Mainstreaming Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA) into City Development Plans (CDPs)

Part I of Deliverable 12

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

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Abbreviations and Acronyms

BPL : Below Poverty Line
CCA : Climate Change Adaptation
CDPs : City Development Plans
CSO : Central Statistical Organisation
CSP : City Sanitation Plan
DDMA : District Disaster Management Authority
DMCs : Disaster Management Centres
DRA : Disaster Risk Audit
DRM : Disaster Risk Mitigation
DRR : Disaster Risk Reduction
Eos : Enabling Objectives
GDP : Gross Domestic Product
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
ILCS : Integrated Low Cost Sanitation Scheme
IPCC : The Inter-governmental Panel on Climate Change
JNNURM: Jawaharlal Nehru National Urban Renewal Mission
KSA : Knowledge, Skills and Attitude
LRAP : Local Resilience Action Plan
LWE : Left Wing Extremism
MNREGA: Mahatma Gandhi National Rural Employment Guarantee Act
NCRMP: National Cyclone Risk Mitigation Project
NDMA : National Disaster Management Authority
NDMF : National Disaster Management Framework
NDRF : National Disaster Response Force
NGOs : Non-Governmental Organizations
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
POs : Performance Objectives
PRA : Participatory Rural Appraisal
PUA : Participatory Urban Appraisal
Q&A : Question and Answers
RAY : Rajiv Awas Yojana
SAT : Systematic Approach to Training
SDMA : State Disaster Management Authority
SFCP : Slum Free City Plan
SFIT : Strategic Framework for Implementation of Training
SHGs : Self Help Groups
SJSRY : Swarna Jayanti Sahari Rozgaar Yojana
SPDMI : Strategic Plan for Disaster Mitigation in Istanbul

SSA : Sarv Shikhsha Abhiyan
TOs : Training Objectives
TOT : Training Of Trainers
ULBs : Urban Local Bodies
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

Glossary

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.

Introduction

This training module is developed as a tool to train city managers and administrators [1]for mainstreaming disaster risk reduction (DRR) and climate change adaptation (CCA) into city development plans (CDPs) and their implementation strategies in India.

Increasing urban population in the country is putting an enormous amount of pressure on limited infrastructure and services. High density of population in cities accompanied with the ever increasing flux of migrant people in search of jobs and opportunities adds to the overall complexity of urban governance. A high percentage of urban migrants live in slums without basic services such as water, electricity, sanitation and health care. During the field study in Kolkata slums in January 2013, people said that 'their daily life in slums is a bigger disaster than any that could hit them in future'.

Administratively India is divided into 35 States and Union Territories, which comprise of 640 districts, 7935 towns including 4041 statutory towns and 3894 census towns (Census 2011). Out of 4041 statutory towns 468 are categorized as class I towns (towns with 100,000+ population) and 70 percent (265 million) of urban population is living in these towns. Out of the 468 class I towns 53 towns are million plus population towns and 45.5 percent (160.7 million) of total urban population are living in these towns (Census 2011). Among the million plus cities three are categorized as mega cities with population of 10 million plus. These are Greater Mumbai (18.4 million), Delhi (16.3 million) and Kolkata (14.1 million). The urban local bodies (ULBs) are categorized as Municipal Corporation, Municipal Councils and Nagar Panchayats on the basis of population of respective municipal areas.

74th constitutional amendment has provided constitutional recognition to the Urban Local Bodies and they are expected to be empowered as units of local self-governance or city Government. Government of India's flagship program Jawaharlal Nehru National Urban Renewal Mission (JNNURM) aims at strengthening of ULBs and development of urban infrastructure including water, sanitation, waste management, storm water drainage, roads, transportation etc. considering long term perspective plan of the city. Rajeev Awas Yojana (RAY) aims at making cities slum free through provision of in-situ development, provision of services, relocation and redevelopment considering whole city approach. Urban Local Bodies (ULBs) are responsible for preparation of City Development Plan under JNNURM and slum free city plan under RAY.

Generally disaster risk reduction (DRR) and climate change adaptation (CCA) are missing from the urban planning process: these include CDP (City Development Plan), CSP (City Sanitation Plan), SFCP (Slum Free City Plan) and ward plans, which offer a very good opportunity for the integration of DRR and CCA in the city planning processes.

