developing a holistic, proactive, integrated, multi-disaster oriented and technology driven strategy. With this national policy in place in India, a holistic and integrated approach will be evolved towards disaster management with emphasis on building strategic partnerships at various levels. The themes underpinning the policy include community based disaster management, capacity development in all spheres, consolidation of past initiatives and best practices and cooperation with agencies at national and international levels with multi-sectoral synergy.

The Policy is also intended to promote a culture of prevention, preparedness and resilience at all levels through knowledge, innovation and education. It encourages mitigation measures based on environmental sustainability. It seeks to mainstream disaster management into the developmental planning process and provides for institutional and financial arrangements at national, state, and district-levels for disaster prevention, mitigation, preparedness and response, as it ensures adequate budgeting for disaster mitigation activities in all ministries and departments.

- State Policies on Disaster Management have been either formulated or drafted at various places.
- State Relief Codes/ DM Codes: Many states have manuals and codes for management of drought, floods etc. Now many states are in the process of changing their State Relief Codes into Disaster Management Manuals.

It is very clear that a very elaborate legislative and policy framework for disaster management exists in India. A closer look at the development of this framework over the years shows a radical shift from a predominantly reactive and responsive mode earlier to current proactive and mitigation oriented approach to disaster management in the country.

While an extensive institutional set up has come up in the form of NDMA, NIDM, SDMA, and DMCs at the centre and state levels, capacity to make them function as intended is severely limited by a variety of factors including jurisdictional matters, technical know-how, and lack of ideas and initiatives. Incidentally budget is not a constraint, but judicious budgetary allocation still remains a major policy issue and challenge to be addressed.

Handout 11: National Flagship Programs of the Ministry of Rural Development, Government of India

1. Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)

This is a rural wage employment programme in India. It provides for a legal guarantee of at least 100 days of unskilled wage employment in a financial year to rural households whose adult members are willing to engage in unskilled manual work at a pre-determined minimum wage rate. The objectives of the scheme are:

- To enhance the livelihood security of the rural poor by generating wage employment opportunities; and
- To create a rural asset base which would enhance productive ways of employment, augment and sustain rural household income.

2. Indira Awas Yojana (IAY)

It is one of the major flagship programs of the Rural Development Ministry to construct houses for BPL households in the villages. Under the scheme, financial assistance worth Rs.70,000/- in plain areas and Rs.75,000/- in difficult areas (high land area) is provided for construction of houses. The houses are allotted in the name of the woman of the household or jointly between husband and wife. The construction of the houses is the sole responsibility of the beneficiary and engagement of contractors is strictly prohibited.

3. Prime Minister's Gram Sadak Yojana (PMGSY)

Pradhan Mantri Gram Sadak Yojana (PMGSY) is a centrally sponsored scheme to provide road connectivity in rural areas of the country. The programme envisages connecting all habitations with a population of 500 persons and above in plain areas and 250 persons and above in Hill States, Tribal (Schedule V) areas, the Desert Areas (as identified in Desert

Development Programme) and in the Left Wing Extremism affected (LWE)/ Integrated Action Plan (IAP) districts as identified by the Ministry of Home Affairs/Planning Commission.

4. National Rural Livelihoods Mission (NRLM)

National Rural Livelihoods Mission (NRLM) was launched by the Ministry of Rural Development (MoRD), Government of India in June 2011. This scheme is focused on promoting self-employment and organization of rural poor. The basic idea behind this programme is to organize the poor into self-help groups (SHGs) and make them capable for self-employment.

NRLM has set out with an agenda to cover 7 Crore BPL households, across 600 districts, 6000 blocks, 2.5 lakh Gram Panchayats and 6 lakh villages in the country through self-managed Self Help Groups (SHGs) and federated institutions and support them for livelihoods collectives in a period of 8-10 years.

In addition, the poor would be facilitated to achieve increased access to their rights, entitlements and public services, diversified risk and better social indicators of empowerment. NRLM believes in harnessing the innate capabilities of the poor and complements them with capacities (information, knowledge, skills, tools, finance and collectivization) to participate in the growing economy of the country.¹⁶

Handout 12: National Action Plan on Climate Change ,Government of India

On June 30, 2008, Prime Minister Manmohan Singh released India's first National Action Plan on Climate Change (NAPCC) outlining existing and future policies and programs addressing climate mitigation and adaptation. The plan identifies eight core "national missions" running through 2017 and directs ministries to submit detailed implementation plans to the Prime Minister's Council on Climate Change by December 2008.

Emphasizing the overriding priority of maintaining high economic growth rates to raise living standards, the plan "identifies measures that promote our development objectives while also yielding co-benefits for addressing climate change effectively." It says these national measures would be more successful with assistance from developed countries, and pledges that India's per capita greenhouse gas emissions "will at no point exceed that of developed countries even as we pursue our development objectives."

National Missions

National Solar Mission: The NAPCC aims to promote the development and use of solar energy for power generation and other uses with the ultimate objective of making solar competitive with fossil-based energy options. The plan includes:

- Specific goals for increasing use of solar thermal technologies in urban areas, industry, and commercial establishments;
- A goal of increasing production of photovoltaics to 1000 MW/year; and
- A goal of deploying at least 1000 MW of solar thermal power generation.

¹⁶ <http://aajeevika.gov.in/>

Other objectives include the establishment of a solar research center, increased international collaboration on technology development, strengthening of domestic manufacturing capacity, and increased government funding and international support.

National Mission for Enhanced Energy Efficiency: Current initiatives are expected to yield savings of 10,000 MW by 2012. Building on the Energy Conservation Act 2001, the plan recommends:

- Mandating specific energy consumption decreases in large energy-consuming industries, with a system for companies to trade energy-savings certificates;
- Energy incentives, including reduced taxes on energy-efficient appliances; and
- Financing for public-private partnerships to reduce energy consumption through demand-side management programs in the municipal, buildings and agricultural sectors.

Handout 13: Pakistan's Climate Change Policy

In 2012, Pakistan's Ministry of Climate Change launched the country's first National Climate Change Policy with the policy goal, "To ensure that climate change is mainstreamed into economically and socially vulnerable sectors of the economy and to steer Pakistan towards climate resilient development."

The policy was based on the 2010 report by the Task Force on Climate Change, and developed through a series of meetings and deliberations of nine working groups. The recommendations were subjected to extensive consultations with provincial and federal ministries, institutions and civil society.

The result is a comprehensive framework for the development of national sector-wide action plans for climate change adaptation and mitigation. It identifies CCA policy measures for the economically and socially vulnerable sectors of water, agriculture and livestock, human health, forestry, biodiversity and other vulnerable ecosystems.

The policy includes an objective specifically related to managing those climate extremes related to climate change: "To minimize the risks arising from the expected increase in the frequency and intensity of extreme weather events such as floods, droughts and tropical storms." It has 22 specific policy measures for disaster management in the context of climate change, including: allocating adequate financial and other resources to implement Pakistan's National Disaster Risk Management Framework, protective measures against flood and cyclones, risk mapping, flood forecasting and drought monitoring, early warning systems, disaster preparedness measures including evacuation shelters, and insurance for loss and damage in the aftermath of disasters.

Source: Ministry of Climate Change, Government of Pakistan, 2012

Handout 14: Viet Nam Policy Statement on Climate Change and Disaster Risk Reduction Decision Approving the National Target Program on Response to Climate Change

The Government of Viet Nam created the National Target Program laying out its comprehensive policy to respond to climate change. It was created through Decision Number 158/2008/QĐ-TTg issued by the Prime Minister Nguyen Tan Dong in December 2008. Based on the principles of sustainable development, the document sets out the guiding principles, strategic objectives, tasks and timeline for achieving the program activities. Implementation is expected from the entire political system and society, and the policy places the Ministry of Natural Resources and Environment as the standing agency that shall coordinate the activities of concerned agencies.

The program intends for climate change response activities to be carried out in a “focal and concentrated manner” in response to both urgent and potential long-term impacts, for its tasks to be integrated within “development strategies, programs, master plans and plans of branches and localities, institutionalized in legal documents and thoroughly understood in their implementation.” A central task is to develop climate change scenarios for Viet Nam, with priority on sea level rise, and to assess the impacts on all sectors including DRM (for typhoon, flood and drought). Other tasks had accompanying projects to develop a national disaster prevention program, improve climate monitoring, forecasting, and early warning systems, rehabilitate disaster damage, and more. The policy resulted in the creation of the Support Program to Respond to Climate Change. The support program aimed to raise USD 3-5 billion to address climate change in Viet Nam.

Sources: Reliefweb, JICA

Handout 15: Case Study: Tonga’s joint national action plan for climate change adaptation and disaster risk management

Tonga was the first country in the South Pacific region to address CCA and DRM simultaneously through its Joint National Action Plan on CCA & DRM (Gov. Tonga, 2010). Climate change impacts are expected as heavier rainfall, decreasing annual rainfall, and rising annual mean temperature. Sea level rise and more destructive tropical cyclones are being considered as additional impacts.

How was the action plan made?

The risk assessment was developed based on historical data, climate change scenarios, and consultations with communities and representatives of critical sectors. The action plan used findings from the Initial National Communication to the COP as the source for the climate change projections and scenarios for the years 2050 and 2100.