Fast track urban reforms mainly focused on strengthening of the urban local bodies were started in 2005. Preparation of city development plan (CDP) is one of the most important tasks to be completed at the ULB level under this reform initiative. City Development Plans including CSP and SFCP are an opportunity for the integration of disaster risk and climate change resilience in urban planning and sectoral and sub-sectoral development programs. Development/service benchmarking has been initiated under the sector reform programs and inclusion of elements of DRR and CCA in city development plans could be included as capacity benchmarks.

[1] Different departmental managers working with the municipal administrative setup

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 hand-out.

This training module for city managers and municipal administrators is designed for a five-day workshop in which three days are devoted to the sub-module on urban development 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 Urban Development

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

Learning Unit 1: Urban Development, Disasters, and Climate Change: Critical Reflection

The objective of this learning unit is to enable the participants to examine the key issues and challenges of urban development in India in the context of increasing threat of disasters and impact of climate change. India is urbanising at a fast pace posing challenges both for urban

governance and development. However, these challenges are often not clearly mapped out to feed into the urban/city development plans and programmes being undertaken by different urban local bodies (ULBs)

A city development plan not based on an informed understanding of the existing disaster and climate related risks is likely to increase disaster risk for many vulnerable groups of residents inadvertently. This learning unit will seek to help participants examine issues that cut across urban development, disasters and climate change.

In order to help engage in analysis, this learning unit will approach the issue of disasters and climate related risks from the perspective of an opportunity for sustainable and resilient city development planning and administration. It is becoming increasingly clear in the light of emerging evidence that most of the disasters, including the so-called natural disasters, have human hand in its making. And therefore knowing the human dimension of disasters also offers potential ways to reduce or/and minimise the disaster risks and be prepared to respond to disasters in a manner that results in minimum possible damage and loss.

Learning Unit 2: Disaster Risk Assessment and Management: approaches and strategies

Having an informed understanding of the disaster risks and their appropriate management strategies is critical to effective disaster management at the city level. There are various ways to assess and manage disaster risks in urban areas. This learning unit will help the participants compare available approaches and strategies in terms of their relative advantages and disadvantages in different kinds of urban contexts: these could relate to the size and complexity of growth across mega cities, large cities medium and small towns.

It is envisaged that a comparative assessment of existing disaster risk assessment and management approach and strategies will help the participants arrive at their own ideas and insights for carrying out disaster risk assessment and management strategies in their respective local city contexts.

Learning Unit 3: Participatory planning for disaster risk and climate change resilient city development plans (CDPs)

An analysis of urban development issues and challenges and disaster risk assessment and management approaches and strategies in previous learning units will lead to this learning unit on participatory planning for disaster risk and climate change resilient city development plans (CDPs).

It is universally recognised now that participatory planning involving all the key stakeholders is the most reliable route to the ownership of the plan prepared. A plan owned by those who are likely to work on it is more likely to be put into implementation in the right earnest.

This learning unit will focus on participatory planning approaches and methodologies in general and their application in an urban context in particular.

Learning Unit 4: How to mainstream DRR/CCA into the preparation and implementation of city development plans (CDPs)

While the need for mainstreaming DRR/CCA into development plans in general and city development plans in particular is widely acknowledged by DRR and CCA professionals, it has yet to receive the required attention by municipal administrators and city managers engaged in preparation and implementation of city development plans.

This learning unit will involve a participatory exercise aimed at identifying different ways and means to ensure the mainstreaming of DRR/CCA into preparation and implementation

of city development plans (CDPs). These will include specific instruments and mechanisms to make it happen in real city development planning and its implementation on the ground.

TOT Module

Learning Unit 5: 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 6: 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: Urban Development, Disasters, and Climate Change: Critical Reflection** **Learning Unit 2: Disaster Risk Assessment and Management: approaches and strategies**	**Morning** Opening session (40 minutes) Session 1.1: Urban development in India: a critical reflection (70 minutes) Session 1.2: Growth of cities and disaster risks including development induced disaster vulnerabilities (70 minutes) **Afternoon** Session 1.3: Climate change: implications for urban development and safe cities (90 minutes) Session 2.1: Macro and micro disaster risk assessment: issues and implications (90 minutes) Participatory evaluation of learning from the day (10 minutes)
Day 2	**Learning Unit 2: Disaster Risk Assessment and Management: approaches and strategies** **Learning Unit 3: Participatory planning for disaster and climate resilient city development plans (CDPs)**	**Morning** Recap of the previous day (10 minutes) Session 2.2: Participatory risk assessment: hazard, risk, vulnerability, and capacity assessment (HRVCA) (90 minutes) Session 2.3: Risk to resilience: shift in urban development perspective and planning (90 minutes) **Afternoon** Session 3.1: Participatory planning: concept, methods and tools (90 minutes) Participatory evaluation of learning from the day (10 minutes)

Day 3	**Learning Unit 4: How to mainstream DRR and CCA into city development plans (CDPs)**	**Morning** Recap of the previous day (10 minutes) Session 3.2: Mainstreaming DRR and CCA concerns into CDPs (90 minutes) Session 4.1: Disaster risk reduction (DRR) and climate change adaptation (CCA) inclusive development: a conceptual overview(90 minutes) **Afternoon** Session 4.2: Building back better: concept and practice(90 minutes) Session 4.3: Preparing strategic action plan outline for mainstreaming DRR and CCA into CDPs(90 minutes) Participatory evaluation of learning from the day (10 minutes)
Day 4	**Learning Unit 5: Systematic Approach to Training (SAT)**	**Morning** Recap of the previous day (10 minutes) Session 5.1: Assessing training needs (90 minutes) Session 5.2: Defining training aim and objectives (90 minutes) **Afternoon** Session 5.3: Deciding the content, methodology, and resource persons (90 minutes) Session 5.4: Deciding the monitoring and evaluation indicators and processes (90 minutes) Participatory evaluation of learning from the day (10 minutes)
Day 5	**Learning Unit 6: Learning and Facilitation Skills** **Monitoring and evaluation** **Wrap-up session**	**Morning** Recap of the previous day (10 minutes) Session 6.1: Art of facilitation 1(90 minutes) Session 6.2: Art of facilitation 2 (90 minutes) **Afternoon** Session 6.3: Sharing, Listening and Learning (60 minutes) Session 6.4: 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.

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 ULB 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 TOT 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.

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 TOT 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 TOT

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 TOT. 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 'Let us share'. 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 'Let us share' space 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: Urban Development, Disasters, and Climate Change: Critical Reflection

Objective

- Examine the linkages between urban development, disasters, and climate change in the context of India with a global perspective
- Articulate the implications of rapid urbanisation on disaster and climate change related risks in India

Sessions

- Urban development in India: a critical reflection (70 minutes)
- Growth of cities and disaster risks including development induced disaster vulnerabilities (70 minutes)
- Climate change: implications for urban development and safe cities (90 minutes)

Estimated time: 230 minutes (3 hours 50 minutes)

Expected Outcome

Participants would have acquired an informed understanding of the inter-linkages across urban development, disaster risks and climate change.

Session 1.1: Urban development in India: a critical reflection

Duration: 70 minutes

Objectives: To help the participants reflect critically on the urban development context in India with specific reference to increasing disaster and climate related risks in cities in the country.

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: Urban Myths and Misconceptions

Session Plan with Facilitator Notes

The facilitator should start the session with an informal interaction with the participants on their views on urban development, disaster risks 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 10 minutes highlighting the critical linkages across urban development, disasters and climate change particularly in view of the increasing disaster and climate related risks in Indian cities. Share the relevant data on damage and loss due to disasters and the impact of climate change both in the global and Indian context as a part of this presentation. This presentation should also cover the evolution of the discourse and action on all the three inter-related domains of urban development, disasters and climate change globally over the years, before zeroing in on the Indian cities.

Focus should be on mapping out the conceptual field and outlining various policy approaches, particularly with reference to addressing the urban disaster risks in view of the inter-connections across development, disasters and climate change in the urban context in India. (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. (5 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 municipal administrators and city 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)

Close the session with a presentation summing up the key learning from the session and highlighting the role of DRR/CCA in sustainable urban development. (5 minutes)

Technical Notes

Rapid pace of urbanisation in India has put massive pressure on existing infrastructure and services across most of the cities. Increasing influx of migrant population to urban centres in search of job opportunities often results in a large number of people living in slums without basic facilities and services such as housing, electricity, water, sanitation, education and health.