Potential impacts to critical sectors were anticipated, analyzed and presented in consultation meetings. Specialized computer models were used for assessing the potential climate change impacts and disaster risks, particularly in the water resources and agricultural sectors. These assessments were compiled into a situation analysis. A consultation process was designed to obtain the inputs from highly vulnerable communities and from representatives of government and non-governmental organizations working in critical sectors. The purpose of each consultation included the identification of:

- CCA and DRM issues and the climate factor with the most severe impact in each of the communities/sectors
- The needs and priorities for adaptation and risk reduction

Following consultations, a decision was made to prioritize issues that require additional or new resources to strengthen Tonga’s resilience to climate change and disaster impacts. As many of the proposed actions were already covered by existing and planned government initiatives, the planning process provided an opportunity to review priorities and capture emerging issues.

How was DRM reflected in the Action Plan?

The development of the Joint National Action Plan on CCA & DRM is related to important national initiatives to strengthen Tonga's capacity for DRM. All of the goals are important to DRM, and have several DRM measures. Here are some examples of the goals and identified key actions:

- Improved good governance for CCA and DRM: Review building code to incorporate CCA and DRM criteria; conduct CCA and DRM mainstreaming training for key national stakeholders; and establish district emergency office and staff in outer islands
- Enhanced technical knowledge base, information, education and understanding of CCA and effective DRM: Develop and make available to the public coastal vulnerability maps; and document traditional knowledge on early warning, food preservation and land management
- Analysis and assessments of vulnerability to climate change impacts and disaster risks: Design site specific forms of coastal protection; provide training on the integration of CCA and DRM in the environmental assessment process; and improve/develop roadside drainage systems
- Enhanced community preparedness and resilience to impacts of all disasters: Enforce building code through retrofitting school building and tourist facilities; develop waste management strategies for post disaster situations; and assess and upgrade existing early warning and monitoring systems for all natural hazards

Strong partnerships, cooperation and collaboration within government agencies and with civil society, CSOs and the private sectors: Provide resources and capacity to strengthen community participation in CCA and DRM activities outlined in the action plan; and integration of CCA and DRM into private sector plans.

Handout 16: A Case Study of the "Afat Vimo" Disaster Insurance Scheme, All India Disaster Mitigation Institute (AIDMI)

About the case study

The following case study is drawn from the publication, *"Building Disaster Resilient Communities: Good Practices & Lessons Learned"*, which is a joint effort of the "Global Network of NGOs for Disaster Risk Reduction", an emerging network of national and international NGOs aiming to reduce disaster risk worldwide. It is compilation of initiatives which were or are being implemented by local NGOs for building the resilience of vulnerable

Introduction

In 2002, the majority of the 2001 Gujarat earthquake relief beneficiaries were still exposed to disaster-induced financial losses. Various studies - including the Gujarat Community Survey of 2002 by the Gujarat-based All India Disaster Mitigation Institute (AIDMI) and ProVention Consortium - revealed that access to risk transfer was correlated with sustainable economic recovery among victims¹⁷, yet only two per cent of those surveyed had insurance. A micro-insurance scheme was designed to augment AIDMI's ongoing Livelihood Relief Fund¹⁸ activities. The resultant scheme, called "Afat Vimo", was the result of extensive discussions and negotiations with insurance providers who could be interested in supplying low-premium insurance policies to poor clients.

Initiative

¹⁷ All India Disaster Mitigation Institute. (2002). Community Survey: Gujarat Earthquake 2001. AIDMI and ProVention.

¹⁸ Established after the 1998 Kandla cyclone, the Livelihood Relief Fund (LRF) of AIDMI has supported livelihood recovery of 13,336 victims to date. This demand-driven and tailor-made relief worked in the 2001 Gujarat earthquake, 2002 riots, December 2004 tsunami, 2004 Gujarat floods and 2005 Jammu and Kashmir earthquake.

This is a disaster micro insurance scheme for low-income households. The Afat Vimo scheme is part of the Regional Risk Transfer Initiative (RRTI), an action learning project (ALP) of the Gujarat based All India Disaster Mitigation Institute (AIDMI). The RRTI teaches insurance companies, authorities, donor communities and NGOs how to facilitate a convergence between micro-finance tools and disaster risk reduction strategies. The RRTI was launched on 25 September 2003. It is an ongoing initiative.

The Afat Vimo scheme has been implemented in the Indian states of Gujarat, Tamil Nadu, Pondicherry, and Jammu and Kashmir. Lessons have been shared in Sri Lanka, Pakistan, Iran and other Asian countries through policy dialogues, regional courses, and publications. The Afat Vimo insurance scheme is implemented with ProVention Consortium, the Indian Chamber of Commerce and Industry for Small-Scale Business (CCISB) and local insurance companies.

Outcomes and Activities

Feedback from beneficiaries who made claims under the Afat Vimo policy has been very positive and encouraging. To date, 204 claims were made to insurance companies. Of these, 155 were successfully settled, giving a combined payout of 21,940 US dollars. It emerged from a 2006 internal evaluation survey of Afat Vimo clients that 100 per cent of the surveyed clients were willing to renew their policy. Seventy-five per cent of those surveyed felt that Afat Vimo offered them better protection and 24 per cent said it offered them significant protection.

All the surveyed clients said the Afat Vimo scheme needed to be extended to more people in other disaster-affected states. The main reasons given for this view were the value of having insurance in times of crisis (36 per cent), reduced dependence on outside relief (33 per cent) and the affordability of the scheme compared to other insurance schemes (20 per cent).

A participatory review of the Regional Risk Transfer Initiative (RRTI) was conducted in January 2007 by an international consultant. The review found that the scheme was clearly welcomed by clients and that there was pressure to extend it. The review also concluded that most of the practical problems encountered were addressed. The insurance companies have proved to be quick in resolving claims (average about 20 days) and flexible in adjusting and clarifying the terms of insurance. Evidence collected for the review suggested that the main value of micro-insurance lies in limiting indebtedness that can quickly be triggered by an event such as disaster, accident or death.

Good Practice

The good practice in Afat Vimo lies in the fact that risk is transferred from the individual level to the community or inter-community levels, which include groups based in different geographic locations and which are not equally disaster prone. The Afat Vimo scheme represents an innovative approach to risk identification, pooling and transfer, which recognizes the fact that the majority of poor disaster victims have little or no access to risk transfer schemes.

According to a recent study of micro insurance policies in India by the International Labour Organization, 45 per cent of micro-insurance schemes researched cover only a single risk and only 16 per cent cover three risks. As Afat Vimo covers 19 disaster risks, it is one of the most comprehensive products in India. This not only makes the policy more attractive to clients, but also makes investment in the policy more efficient in economic terms. Another aspect of Afat Vimo that sets it apart from other micro-insurance policies is the extensive range of eventualities covered under the policy.

Last but not least, Afat Vimo policyholders are also supported with micro-mitigation measures such as fire-safety training, seismic-safe construction practices and business development services. The policy is available for an annual premium of less than 5 US dollars (about a four-day wage). Damage to policyholders' houses, household assets, trade stock and losses of wages due to accidents are covered. The earning household member's life is also covered.

Questions for Reflection

- What makes Afat Vimo a successful initiative for disaster risk reduction (DRR) at the community level?
- What could be the points of key policy learning in the experience of this initiative?
- What could be the challenges of taking this kind of an initiative to scale both in terms of policy and practice at the national and state levels?

Handout 17: A case study on building community resilience at state level

About the case study

The following case study is drawn from a discussion paper titled 'Building community resilience at state level: disaster risk management and rural livelihoods in Orissa' and first published by Institute of Development Studies (IDS), Sussex, UK in 2010.

This takes the state of Orissa as a case for examining various policy approaches on building community resilience at state level in terms of their efficacy in achieving the desired results. This case study, though a bit old now, is still relevant for examining the policy implications of approaches adopted for building community resilience at state level.

Orissa as a case study

Orissa has long been prone to disasters: recurring droughts, flood and cyclones are regular features in the state and have had a crippling effect on the economy. In 1999 a severe cyclone followed by a super severe cyclone lashed the entire coast of Orissa causing large scale loss of life. Whilst the extent to which climate change will exacerbate floods and droughts is not yet fully understood – one thing is clear – their frequency and intensity will increase, not diminish. Cyclones may intensify. Temperature increase is underway and causing heat stress. Further, different topographical areas in Orissa are frequently vulnerable to different kinds of natural disasters – floods, droughts and cyclones. Environmental degradation (deforestation, coastal vegetation/wetlands loss and soil erosion) has compounded the impact of the natural disasters that are striking new areas.

Orissa is part of 'Poorest India' and has the highest incidence of poverty despite recent improvements. Latest figures show that 57 per cent are living below the poverty line and almost 90 per cent of the poor live in rural areas. Poverty is significantly worse in the western and southern districts of the state – linked to agriculture with more than two-thirds of the population employed in the sector. Most people are subsistence farmers and many practice sharecropping. Productivity is low; the poorest scraping together a living on marginal lands.

The Human Development Index (HDI) of the state increased from 0.27 in 1981 to 0.40 in 2001, which was a rise of around 51 per cent. Of Orissa's 40 million people, about 16 per cent live in urban areas. In total, 22 per cent of the population comprises Scheduled Tribes (against the all-India percentage of 8 per cent) and 16.5 per cent Scheduled Castes (about the same as the all-India percentage).

Orissa continues to be off-track on all the MDGs. IMR rates, despite an impressive decline from 2001 to 2006, continue to be among the highest in the country. Institutional births are still low at below

40 per cent. Trends are closest to the target in education (including gender equality) and tackling infectious diseases. The rate of literacy has increased by 14 per cent since 1990 and the number of drop-outs in schools has decreased in ten years from 1.27 million to 0.2 million.

Specific weather and disaster background

Orissa has been called the disaster capital of India. Cyclones are the big catastrophic events.

The cyclone zones are also prone to tidal surge affecting the coastal districts. Flood during the rainy seasons occurs without fail every year. The coastal districts of the state, as well as other districts which have the major rivers flowing across it and have large reservoirs, are prone to such hazards. Damage to river embankments are also caused due to flooding. Most of the western districts of the state are prone to drought every year and thus belong to the high-risk category. Erratic rainfall and under-utilisation of water resources are the main cause for such calamities. During 1965-2009, it has been repeatedly hit by various disasters such as cyclones (6), floods (17), droughts (19) and heat waves. Climate change has increased the intensity and range of disasters and reportedly, more areas within the State have become vulnerable to disasters.

Orissa current problems

In Orissa, over 80 per cent of annual rainfall occurs during the monsoon period, average 1,400 mm, with an average of 70 rainy days. The State experiences either heavy flood or drought every alternate year due to disproportionate distribution of rainfall. In recent years, wide fluctuation in climate has been observed and irregular rainfall causing both floods and droughts is a major concern. The impact of drought on farmers has been deleterious in some areas. Floods in 1980, 1982, 2001 and 2003 were particularly severe but there have been notable flood events in each of the past 4 years. For example, in 2009, 1,451 villages in 15 districts were affected, 13,000 houses were lost or damaged, and over 60,000 people were evacuated and accommodated in 80 camps¹³. Saline water ingress has been observed in some coastal districts. There are also major pollution and water quality issues emerging as industrialisation and urbanisation proceed in the State. Increased disaster intensity interacts with low resilience to compound problems of food security, water security and livelihood security in the State, and is leading to poor health conditions.

Policy interventions assessed

Due to its vulnerability and record of disasters, development policy initiatives have been instigated and are constantly evolving to address poverty and resilience and reduce impacts of extreme weather events. These have been evolving over time and are implemented from state to district to panchayat and community level. Two pivotal interventions were selected for assessment covering the spectrum of activities required for CSDRM. These have been supported by the State Government and donor agencies over a period of time: the Western Orissa Rural Livelihood Programme (WORLP) and the Orissa State Disaster Management Authority (OSDMA) – whose establishment was driven by the 1999 super-cyclone¹⁵. Both these have influenced policy development at national level – on water shed management and disaster management. The National Disaster Management Act and institution is based on experience from Orissa State and its Disaster Management Authority.

Orissa State Disaster Mitigation Authority (OSDMA) was set up by the Government of Orissa as an autonomous organisation in the aftermath of the super-cyclone in 1999. It was registered under the Societies Registration Act, 1860 as a non-profit making and charitable institution. The Department of Revenue is the administrative department of OSDMA. Subsequently, the name of the Authority was changed from Orissa State Disaster Mitigation Authority to Orissa State Disaster Management

Authority. The Authority has the mandate not only to take up the mitigation activities but also the relief, restoration, reconstruction and other measures. These activities cover the entire gamut of disaster management including preparedness activities.

The Government of Orissa is implementing the Disaster Risk Management (DRM) programme in 16 disaster-prone districts in order to reduce the vulnerabilities in two phases from 2002-08 with the support of the Government of India (Ministry of Home Affairs) and the United Nations Development Programme (UNDP, supported by DFID). The Community Based Disaster Preparedness (CBDP) programme is being implemented in ten blocks of seven coastal districts on a pilot basis. The overall goal of the programme is 'Sustainable Reduction in Disaster risk in some of the most hazard-prone districts'. The disaster management plans start from the village/ward level and are consolidated through similar planning at the panchayat, block, district and urban local bodies' levels in the selected districts. A cadre of village volunteers has been created to carry out the village based natural disaster risk management programmes.

Orissa implements in the order of ten different watershed programmes or projects in the state, including the Western Orissa Rural Livelihood Programme (WORLP). The Western Orissa Rural Livelihoods Project (WORLP), funded by DFID and implemented by the State Government's Orissa Watershed Development Mission, was set up in 2000 with the aim of reducing poverty by making the livelihoods of rural people in the project area more sustainable. WORLP is a partnership between the Department for International Development (DFID), UK and the Government of Orissa (GoO). The project was inaugurated by the Chief Minister of Orissa in August 2000 at a cost of Rs 230 crores (GBP 32.75 million). WORLP was designed to cover 870 villages in 290 watersheds of 29 blocks in four of the poorest districts of Orissa, where human development indicators are comparable to sub-Saharan Africa. WORLP is unique in its design and approach and has less of the technical confines of other, previous watershed programmes. 'Watershed Plus' is a term which was coined during the design of this project, and refers to the additional focus on people's livelihoods which was introduced.

Planning for adaptation to climate change in India

For India as a whole, the Government has decided that climate change may alter the distribution and quality of India's natural resources and adversely affect the livelihood of its people. India may face a major threat because of projected changes in climate as its economy is closely tied to its natural resource base and climate sensitive-sectors.

The Government has a vision to create a prosperous but not wasteful society, and economy that is self-sustaining: maintaining a high growth rate to increase living standards is vital for the vast majority of the people and to reduce their vulnerability to climate change. The vision aims to achieve national growth objectives by enhancing ecological sustainability leading to further mitigation of greenhouse gas emissions. (NCCP, 2008)

The Indian Prime Minister has urged each State Government to create their own state level action plan consistent with the strategies in the National Plan (18-08-09). The Government recognises that to deal with the challenge of climate change there is a need to act on several fronts simultaneously. Eight National Missions form the core of the National Action Plan, which will promote understanding of climate change, adaptation and mitigation, energy efficiency and natural resource conservation. The priority National Missions are:

1. Solar energy
2. Enhanced energy efficiency
3. Sustainable habitat
4. Conserving water

5. Sustaining the Himalayan ecosystem
6. A 'Green India'
7. Sustainable agriculture
8. Strategic knowledge platform for climate change.

The National Action Plan has been prepared under the guidance and direction of Prime Minister's Council on Climate Change. Some of the national strategies and programmes are already part of current action, although it is known that they may need a change direction and accelerated implementation. The Missions are being institutionalised by their respective Ministries and it is clear that several will involve action at state level, a process which is beginning to get underway.

Disaster management finds a brief reference in the NAPCC, not as a Mission, but as an additional initiative integrated with the government's 11th Five Year Plan. It can also be noted that climate change is only mentioned briefly in the National Policy on Disaster Management as providing one factor in increasing vulnerability. It is however possible to identify interrelated policies in the NAPCC.

For example, the National Mission on strategic knowledge is expected to develop accurate weather indices and better prediction of extreme events, early warning systems that can enhance preparedness. One of the potential linkages of national policy to state policy for the CSDRM is through the Mission on Sustainable Agriculture. This mission fosters adaptation in the agriculture sector by propagating varieties tolerant to extreme weather conditions.

There are several national and state-level policies across a range of sectors like agriculture, water, forest, health, housing, resettlement and rehabilitation that have the potential of integrating climate change and disaster risk reduction. This intermeshing of national, state and sub-state level policies takes place through the existing national and state level institutions as well as local authorities. For example national government may moot mandatory rainwater harvesting or solar water heater usage for large residential complexes, but the state has to enact and amend rules to implement this.

Orissa state climate change action plan

Orissa is the first State in country to produce a State Climate Change Action Plan (CCAP). This move is a response to the particular pressing issues in Orissa and also direction from national policy. In addition to the disaster experiences outlined above there are also energy and development issues around the climate change agenda. There has been high growth in the metal and mineral sectors which has put pressure on the environment both due to land use change and degradation of forest area. Rapid urbanisation and industrialisation have resulted in high congestion in transport and scarcity of water and electricity. There is recognition that climate change has the potential to derail the current growth strategy and deepen poverty in Orissa. The underlying rationale for the CCAP is to lead Orissa to move towards a carbon-conscious, climate resilient development path. In the first instance a scoping study was commissioned by DFID-India to support the Government of Orissa.

The CCAP was prepared following presentation of the findings of this scoping study. The GoO established a High Level Co-Ordination Committee headed by the Chief Secretary with Principal Secretary Forest and Environment acting as its convenor to steer preparation of the CCAP. The GoO established working groups to cover the different sectors, drawn from departments to deliberate on various actions that would help in reducing the impact of climate change in the state. The groups had multiple consultations with experts and officials and identified 287 priority actions in 11 sectors – some are adaptive and some are related to mitigation. Five stakeholder consultations were organized with about 500 people participating and sharing their point of view, helping government to finalise the action plan. The draft Climate Change Action Plan (CCAP) 2010-2015 was published on 5th June 2010. Then the draft report was shared with stakeholders and is currently on the web to invite more comments from the wider stake-holding community.