According to Census 2011, about 377 million Indians comprising of about 31 percent of the country's population, live in urban areas. This is a smaller proportion compared to other large developing countries, for example, 45 percent in China, 54 percent in Indonesia, 78 percent in Mexico and 87 percent in Brazil. With the more rapid growth of the Indian economy in recent years, which is expected to continue, the rate of urbanisation will increase. Projections are that by 2031, about 600 million Indians will reside in urban areas, an increase of over 200 million in just 20 years.

Presently the highest rates of economic growth are being witnessed in Asia, especially in China and India, which today also have the largest rural populations, but are urbanizing at a fast pace. Even in other Asian countries a large number of cities are witnessing high rates of economic growth and the growth in their urban population is also going to be higher.

Urban areas are engines of economic growth. Data on the urban share of the gross domestic product (GDP) for the Indian economy is not available on a regular and consistent basis but estimates by the Central Statistical Organisation (CSO), available for a few years, indicate that this share increased from 37.7 percent in 1970–71 to 52 percent in 2004–05. The midterm appraisal of the Eleventh Plan projected the urban share of GDP at 62–63 percent in 2009–10.

Urbanization in India has been slow but steady. India has had a relatively slow but stable rate of growth in its urban population since 1921, during which the level of urbanization has increased slowly from 11.2 percent to about 27.8 percent in 2001. Although the total urban population increased more than 11 fold between 1901 and 2001, from about 26 million to 285 million, the number of settlements increased by just 140 percent to 4378 from 1830 during this period. The increase in the number of towns has also been steady across the decades. Thus most of the growth has been due to the enlargement of existing towns at every level and not significantly due to the addition of new towns. The majority of settlements now classified as towns have exhibited urban characteristics for a long time.

Urbanisation in India is invariably accompanied by growth of slum population. As slums are often located in vulnerable locations like railway tracks, drainage lines, river beds, they are prone to a range of disaster risks including those related to the impact of climate change. Unprecedented and heavy precipitation causing floods such as Mumbai floods of 2005 not only disrupt the lives of slum dwellers, but also the entire city life including businesses. Damage and loss due to these disaster events run into millions of dollars.

Massive urban growth has led to complex problems of inadequacy of basic urban services. About 21% of urban population is living in squatter settlements where access to the basic services is very poor or very substandard. About 80% of population living in urban areas have access to drinking water but there are severe deficiencies in terms of safe and equitable distribution of water. As per estimates about 46% of households have water borne toilets while only 36% are connected with public sewerage system. Almost half of the solid waste generated in towns and cities remains uncollected. The town roads are inadequate to meet the growing traffic demand which in turn leads to traffic congestion.

Inadequacy of minimum basic services in urban areas has resulted in deterioration of quality of life. The infrastructure development could not keep pace with rate of urbanization. The Urban Local Bodies (ULB) and Municipal Corporation are primarily responsible for providing minimum basic services to the inhabitants.

The ULBs/Municipal Corporations are unable to cope up with the increasing demand of providing quality urban services in towns and cities due to lack of resources. Over the years Government of India has provided central assistance through a number of centrally sponsored schemes like Accelerated Urban Water Supply Programme, Low Cost Sanitation Programme, Mega City Scheme, National Slum Development Prorgramme, Swarna Jayanthi Shahari Rozgar Yojana, Valmiki Ambedkar Awas Yojna and Scheme for Integrated Development of Small and Medium Towns.

In order to bridge the resource gap that cities and towns are facing today, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was launched. JNNURM is a programme in a mission mode approach that integrates the two pressing needs- massive investments/resource required for infrastructure development and at the same time urban reforms that are required to sustain big investments.

Some of the major initiatives taken under the Eleventh Plan

1. JNNURM: The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was launched in December 2005 for a period of seven years with an outlay of 66,085 crore. The objectives of the scheme included empowerment of Urban Local Bodies (ULBs), planned and holistic development of cities and the task of making the process inclusive. The scheme mandated preparation of City Development Plans (CDP) and a set of urban reforms at State and Municipal levels.

2. Swarna Jayanti Sahari Rozgaar Yojana (SJSRY) is designed to enable urban poor to get gainful employment. The scheme has a progressive architecture which includes in-situ rehabilitation of slums and legislation to provide property rights to slum dwellers. Another thrust has been implementation of the Employment of Manual Scavengers and Construction of Dry Latrines (prohibition) Act 1993. Under the Integrated Low Cost Sanitation Scheme (ILCS) 2.5 lakh dry latrines have been converted into sanitary ones and about 1.55 lakh new toilets have been sanctioned.