The main feature of the Climate Change Action Plan is the high commitment of the state to the process, with the attention coming from the highest echelons of the administration. The Climate Change Action Plan has projected a budget of Rs 17,000 crores in different sectors in adaptation, mitigation, knowledge building and policy reform. A new Orissa Climate Change Agency is to be established during the first year of implementation with information, advisory, supervisory and coordinating role on climate change issues. This Agency will be a single-window contact for dealing with the Government of India and external funding agencies in issues relating to climate change.

The CCAP is the blue print for the next five years for reducing risk from climate change. In total the Draft Climate Change Action plan validated the 287 priority actions in 11 sectors:

Sectors	No of priority actions deliberated
Agriculture	37
Coastal Disaster	9
Energy	42
Fishery	14
Forestry	13
Health	10
Industry	60
Mining	42
Transport	19
Urban	21
Water	20
Total	287

The total climate budget is expected to be around Rs 17,000 crores for five years. This compares to spending in OSDMA of 1,300 crores over five years, and 230 crores for WORLP over ten years.

The CCAP framework could create the enabling environment to drive forwards the comprehensive approach to disasters which the CSDRM approach can frame. Because the OSDMA and WORLP cover two programmes with different geographical foci and are focused on different aspects of disasters – slow onset disasters (drought) under the WORLP interventions and rapid onset disasters (floods, cyclone, quakes) under the OSDMA, both with quite distinct types of activities – they are not yet related within the state frameworks.

OSDMA and WORLP staff contributed to the development of the CCAP but to different sectors. In fact the recent Orissa Climate Change Action Plan creates distinct priorities under agriculture, water, basin development, rural development, and places disasters within a coastal context but recognises these are all cross-cutting.

The Orissa CCAP has several priority actions in coastal and fishery sectors which are relevant to the CSDRM, including scenario development, modelling, mainstreaming elements of disaster management policy at the district level (e.g. preparedness for heat wave, flash floods, etc.) It can be noted that the priority actions in agriculture sector has drawn heavily from experience of WORLP. The CCAP, for example, refers to the need for capacity building of communities to adapt to climate change and better management of climate risks. Similarly the fishery and animal resource sectors' key priorities include early disease warning system, analysis of climate change impacts on aquatic resources and promotion of hardy breeds in the livestock sector.

Coastal and disaster management budgets run into Rs 1,300 crores in five years and focuses on investment in infrastructure, capacity building and enhancing knowledge base about climate events. Some of these actions will be implemented through the OSDMA and regular line departments and some also with the help of the NGOs.

Questions for Reflection

- What are the points of key policy learning from Western Orissa Rural Livelihood Programme (WORLP)?
- What are the major policy implications of DFID's Climate Smart Disaster Risk Management (CSDRM)?
- What could be the lessons learnt for community resilience building at state level in this initiative?

Handout 18: Baseline Indicators for Disaster Resilience

Resilience: is the collective capacity of an at-risk community to identify and reduce its disaster risk and withstand the impact of a hazardous event in a manner that results in minimum possible damage and loss of life, livelihoods, infrastructure, services, resources, and assets on the one hand and is accompanied with the ability to rebuild all these better than before on the other.

Impact Indicators

1. **Increased community capacity to deal with hazards and emergencies in a manner that reduces the chances of possible damage and loss due to disasters:** sub-indicators include increased awareness of people about the possible hazards and their mitigation measures; identification of vulnerable people and places; community resources such as land, water, and forest mapped and protected; organised community groups such as self help groups (SHGs) playing an active role in disaster management activities at the community level; people have increased access to information and decision making opportunities.
2. **Disaster risk reduction addressed in mainstream development plans and programs at the local level:** sub-indicators include disaster risk audit (DRA) of mainstream development programs carried out by community groups such as SHGs; required changes made in plans, programs and their implementation strategies; community initiatives for prevention of and preparedness for possible hazards/disasters integrated into on-going programs.
3. **Social/financial inclusion and security:** active formal/informal social networks in place; people, particularly women, have access to credit and insurance, particularly health insurance; collective decisions taken in community wide meetings held at regular intervals; SHGs engaged in social enterprises including business activities with development goals; SHGs having substantial savings and effective bank linkages; community based local platforms for mutual help.
4. **Grassroots women empowered to function as community leaders and DRR activists:** women and their groups involved in hazard/vulnerability/capacity/resource mapping leading to identification of risk and risk reduction measures; women and their groups having substantive engagement with local authorities and government on issues that concern them; women and their groups involved in setting the agenda and taking investment decisions; women and their groups engaged in handling development funds.
5. **Reduction in the number of unsafe places of residence and public utility within the community:** sub-indicators include identification, repair and retrofitting of unsafe residences and other built up structures such as schools, health centres etc. or resettlement of people in safe areas as against their earlier residence in unsafe areas.
6. **Enhanced livelihoods and food security through diversified livelihood practices and protection of natural resource base such as land, water and forest:** sub-indicators include diversification of livelihoods with an increased number of households having more than one source of income; increased number of households having a stable source of income throughout the year; community engagement with concerned local authorities and collective local action to conserve natural resources.
7. **Improved preparedness to deal with emergencies by preventing or/and containing damage and losses due to disasters:** sub-indicators include disaster management task forces trained in

search, rescue, relief, and resettlement on one hand and having community organisations and social networks to rebuild lives and livelihoods on the other.

Baseline indicators

1. Number/ percentage of people/households living in safe houses
2. Number/ percentage of people/households having access to safe water, sanitation and health services
3. Number/percentage of people/households having stable source of income throughout the year
4. Number/percentage of people/households having more than one source of income
5. Number/percentage of women in the community/village having formal membership of community based organisations such as SHGs and mahila mandals
6. Number of organised women groups such as SHGs and mahila mandals in the village involved in preparation of community based disaster management plans
7. Number of disaster management task forces trained in search, rescue, relief, recovery and reconstruction in the village
8. Number/percentage of people/households aware of possible hazards and their mitigation measures at the community level
9. Percentage of the available community resources such as land, water and forest being hazard prone and under threat from earthquake, floods, cyclone, and drought
10. Percentage of hazard prone community resources for which protection measures have been undertaken

Handout 19: Tracing how climate conditions and development decisions increased flood risk in Pakistan

The series of floods in 2010 from Pakistan's Indus River affected more than 20 million people, resulted in the deaths of almost 2,000 people, caused damage and indirect costs of more than PKR 855 billion (USD 10 billion), and a 2 per cent decline in GDP (ADB and World Bank, 2010). It was the country's worst flood disaster in terms of number of affected population and economic damages (EM-DAT, 2013b).

The expansion of farmland into the flood plain increased the exposure and vulnerability of people to the floods. As the Indus irrigation system expanded to be one of the largest in the world, wetlands were converted into farmland and the bulk of the population settled in the floodplains. People tended to live in flimsy houses, thus over 900,000 houses were completely destroyed by the flood, 92 per cent of which were poorly constructed of mud and unreinforced light materials.

The dynamic Indus River carries a high sediment load from the Himalayan and Karakoram mountain ranges. Protective structures such as barrages and embankments constricted the river and may have led to the accumulation of sediment and subsequent overflow of floodwater (Gaurav et al., 2011).

A massive cutback in flood defenses as a direct result of money being reallocated to the military budget (Hunt, 2010) represents the balancing act that many countries perform in the face of competing political priorities. Furthermore, prior to the flood, most government institutions were struggling to fulfill their mandates under the 2006 National Disaster Management Ordinance; systems and procedures were still evolving, institutional and human capacity development for DRM was still being undertaken (ADB and World Bank, 2010). There was low capacity for communicating early warning from district to community levels, while at-risk communities had low capacity to interpret the warning and limited options to respond (ADPC, 2012).

The main cause of deaths and damage was the lack of drainage infrastructure and poor maintenance of flood defenses. However, with the climate change trend leaning towards more intense rainfall events, it is now urgent to turn to DRM to anticipate and avoid similar flood impacts in the future. The climate conditions that contributed to flood risk were heavy rains of more than 200 mm within 24 hours and very high river flows (Ministry of Water and Power, 2010). The flood is listed as one of

several extreme events linked to global climate change (WMO, 2011). With the detected westward-shift of the monsoon's reach and a compression of the rainy period (Hanif, 2011), there is a possibility for such floods to recur in the Indus River floodplain.

Source: DRM Practitioner's Handbook Series, Integrating DRM into Climate Change Adaptation

Handout 20: Understanding Vulnerability due to Current Policy Measures: The Case of Paddy Rice in Andhra Pradesh, India

The rationale for widespread cultivation of paddy rice in the dry lands of Andhra Pradesh is based in part on government price-support policies for producers, which buffer the risk of price volatility and thus dilute incentives to switch to more environmentally appropriate, drought-tolerant crops.

As flooded rice is a highly unsuitable crop in dry lands, the price incentive distorts the farming system from what it optimally should be under dry land conditions.

A better policy to support drought adaptation would be to eliminate such a distorting subsidy or at least provide a similar price incentive for millet, one of the best cereals to cultivate in dry lands. This is but one example of how policies lead to good or bad practices from the perspective of drought risk management. A review of such policies should be included in a complete strategy to optimize farming systems and the livelihoods of people living in dry lands.

Source: World Bank 2010, GN 4.

Handout 21: Example: Outcome Indicators for Mainstreaming Climate Change Adaptation

In view of most adaptation objectives, there is often a need to develop and establish outcome indicators to track the following, among others:

- Capacity to identify current climate risks and assess likely future **climatic trends**
- Percentage of **sector staff equipped and trained** to incorporate climate change considerations into their work (vulnerability and risk assessment, economic analysis, policy aspects, adaptation measures)
- Inclusion of acquired knowledge about current and future climate risks in **decision making** at various levels
- Number of **policies** that incorporate adaptation issues
- Number of adaptation **measures** (climate-proofed or specific) at the national level (economic incentives such as insurance, subsidies or low-interest loans, capacity building initiatives, infrastructure, sustainable land tenure, etc.)
- Level of **enforcement** of policy (e.g. on land and water rights)
- Creation of an academic, private sector, NGO, public sector, civil society and government **partnership** for developing, implementing and up-scaling adaptation efforts (e.g. establishment of inter-institutional committees)

Source: Adapted from World Bank 2010, GN 8.

Handout 22: Progress Checklist for Climate Change Adaptation Mainstreaming Finding the Entry Points and Making the Case

- Entry points for adaptation mainstreaming agreed on and related roadmap taken into account in the work plan for the next stage of the effort

- Key ministries (e.g. environment, finance, planning, sectors) and other non-governmental actors (e.g. representatives of communities and the private sector) relevant to the agreed entry points are members of the steering committee or task force of the adaptation mainstreaming effort
- Adaptation mainstreaming champions liaising with in-country donor coordination mechanisms
- Increased awareness that poor people are likely to be the most affected by climate change, that national development goals and key sector strategies (e.g. agriculture, health, energy, tourism) can be affected by climate change and that national development and sectors can in turn affect the vulnerability of the country and the poor
- Activities to be implemented in collaboration with finance and planning or relevant sector ministries included in the workplan for the following stage of the effort

Mainstreaming Climate Change Adaptation into Policy Processes

- Adaptation-related indicators linked to policy documents of national development planning integrated in the national monitoring system
- Increased budget allocations and public expenditures for adaptation policy measures of non-environment ministries and subnational bodies
- Adaptation mainstreaming established as standard practice in government and administrative processes, procedures and systems (e.g. budget call circulars, systematic inclusion of adaptation in public expenditure reviews, coordination mechanisms, systematic climate-proofing, monitoring)

Long-Term Outcomes

- Institutions and capacities strengthened for long-term adaptation mainstreaming
- Conditions for simultaneous improvement of adaptation and poverty reduction enhanced

Handout 23: Possible Entry Points for Mainstreaming into National Development Planning

Planning level	Entry Points
National government and cross-sector ministries	Poverty reduction strategy paper
	National development plan
	MDG-based national development strategy
	National budget allocation process or review (e.g. medium-term expenditure framework, public expenditure review)
Sector ministries	Sector strategies, plans and policies (e.g. agricultural sector plan)
	Preparation of sector budgets
	Public expenditure reviews
Subnational authorities	Decentralization policies
	District plans
	Preparation of subnational budgets

Handout 24: Guiding Questions for Engaging in the Budgeting Process

- Are budget planning and expenditures being directed toward the appropriate priorities in view of adaptation? For example, is sufficient budget allocated and spent for irrigation modernization/ development and water conservation in areas subject to increasing water stress and droughts; flood protection measures for critical infrastructure; and reversing trends of land degradation in productive areas?
- Do recent changes in budget allocations and expenditures provide evidence for increased attention to adaptation to climate variability and disaster preparedness?
- Do public investment decisions consider geographical distribution of climate risks and vulnerabilities? For example, are investments in water harvesting going toward the most water-stressed areas? Are investments in crucial transport networks going to cyclone-prone areas and, if so, is there any expenditure conditionality to ensure that critical infrastructure is climate-proofed?
- How can the revenue-generating, budget planning and allocation, and expenditure management systems be improved and/or revised to enhance the contribution of relevant economic sectors to adaptation, development and poverty reduction?

Source: Adapted from World Bank 2010, GN 4.

Handout 25: Developing an integrated approach

- **Increase understanding of the hazard and climate change context:** An understanding of past trends, present experiences and future projections of hazard occurrence, climate variability and the range of effects of climate change on the area and population concerned should underpin any decisions or actions to build disaster and climate resilience. It should include mapping at different scales, to allow for regional and local hazards and effects of climate change. The risk analysis process itself should increase understanding among all stakeholders, both as a result of its participatory nature, and through sharing of the results.
- **Increase understanding of exposure, vulnerability and capacity:** An assessment of the vulnerabilities and capacities of the population, systems and resources should be the foundation for decisions on the location, target populations (including understanding differential vulnerability), objectives and approach of measures to build disaster and climate resilience. It should include analysis of the projected effects of climate change as well as of those currently observed. The assessment should also increase understanding among all stakeholders of the causes of exposure, vulnerability and capacity, both as a result of a participatory process, and through sharing of the results.
- **Recognize rights and responsibilities:** Disaster risk reduction and climate change adaptation should be regarded among the responsibilities of states and governments as duty-bearers for the realization and enjoyment of human rights. Governance systems and the political environment should enable people at risk or affected by disasters and climate change to demand accountability for their decisions, actions and omissions. The role of other stakeholders, including NGOs, should be complementary to, and enabling of, the relationship between duty-bearers and right-holders.
- **Strengthen participation of, and action by, the population at risk:** All people at risk have the right to participate in decisions that affect their lives. Their first-hand knowledge of the issues affecting them is critical to ensuring that analysis and subsequent actions are based

on empirical evidence. In addition, the sustainability of resilience-building strategies depends on their ownership and agency. Therefore all decision-making processes and actions should directly involve the population at risk ensuring that women, men and children, as well as high-risk groups, are included.

- **Promote systemic engagement and change:** As there are multiple causes and drivers of vulnerability and exposure to hazards and the effects of climate change, strategies to build disaster and climate resilience should engage all sectors of society and government. The goal of multi-sectoral and multi-stakeholder engagement should be to make building disaster and climate resilience central to development planning. The commitment of all actors to this goal should be reflected in their respective policies, plans and budgets.
- **Foster synergy between multiple levels:** The importance of an enabling political environment is critical to actions taken at the household, community and local levels. Similarly, the impact of a policy or law depends on its implementation by different levels of government and its relevance to the population at risk. Decisions and actions taken at each level should be mutually informative and facilitate the development of a coherent and coordinated approach.
- **Draw on and build diverse sources of knowledge:** Analysis of disaster and climate change risk should seek to complement local and traditional knowledge with the results of scientific research in order to continue to co-generate new knowledge. Measures to build disaster and climate resilience should promote replication of effective practices, encourage autonomous innovation and introduce, where appropriate, external technology to help address new or magnified challenges. Strategies and programs should be monitored and evaluated to ensure that learning is captured and made available to others.
- **Instil flexibility and responsiveness:** As the effects and impacts of climate change remain uncertain, particularly on a local scale, and many dynamic processes (such as urbanization and environmental degradation) influence exposure and vulnerability, analysis of disaster and climate change risk should be responsive to emerging knowledge. Similarly, strategies and programs to build disaster and climate resilience should be flexible, to accommodate new inputs.
- **Address different time scales:** Analysis, strategies and programs should address current, identified risks and likely future scenarios. Preparing for the occurrence of known hazards should not be neglected in favour of building capacities to adapt to medium- and long-term effects of climate change, and other, potentially unknown shocks or stresses. Resource allocation and activities should be planned accordingly.
- **Do no harm:** Processes to define strategies and programs to build disaster and climate resilience should always incorporate an assessment of their potential negative impacts, including their contribution to conflict and effects on the environment. In cases where potential harm is identified, measures to substantially reduce or remove them should be built into the strategy and program design. To avoid creating a false sense of security, or promoting mal-adaptation, programs should always be based on a multi-hazard, multi-effect assessment.

Handout 26: Systematic Approach to training

The fact that current DM and DRR related training practices are largely ad hoc and not based on clear identification of training needs call for a systematic approach to training. There seems to be a global consensus that training in order to be effective has to be based on a systematic approach.

A systematic approach to training (SAT) pre-supposes the following:

- Training is based on identified training needs and is in response to real and not imagined needs of the functionaries involved
- Participants are selected on the basis of training needs and not on other factors including their easy availability for training.
- Impact of training is evaluated and learning used to improve the training design and delivery further for better results.

The first and last related to training needs and impact evaluation happen to be the blind spots of training in the development sector in general and in the field of disaster management in particular. Even the performance of the second one related to selection of participants for training is suspect and skewed in many cases as revealed by the study.