3. Urban Transport: A major achievement leading to transformational change in public transport has been a significant extension of Metro rail network in large cities.

These programmes offer an opportunity to contribute to safe and sustainable urban development in Indian cities. Real challenges of urban development in India include developing strategies that can effectively reduce the incidence of poverty and the vulnerability of the poor by facilitating their access to city infrastructure and basic services like clean water, electricity, basic hygiene and sanitation etc. This calls for an inclusive urban development which takes care of the needs of the most disadvantaged while reducing their vulnerability to disaster and climate related risks and enhancing their coping capacity.

It must be underlined here that in the wake of a newly elected government at the national level in India in May 2014, a number of policy and programmatic changes are expected to take place in the urban development sector as well. Narendra Modi, the new Prime Minister of India has included the development of 100 new cities as a part of his overall development agenda for the country. This underscores the renewed policy emphasis on urban development at the centre in India.

Policy and programme changes need to be closely observed and tracked over next 4-5 years in order to identify appropriate entry points and develop effective strategies for mainstreaming DRR/CCA concerns into urban development in India.

Key Learning Points

- Rapid pace of urbanisation in India has put massive pressure on existing infrastructure and services across most of the cities.
- Urbanisation in India is invariably accompanied by growth of slum population.
- Massive urban growth has led to complex problems of inadequacy of basic urban services.
- The ULBs/Municipal Corporations are unable to cope up with the increasing demand of providing quality urban services in towns and cities due to lack of resources.

Session 1.2: Growth of cities and disaster risks including development induced disaster vulnerabilities

Duration: 70 minutes

Objective: At the end of this session, the participants will be able to identify and examine different kinds of urban disaster risks including development induced disaster and climate related vulnerabilities that go with the growth of cities.

Methods:

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

Materials Needed:
Hand outs, flipcharts, markers

Handouts:
Handout 2: Possible Impacts of Climate Change on Cities

Session Plan with Facilitator Notes

Starting the Session (5 minutes)

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

Interactive Lecture Presentation and Discussion: (30 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.

Introduce the concept of safe and sustainable urban development and their underlying concerns and challenges. Engage the participants in a discussion on the different key elements that interact with each other to result in sustainable development in an urban setting.

Discuss development induced hazard and vulnerability and how unsustainable development can lead to increased vulnerability, mainly for the poor and the disadvantaged 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

Group Work 1 and Presentation: 30 min

Divide the participants into four or five working 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: resettlement of slums	Loss of livelihoods and social networks that support it

Distribute the hand out 2 related to possible impacts of climate change on cities to the participants to read and reflect for five minutes.

Invite participants to share their reflections on this in view of their own experience of the cities that they come from and also to present the matrix. (10 minutes)

Follow it up by engaging the participants in a discussion on how disasters can provide windows of opportunity for DRR and CCA sensitive development in social, economic and environmental spheres. Discuss this theme with the help of real life examples. (5 minutes)

Summarise the key learning points of the session (5 minutes)

Technical Notes

Introduction

More than half of the world's population and the majority of its capital assets are found in urban settlements. Maintaining these centres relies upon chains of consumption that pull in water, food and energy, and export waste. Urban influence is felt far beyond administrative boundaries through migration and the impact of urban demands on rural markets and livelihoods – opening opportunities but also challenging established cultures and values including those that shape people's relationships with nature and the environment.

Urban transition from security to risk

In 1981, Amartya Sen described cities as places of refuge from famine where food stores, economic opportunity and political accountability provided a buffer from environmental change. Even today this is the dominant perception of cities reflected in a lack of research and funding for urban resilience (Vale and Campanella, 2005).

Cities are now being increasingly seen as hotspots of disaster risk. Given the multiple sources of disaster risk, increasing poverty and inequality and failures in governance emerge as some of the most crucial ones: high population density, crowded living conditions and location of residential areas close to hazardous location or industry further exacerbate the risk. Coastal cities are exposed to natural hazard including the modification of environments which generates new hazard, e.g. through the loss of protective mangroves to urban development, or subsidence following ground water extraction.