The following figures present the suggested framework for implementation of training, which is based on the larger capacity development framework of the study, but targets only training for the purpose of this framework.

Figure 1: Strategic Framework for Implementation of Training (SFIT)

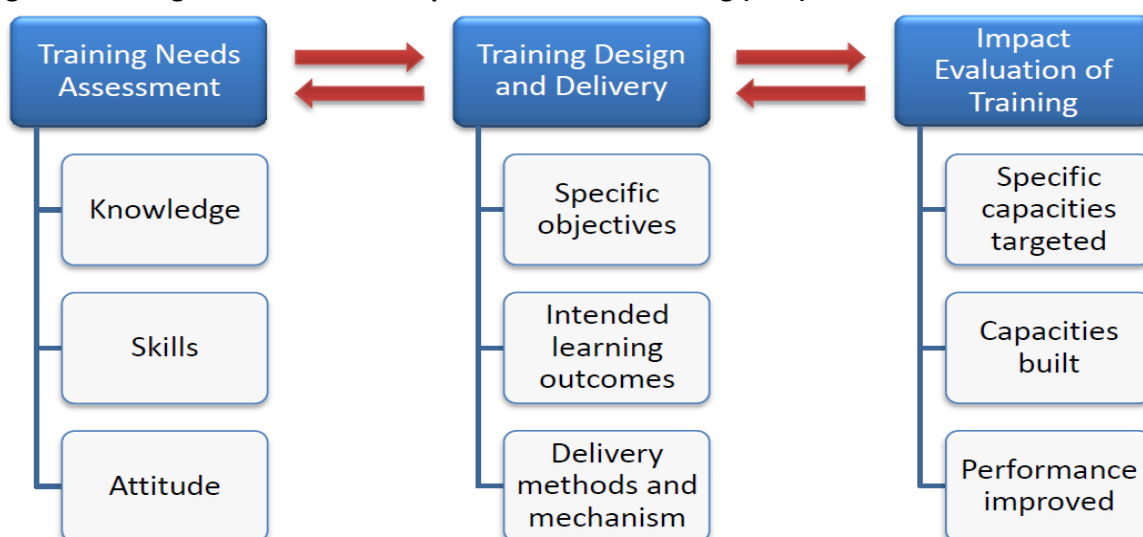
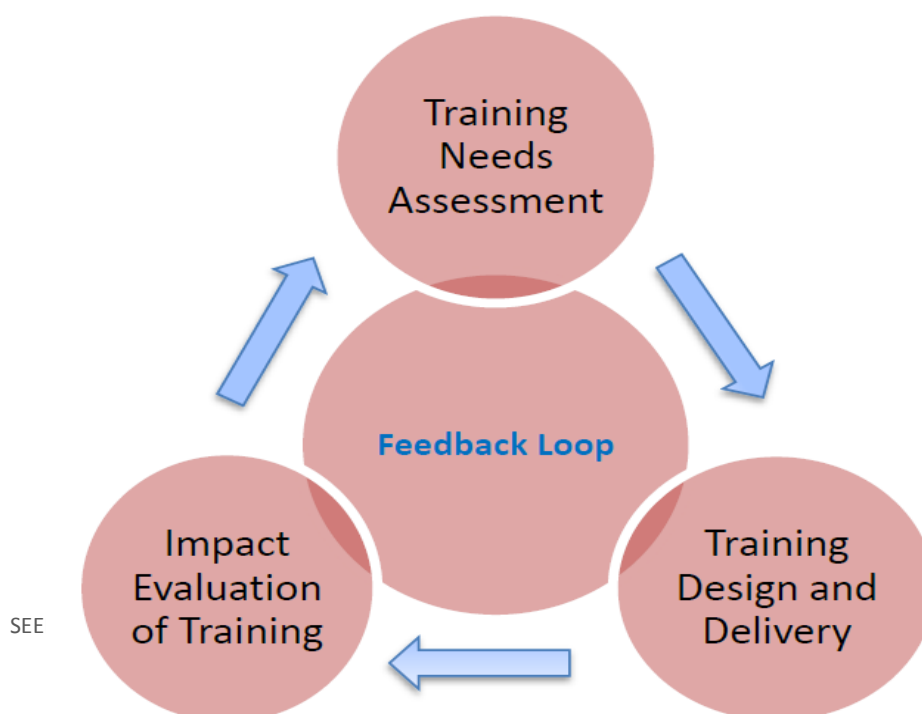


**Figure 2:
Feedback Loop**



The current training practices are in general limited mainly to training design and delivery component of the suggested framework. This is generally not preceded by any systematic training needs assessment and is usually not followed up by any kind of impact evaluation. This is practically like shooting in the dark: one of course is hitting some target, but is never sure what and with what consequences.

This framework can be used to streamline the training functions in a manner that leads to targeted capacity development for disaster management and disaster risk reduction across sectors.

Handout 27: Capacity Needs and Training Needs Assessment

Capacity, Capacity Needs and Training Needs¹⁹

Capacity for the purpose of this framework is defined as the overall capability of an actor (individual or institution) to perform and produce results. Capacity is a relative term and can be defined only in relation to the roles and responsibilities of the concerned actors as stakeholders. In case of functionaries at work, capacity is defined in terms of knowledge, skills and attitude that they possess to carry out a given task and achieve a certain intended result. In the case of organisations, capacity is defined in terms of overall organizational capability to plan and implement schemes, programmes and projects to achieve a given set of objectives on scale.

Capacity Needs



Training as a tool to build capacity seeks to upgrade knowledge, skills and attitude (KSA) of the people being trained. Organisational re-engineering and development including re-designing the business processes and work protocols are the means to enhance organizational capacity to function and deliver the required goods and services to achieve the agreed objectives. This may entail re-

¹⁹ Strategic Framework for Implementation of Training(pg 20-21), Deliverable 6, Preparing Long Term Training and Capacity building Strategy, NCRMP

defining the functional goals of the organization and developing strategic action plans, besides mobilizing resources and upgrading the existing infrastructure to increase the organizational capacity.

As this framework relates to training, a look at the current training scenario with specific reference to DM and DRR functions would be in order. Training is of various types differentiated by factors such as length/duration of training, content of training, training methods and tools. There are different types of training categorized by their nature, location, level, duration, purpose and methodology. These include: general and specialized training; induction, in service and follow up training; on site and off site training; training of trainers.

Conventional notion of training carries the image primarily of a class room activity based on a vertical relationship between the trainer and trainees: this is characterized by a top down relationship between the trainer as teacher and the participant as the learner. This is now universally recognised to be outmoded and of limited use, as the retention and use of learning received through one way top down method (mainly lectures) by an expert is very low, as it does not fit in with adult modes of learning. But class room training sessions are still the most widely used training methodology both at NIDM and state level Disaster Management Centres (DMCs). Most of the class room training is theoretical and of a general nature. Practical training aimed at building specific knowledge and skills of specific groups of people is very limited and has yet to be undertaken in a systematic manner and on scale.

There are other innovative modes of training that have been used in varying degrees in recent years. These include online training, blended learning, satellite training etc. These have been used by NIDM, Indian Institute of Remote Sensing, Vigyan Prasara and state level agencies such as in Karnataka. But the specific ways in which these modes help have yet to be ascertained and fully appreciated.

Handout 28: Training/Behavioural Objectives: Verbs to Describe Complexity of Behaviour

1.00 **Knowledge:** The recall of information.

define	name	order
describe	recite	recognize
label	recall	record
list	relate	reproduce
match	repeat	state
arrange		underline

2.00 **Comprehension:** The translation, interpretation or extrapolation of knowledge.

arrange	explain	interpret
classify	express	locate
describe	indentify	report
discuss	indicate	restate
sort	translate	extrapolate

3.00 **Application:** The application of knowledge to a new situation.

apply	practice	solve
Choose	prepare	use
Illustrate	schedule	demonstrate
Operate	sketch	measure

4.00 **Analysis:** To break down knowledge into parts and show relationships among the parts.

analyze	diagram	question
appraise	discriminate	test
calculate	distinguish	differentiate
categories	examine	compare
contrast	experiment	inventory
criticize		

5.00 **Synthesis :** Bringing together parts (elements, components) of knowledge to form a whole and build relationships for new situations.

arrange	design	prepare
assemble	formulate	propose
collect	manage	set up
compose	organize	synthesize
create	plan	write
construct	modify	conduct

6.00 **Evaluation :** Judgments about the value of material and methods for given purposes.

appraise	estimate	select
argue	evaluate	support
assess	judge	value
attack	predict	score
compare	rate	defend

Handout 29: Johari Window

It is a simple and useful tool for understanding and training self-awareness, personal development, improving communications, interpersonal relationships, group dynamics, team development and intergroup relationships.

It is also referred to as a 'disclosure/feedback model of self-awareness', and an 'information processing tool'. It represents information - feelings, experience, views, attitudes, skills, intentions, motivation, etc - within or about a person - in relation to their team, from four perspectives.

Standard Representation

		Self	
		Known	Unknown
Others	Known	1 Open/Free Area	2 Blind Area
	Unknown	3 Hidden Area	4 Unknown Area

The four Johari Window perspectives:

Called 'regions' or 'areas' or 'quadrants' each contains and represents the information - feelings, motivation, etc – in terms of whether the information is known or unknown by the person, and whether the information is known or unknown by others in the team.

The four regions, areas, quadrants, or perspectives are as follows, showing the quadrant numbers and commonly used names:

1. Open area, open self, free area, free self, or 'the arena': what is known by the person about him/herself and is also known by others.
2. Blind area, blind self, or 'blindspot': what is unknown by the person about him/herself but which others know.
3. Hidden area, hidden self, avoided area, avoided self or 'façade': what the person knows about him/herself that others do not know
4. Unknown area or unknown self: what is unknown by the person about him/herself and is also unknown by others

Handout 29: Stephen Covey's seven habits of highly effective people

Stephen Covey's Seven Habits of Highly Effective People²⁰

Habit 1 - be proactive

This is the ability to control one's environment, rather than have it control you, as is so often the case. Self-determination, choice, and the power to decide response to stimulus, conditions and circumstances

Habit 2 - begin with the end in mind

²⁰ <http://www.businessballs.com/sevenhabitssteven Covey.htm>

Covey calls this the habit of personal leadership - leading oneself that is, towards what you consider your aims. By developing the habit of concentrating on relevant activities you will build a platform to avoid distractions and become more productive and successful.

Habit 3 - put first things first

Covey calls this the habit of personal management. This is about organising and implementing activities in line with the aims established in habit 2. Covey says that habit 2 is the first, or mental creation; habit 3 is the second, or physical creation.

Habit 4 - think win-win

Covey calls this the habit of interpersonal leadership, necessary because achievements are largely dependent on co-operative efforts with others. He says that win-win is based on the assumption that there is plenty for everyone, and that success follows a co-operative approach more naturally than the confrontation of win-or-lose.

Habit 5 - seek first to understand and then to be understood

One of the great maxims of the modern age. This is Covey's habit of communication, and it's extremely powerful. Covey helps to explain this in his simple analogy 'diagnose before you prescribe'. Simple and effective, and essential for developing and maintaining positive relationships in all aspects of life.

Habit 6 - synergize

Covey says this is the habit of creative co-operation - the principle that the whole is greater than the sum of its parts, which implicitly lays down the challenge to see the good and potential in the other person's contribution.

Habit 7 - sharpen the saw

This is the habit of self renewal, says Covey, and it necessarily surrounds all the other habits, enabling and encouraging them to happen and grow. Covey interprets the self into four parts: the spiritual, mental, physical and the social/emotional, which all need feeding and developing.

Annexure 3: Design brief

CLIENT

The National Disaster Management Authority (NDMA) and the National Institute of Disaster Management (NIDM) of India.

WHY THIS TRAINING COURSE?

Performance Problem

Rural development is one of the key sectors and besides sector specific policies, plans and programs it is closely linked with agriculture, irrigation, rural livelihoods and rural infrastructure.

Integration of disaster risk and climate change resilience into sectoral and sub-sectoral plans and strategies would have large scale implications on the development outcomes and their sustainability over time. Various important sectors including drinking water, sanitation, housing, electrification, transport, employment/ livelihoods are equally important for improvement of quality of life of rural masses and have knock on effects on the overall gains of DRR and CCA sensitive development planning. Integration of DRR and CCA in the development plans and programs is important for sustainable development and resilience building of all the sectors and actors.

In all the programs and schemes like MNREGA, RKVY, IWM, RGNDWM, Minor Irrigation, NRLM, NBA, REA, and etc. DRR and CCA concerns have not been addressed. This ignorance can be attributed to the lack of sensitization of policy/program makers towards mainstreaming of DRR and CCA at level of policy making, program designing and strategy formulation.

Training Needs

Training needs are identified in the SWOT analysis for preparing long term training and capacity building strategy for disaster risk reduction in India under NCRMP. For the rural development sector training needs are identified for all 3 levels – national / state policy level, state / district management level and district / sub-district operational level.

However, it is envisaged that mainstreaming DRR and CCA concerns into rural development policies and programs right at the top will contribute substantially to DRR and CCA inclusive development planning and administration at various levels down the line. In view of this, it is proposed to have policy makers and program /project designers at the central and state level as the target audience for this proposed sensitization training program.

Specific identified training need at national / state policy levels that facilitates integration of DRR into sectoral plans and strategies are:

- Link between development, disaster risk reduction and climate change adaptation and need for mainstreaming DRR into development planning
- Basic orientation and sensitization on disaster – development link, DM and DRR including DM Act, policy, relevant legislations, norms, building by laws, relevant GOs/guidelines and functional roles and responsibilities.
- Sensitization on the Preparation and Implementation of DM action plans and SOPs at various levels including HRVC at micro level.
- Knowledge about instruments and incentives that facilitate mainstreaming DRR into development planning
- Participatory planning and action

Benefits

A series of such trainings will help develop plans and policies inclusive of DRR and CCA concerns leading to safe and sustainable development.

WHO IS INVOLVED?

Trainee profile

Training is designed for grade 'A' officials working at Central and State level working in policy making positions.

Overall numbers of trainees

The number of trainees to be trained through this training program is as follows:

Officers to be trained over 5 years	:	7,500
Officers to be trained annually	:	1,500
Number of training programs annually	:	60
Number of refresher training programs in five years*	:	120

(* two days refresher training programs may be organized from third year onwards)

Number of trainees per course

The intensive workshop and discussion base of the course will work best with smaller numbers. Therefore, each training batch should have no more than 25 trainees.

Entry behaviour

It is assumed that around 10 percent of the total (300,000) grade A officials are involved in policy making/planning and training would be provided to 25 percent of the 10 percent involved in policy making.

It is expected that the participants would have fair understanding of components of development and planning. It is likely that there are few participants that have been involved in disaster management in their respective states. A pre-training assessment of the knowledge and the use of knowledge have been envisaged to ascertain their knowledge base at the entry level. This assessment would also help the facilitator focus on need based inputs for knowledge enhancement during the training.

Resource Persons

The resource persons for this program will be identified training experts from leading training institutes like NIDM, IIPA, and SIRD etc.

Constraints

The training programs are planned for the officials involved in policy / planning / program designing at National and State level and involving them in the training program and processes is itself very challenging. It may present itself as a constraint in getting the participants to the training space.

BASE SUB- MODULE

Aim

Sensitization of policy makers and program designers about the instruments, incentives, tools and process for mainstreaming of disaster risk and climate change resilience in sectoral policies, plans and program designs.

Objectives

Duration

This training sub module will be run over a period of 3 days.

PERFORMANCE OBJECTIVE	TRAINING OBJECTIVES	ENABLING OBJECTIVES
<i>In their jobs, the trainees will:</i> Design plans and policies in a manner that they address DRR and CCA concerns and are sustainable	<i>After the training course, the trainees will be able to:</i> Assess critical issues of disaster risk reduction and climate change which impacts the development discourse	<i>During the training, the trainees will learn to:</i> - Relate the disaster risk and climate change with respect to their combined and potential effect on development. - Recognize the relevance of disaster risk reduction and climate change adaptation for planning for sustainable development. - Examine the various factors and issues involved in disaster risk and climate change resilience development planning. - Identify instruments, tools, processes and provisions that facilitate DRR into development planning.

Detailed training outline and learning units of the base sub- module

The sub-module will attempt to kick-start the thinking process and generate discussion, rather than prescribe rigid solutions as people will have to adapt these fundamentals to varying situations on the ground.

LEARNING UNITS	OBJECTIVES	Session(s)	METHOD	MEDIA / PERFORMANCE AIDS	ASSESSMENT MEASURES	TIME
PART 1: INTRODUCTION						
	Knowing each other and about the program	By course organisers: Welcome By trainees: Introductions, educational/work background and expectations from training By resource person: Introduction and brief explanation of what to expect over the course of the training. Address the 'WHY'!	Discussion	Black/white board/PPT on workshop outline/ expected schedule		45 min
Learning Unit 1: Development, Disaster and Climate Change: In the context of rural development						
	Examine critical linkages across development, disasters and climate change in the context of rural development.	• Development, disasters and climate change • Disaster risk reduction and climate change adaptation in the context of rural development	• Interactive lecture presentation • Questions and Answers • Group work • Presentation in the plenary	• Handouts • Power points	Internal validation	2.5 hour
Learning Unit 2: Disaster Management and Rural Development						
	Examine the disaster management approaches adopted at the national level over the years. Engage in an analysis of different stages of the disaster management cycle and their interrelations. Identify the key issues and challenges of disaster	• Disaster management approaches at the national level • Disaster management cycle: stages and interrelations. • Rural development: disaster management issues and challenges	• Interactive lecture presentation • Group work on case study • Presentation and discussion	• Handouts • Power point	Internal validation	3 hours

	management in the specific context of rural development in India.					
Learning Unit 3: Risk to Resilience: Policy Implications						
	Examine the shift in focus and perspective from risk to resilience within disaster management approaches, particularly in terms of their policy implications.	- Disaster risk, climate change and rural development: a policy perspective - Resilience building as pathway to sustainable development	- Experience sharing by participants - Discussion in the plenary - Closing remarks	- Handouts - Case study - Power point	Internal validation	3 hours
Learning Unit 4: Disaster Risk reduction and Climate Change Adaptation Inclusive Development: Perspective and Practice						
	Examine the current policy perspectives and practice to make the development process DRR and CCA inclusive	- Disaster risk reduction and climate change adaptation inclusive development: a conceptual overview - DRR and CCA inclusive development planning: institutions, instruments and incentives	- Experience sharing by the participants - Reflection and discussion - Summing up	- Case Study - Handouts - Power points	Internal validation	3 hours
Learning Unit 5: Mainstreaming DRR and CCA in Planning and Policy Making						
	Examine different conceptual frameworks and models for mainstreaming DRR and CCA into rural development and identify key policy issues and challenges for effective mainstreaming.	- Mainstreaming DRR and CCA: approaches and methods - Key policy issues and challenges in effective mainstreaming of DRR and CCA	- Interactive lecture presentation - Discussion in the plenary - Closing remarks	- PPT/Lecture - Handout - Case studies	Internal validation	3 hours
EVALUATION AND FEEDBACK						
	Evaluation Gather feedback		- Presentations of assignments - Discussion	- Checklist to evaluate - Feedback form	Internal validation	45 min