Dominant solutions such as regularised urban planning and grand engineering projects provide security for some but exclude many more. This need not be the case. Cities continue to be able to draw on the human, intellectual, financial and material resources that can bring security. But the priorities that shape urban decision-making and governance have yet to deliver equitable and sustainable risk reduction either as part of development or in response and reconstruction from disaster events.

Rapid population growth in cities has exacerbated this trend and increased the stakes, as many more people now have their lives and livelihoods threatened. However, population growth is not the principal underlying causal factor. Increasing pace of urbanisation has also shown that established practices and dominant values for planning and development in cities have led to an accumulation of inequality, marginalisation and disaster risk over time.

Not only is perceived risk an underestimate, but the factors leading to risk and resilience within urbanisation processes are misrepresented. This bias has arisen from two shortfalls in the academic and critical policy literatures. First, research has prioritised megacities. Little comprehensive work has been undertaken in cities of less than 5 million people. Megacities are important, containing around 14% of urban population, but 22% live in cities of between 1 and 5 million and 64% in settlements of less than 1 million (UNHABITAT, 2007). The result is an understanding of risk and resilience based on the political, social, economic and environmental processes found in megacities, which is taken to be representative of all urban settlements.

Second, and perhaps reflecting a desire to communicate with urban planning professionals, the majority of work on urban disaster risk is organised by an analysis of phenomena tied to particular places. We have a good understanding of how local social and economic factors shape disaster risk and resilience in a small number of places. We know much less about how urban systems respond to and shape disaster risk, and indeed the vulnerability of the

systems themselves. There is a technical literature on critical infrastructure, particularly urban water, but this continues to remain outside the lens of most social science research. A political ecology of urban resource flow and how this may be re-shaped by demographic change and rapid population growth in the context of climate change is a priority.

The dynamic nature of urbanisation under demographic variability and climate change means that we can no longer rely solely on past events and trends to prepare for the future. The need to plan for the unexpected and for sensitive early warning systems that can pick up emerging crises was well demonstrated in the European heat wave of 2003 where 35,000 to 50,000 mainly elderly urban residents lost their lives. This was unprecedented, but not unpredictable had lessons been learnt from earlier events in US cities. Reducing risk has required interdisciplinary work that brings together demography, epidemiology, climatology and social policy with pathways for risk being varied and shaped by individual health status and social context (McGregor et al 2007).

India's vulnerability to hazards and disasters is much more varied and complex and can throw up many more unprecedented challenges.

Vulnerability in Informal Settlements[2]

Within the last decades, population shift from impoverished rural economies, pressures of globalization and industrial relocation have contributed to one of the biggest challenges in the large cities of developing countries: expansion of urban areas and creation of unplanned informal settlements as the sole option for newcomers. Even though informal settlements[3], squatters, and slums have been an observed condition of the urban past, these settlements have grown in numbers and in spatial forms with the increase of the urban poor and their exclusion from formal housing sectors.

First, most informal settlements carry physical vulnerabilities due to their location or construction practices. These settlements are often "located on land not deemed appropriate for habitation because of its steep terrain or geological characteristics that make it prone to subsidence, landslides, or mudslides" (UN-Habitat 2003, 69). Slum dwellers and squatters often settle in these dangerous locations as the only option for their livelihoods and survival. An example is the large squatter settlement in the megacity of Delhi. According to David Sanderson (2000, 98), the settlement has "existed within the designated flood plain of the Yamuna River for more than 25 years," and it is "forced to evacuate at least once a year to the busy roadside whilst their shelters are flooded for upwards of one month. . . . The regular flooding is seen as the price to pay for living in the centre of the city at low cost."

In the megacity of Calcutta, 66 percent of the population is reported to live in squatter settlements at risk from flooding and cyclones (Pelling 2003, 28). Many times, inadequate building materials accompany risk by physical exposure in squatter settlements, as structures are often built with non-permanent materials, such as "earthen floors, mud-and-wattle walls or straw roofs" (UN-Habitat 2003, 11). Quick makeshift structures are observed in impromptu urbanizations and sprawls of many low-income countries.

[2] VULNERABILITY in HAZARD-PRONE MEGACITIES: An Overview of Global Trends and the Case of the Istanbul Metropolitan Area, Ebru A. Gencer ,Summer Academy for Social Vulnerability

[3] Informal settlements have recently been defined and used under the large umbrella of the term slum. In this paper, the term slum is used to express both deteriorated inner city and peripheral settlements; while informal settlements mostly detonate illegal and squatter settlements in mostly peri-urban areas.

For instance, the sprawl of the megacity of Mumbai (Bombay) is attributed to the city's shift of its industrial base from import substituting to export orientation, and relocation of industry from central city to highways extending to periphery (Pelling 2003, 29). In his exploration of postmodern Bombay, Jim Masselos (1995, 212) wrote: "A global city like Bombay is in fact predominantly a village, a series of villages represented in the shanty structures that permeate the city. . . . Shanty structures derive from village prototypes in rural India but are modified by the requirements of space and the availability of materials – plastic, tin, bits of cloth, wood and bricks, which draw on past and present materials."

Key Learning Points

- The dynamic nature of urbanisation under demographic variability and climate change means that we can no longer rely solely on past events and trends to prepare for the future.
- Dominant solutions such as regularised urban planning and grand engineering projects provide security for some but exclude many more.
- Coastal cities are exposed to natural hazard including the modification of environments which generates new hazard, e.g. through the loss of protective mangroves to urban development, or subsidence following ground water extraction.

Session 1.3: Climate change: implications for urban development and safe cities

Duration: 90 minutes

Objective: At the end of this session, the participants will be able to identify the implications of climate change on urban development in general and safe cities in particular with specific reference to Indian cities.

Methods:

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

Materials Needed:
Handouts, flipcharts, markers

Hand outs:
Handout 3: Potential Impacts of Climate Change on Urban Development & Impacts on Urban Planning

Session Plan with Facilitator Notes

Starting the Session (5 minutes)

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

Interactive Lecture Presentation and Discussion: (30 minutes)

Ask the participants to share their views on climate change and any questions that they might have on the issue on the basis of their existing understanding and experience. List out all the responses from them on a flip chart or white board (10 minutes)

Make a brief presentation on linkages between urbanisation and climate change and also how urban centres are the major contributors to the greenhouse gases. Touch upon the likely challenges of climate change in the specific context of urban governance and development (10 minutes)

In the second half of the interactive lecture presentation distribute Hand-out 3 and discuss the potential impacts of climate change on urban development and impacts on urban planning. (10 minutes)

Group Work and Group Presentations (50 minutes)

Form 4-5 groups of participants on the basis of the size, demography and topography of the cities that they come from. There could be groups on the basis of mega cities, large cities, medium size cities and small towns and municipalities. Another set of criteria for formation of groups should include: location such as cities on coast, in deserts, in the mountains or near rivers. Ask the working groups to work on the potential impact of climate change on urban development in general and city planning in particular in the specific context of the types of cities that their group represents. (25 minutes)

Ask the groups to make their presentations in the plenary and follow it up by an open house discussion (25 minutes)

Summarise the key learning points of the session (5 minutes)

Technical Notes

Climate change has become one of the most challenging global environmental issues facing humanity. Global warming is created by such societal activities as the combustion of fossil fuels and land use changes, but with wide ranging consequences to our natural world and to human settlements all around the world. While it is a profound global issue, in all of its manifestations and components, global warming is a deeply local issue as well. It is in this context, that urban centres of different sizes – especially cities – play a crucial role in the climate change arena.

Urban households, industries and infrastructures are key sources of greenhouse gases. Urban areas concentrate populations, economic activities and built environments, thus increasing their risk from floods, heat waves, and other climate and weather hazards that climate change is expected to aggravate. Many of our urban centres are in the very areas (e.g. coasts) that will make them more vulnerable to adverse climate change events.

But beyond the obvious risks and vulnerabilities that climate change will bring to our urban areas, these same urban centres will, by necessity, play a pivotal role in our mitigation and adaptation efforts as well. Urban centres are hubs of development, sources of innovations and policy responses to reduce the emissions of heat trapping gases and adapt to the impacts of climate change. It is this combination, within urban areas, of increased vulnerabilities along with increased opportunities that can incubate important synergies and resources for creating innovative adaptation and mitigation strategies.

Urban areas have many linkages with climate change. Urban centres are drivers of global warming because they concentrate industries, transportation, households and many of the emitters of greenhouse gases (GHG); they are affected by climate change; and they are sources of responses i.e., of initiatives, policies and actions aimed at reducing emissions and adapting to climate change.