TOT SUB- Module

Aim

The aim of this sub-module is to introduce the participants to the basic knowledge and skills related to design and delivery of training.

Objectives

PERFORMANCE OBJECTIVE	TRAINING OBJECTIVES	ENABLING OBJECTIVES*
<i>In their jobs, the resource persons will:</i> 1. Design and develop training module 2. Facilitate training programs/workshops	<i>After the training course, the trainees will be able to:</i> 1. The participants will be able to adapt the base sub- module to specific local contexts in which further training programmes are to be organised and organise it with effectiveness.	<i>During the training, the trainees will learn to:</i> • Conduct training need assessment • Design a training program in terms of its content, methodology • Evaluate and monitor the training program • Facilitation skills for training

Duration

The TOT sub-module will run over 2 days.

Detailed training outline and learning units of the TOT sub module

This sub module is intended to be a refresher crash course in training design and delivery for those who already have sufficient background and experience in training trainers from different development sectors and at various levels.

LEARNING UNITS	OBJECTIVES	CONTENT / CONTENT DELIVERY	METHOD	MEDIA / PERFORMANCE AIDS	ASSESSMENT MEASURES	TIME
Learning unit 6: Systematic Approach to Training (SAT)						
	The objective of this sub-module is to equip the participants with basic knowledge about the key issues to be addressed in the course of designing a training intervention/ programme	1. Assess training needs 2. Define training objectives 3. Decide the content, methodology, and resource persons 4. Decide monitoring and evaluation indicators and processes	• Brainstorming • Group work • Presentation and discussion in the plenary	• Handouts • Power point	Internal validation	6 hours
Learning Unit 7: Learning and Facilitation Skills (LFS)						
	The objective of this sub-module is to equip the participants with basic facilitation skills that help the trainers conduct training/learning sessions with efficiency and effectiveness.	1. Art of facilitation -I : understanding self and others; promoting trust and sharing; listening 2. Art of facilitation-II: handling questions; managing expectations; managing conflicts; nurturing the eco-system of learning 3. Sharing, listening and learning including: creating a learning event and environment 4. Learning to listen and listening to learn; receiving and giving feedback; consolidating learning	• Individual Exercises • Group work • Discussion • Simulation/ Role play	• Handouts • Power point	Internal validation	5 hours
PART 6: EVALUATION OF FINAL ASSIGNMENTS AND FEEDBACK						
	Appraise final assignment Gather feedback		Discussion	Facilitator's note Note on guidelines for appraisal of final assignment.		1 hour

Assessment

- The initial assessment of the knowledge and level of understanding of use of knowledge will be undertaken through a pre training assessment based on quiz. Finding of the assessment will be used to make suitable modifications in the content and delivery strategy of different learning units.
- Each learning unit will also be assessed separately;
- A post training assessment will be carried out to assess the enhancement in the knowledge and skill levels of the participants.

Validation measures

Internal Validation:

- The immediate feedback on the effectiveness of the training methods and learning outcomes would be undertaken at the end of sub-modules.
- The feedback from the participants on the hand outs and performance aids would also be taken.
- The efforts would be made to improve the hand outs and performance aids based on participants' feedback to ensure their effectiveness.

External Validation: The external validation is proposed by the respective state officials and disaster management authorities to assess the application of learning at the performance level.

Sources, References and Further Readings

1. GoI-UNDP. 2002-2007. Training Module for Non- Governmental Organisations on Disaster Risk Management.
2. ISDR, African Union, NEPAD. June 2004. Guidelines for mainstreaming disaster risk assessment in development.
3. ISDR. September 2008. Climate change and disaster risk reduction.
4. E. Lisa F. Schipper. July 2007. Climate Change Adaptation and Development: Exploring the Linkages.
5. United Nations International Strategy for Disaster Reduction Secretariat, Geneva. March 2008. Links between Disaster Risk Reduction, Development and Climate Change.
6. SaleemulHuq, Hannah Reid and Laurel A. Murray. 2006. Climate change and development links.
7. Kareff Rafisura and G. Srinivasan. 2010. Integrating disaster risk reduction and adaptation into rural livelihood programming.
8. Shardul Agrawala, Tomoko Ota, Ahsan Uddin Ahmed, Joel Smith and Maarten van Aalst. 2010. DEVELOPMENT AND CLIMATE CHANGE IN BANGLADESH: FOCUS ON COASTAL FLOODING AND THE SUNDARBANS.
9. OECD. March 2006. Putting climate change adaptation in the development mainstream.
10. Mark Davies, Katy Oswald and Tom Mitchell. Climate change adaptation, disaster risk reduction and social protection.
11. UNDP. February 2010. Armenia disaster risk reduction system capacity development report.
12. UNDP. March 2010. Fostering water security and climate change mitigation and adaptation.
13. International Organization for Migration. 2010. Disaster risk reduction, climate change adaptation and environmental migration.
14. Katie Harris and Aditya Bahadur. Harnessing synergies: 2011. Mainstreaming climate change adaptation in disaster risk reduction programmes and policies.
15. January 2011. SCHEME FOR ASSISTANCE FOR EXPERIMENTAL AND INNOVATIVE COMPONENT OF SARVA SHIKSHA ABHIYAN / RTE AT THE ELEMENTARY LEVEL.
16. Louis Bockel. 2009. How to mainstream climate change adaptation and mitigation into agriculture policies.
17. Lebel, L., L. Li, C. Krittasudthacheewa, et al., 2012. Mainstreaming climate change adaptation into development planning. Bangkok: Adaptation Knowledge Platform and Stockholm Environment Institute.
18. UNDP-UNEP. 2011. Mainstreaming climate change adaptation into development planning: A guide for practitioners.
19. GoI. NATIONAL RURAL LIVELIHOODS MISSION: Mission Document.
20. Dr. Ritu Raj. Training Module for master trainers on school safety.
21. Lavell, A., M. Oppenheimer, C. Diop, J. Hess, R. Lempert, J. Li, R. Muir-Wood, and S. Myeong. 2012. Climate change: new dimensions in disaster risk, exposure, vulnerability, and resilience.
22. United Nations Children's Fund (UNICEF). November 2012. Climate change adaptation and disaster risk reduction in the education sector.
23. JLI FAD. Managing weather risk for agricultural development and disaster risk reduction.
24. GoI. June 2013. Indira awaas yojana.
25. GoI. February 2012. THE MAHATMA GANDHI NATIONAL RURAL EMPLOYMENT GUARANTEE ACT 2005.
26. GoI. National rural livelihoods mission.

27. Gol. Disaster management in India.
28. Gol. August 2004. Disaster Management in India.
29. Subrat Das. 2005. Public Policy towards Natural Disasters in India.
30. Himayatullah Khan, Laura Giurca, Asmatullah Khan. DISASTER MANAGEMENT CYCLE: THEORETICAL APPROACH.
31. Malcolm E. Baird. January 2010. The “Phases” of Emergency Management.
32. Paul Venton and Sarah La Trobe. July 2008. Linking climate change adaptation and disaster risk reduction.
33. ADPC. 2013. Integrating Disaster Risk Management into Climate Change Adaptation. Disaster Risk Management Practitioner’s Handbook Series.
34. Marilise Turnbull, Charlotte L. Sterrett, Amy Hilleboe. 2013. Toward Resilience: A Guide to Disaster Risk Reduction and Climate Change Adaptation.
35. Building Disaster Resilient Communities Good Practices and Lessons Learned, A Publication of the “Global Network of NGOs” for Disaster Risk Reduction, UNISDR, 2007
36. Building climate resilience at state level: Disaster risk management and rural livelihoods in Orissa Merylyn Hedger, Ashok Singha and Mohan Reddy, Strengthening Climate Resilience Discussion Paper 5
37. <http://www.c2es.org/docUploads/India%20National%20Action%20Plan%20on%20Climate%20Change-Summary.pdf>