Climate impacts are not only related to *exposure,* but also to *adaptive capacity*. Urban settlements with a long history of investment in housing, urban infrastructure and services (such as in many high-income countries), and public emergency response (such as in Cuba), as well as those with economic/financial losses much reduced by insurance, will be relatively more resilient to cope with the impacts of climate change. Yet, these urban areas can still be overwhelmed by the increased intensity of storms and by a disparity of vulnerability based largely on access to insurance and income level as seen in the US Katrina experience. These dangers are compounded for urban centres facing *adaptation deficits*.

The main problem for these cities is the lack of provision for adequate roads, piped water supplies and other infrastructures and services that can be depended on in the event of severe weather. Without considering any of the future impacts of global warming, the populations and infrastructures of those urban settlements already show adaptive deficits within the current range of climate variability.

While urban areas are hotspots for climate risks, they are also the *sources of options* to increase our capacity to cope with climate hazards. There is no doubt that urban areas can be dangerous places to live and work; their populations can be very vulnerable to extreme weather events or other hazards with the potential to become disasters. However, the same concentration of people, infrastructures and economic activities in urban centres that may create weaknesses in the face of climate change hazards gives them strengths by making it possible for them to create economies of scale or proximity or for the creation of many of

the measures that may reduce risks from extreme weather events. Furthermore, when provided with policies focused on enhancing sustainability and moving from disaster response to disaster preparedness, urban settlements can increase their effectiveness at coping with climate hazards.

Key Learning Points

- Global warming is a deeply local issue.
- Urban households, industries and infrastructures are key sources of greenhouse gases.
- Many of the urban centres are in the very areas (e.g. coasts) that will make them more vulnerable to adverse climate change events.
- Climate impacts are not only related to *exposure,* but also to *adaptive capacity*.
- While urban areas are hotspots for climate risks, they are also the *sources of options* to increase our capacity to cope with climate hazards.

Learning Unit 2: Disaster Risk Assessment and Management: approaches and strategies

Objective(s): are to help the participants

- Assess hazard, risk and vulnerability using participatory tools and methods.
- Recognize the need for a risk aware approach to city development planning.
- Examine available approaches and strategies for making a shift from risk to resilience in urban development perspective and planning.

Sessions

- Macro and micro disaster risk assessment: issues and implications (90 minutes)
- Participatory risk assessment: hazard risk, vulnerability, and capacity assessment (HRVCA) (90 minutes)
- Risk to resilience: shift in urban development perspective and planning (90 minutes)

Estimated time: 270 minutes (4.5 hours)

Expected Outcome

Participants would have acquired an informed understanding of the various available approaches and strategies for disaster risk assessment and management

Session 2.1: Macro and micro disaster risk assessment: issues and implications

Duration: 90 minutes (1.5 hours)

Objective(s): At the end of the session, the participants will be able to identify the key issues in macro and micro disaster risk assessment and articulate their implications for managing disaster risks in cities.

Methods:

- Interactive lecture presentation
- Group work on case study
- Presentation and discussion

Materials needed:
Flip charts, markers, hand outs

Handouts:
Handout 4: An operational framework for managing climate and disaster risk
Handout 5: Major considerations for managing risks to development
Handout 6: Case Study: Cyclone AILA hits Sundarbans

Session Plan with Facilitator Notes

Starting the Session: (30 minutes)

Begin by asking the participants what they understand by risk in general and disaster risk in particular. Ask them to brainstorm on the sources of risk. Make a free list of points made by the participants. After all the responses from the participants are written out on the white board or a flip chart, group them into two broad categories of macro and micro risks through a consultative process. Location of a city in a highly seismic zone or close to coast exposed to cyclones and storms are sources of macro risk. But poverty and lack of access to basic services of the people living in slums would be of the nature of micro risks.

Draw the attention of the participants to the importance of assessment of both macro and micro risks as a primary precondition for effective disaster management planning at the city level.

This presentation could be made using the power point or flip charts as decided by the facilitator and must highlight the need for different approaches and strategies to deal with macro and micro disaster risks at the city level. This will set the tone for examining the implications of the existing policy regime on disaster management for integrating it into urban development policies, plans and programmes.

Group work on case study (30 minutes)

Use a case study (the attached case study on Sundarbans may be used), preferably from within India or Asia that presents an example of both macro and micro disaster risks in a city context. Ask the participants to examine the issues related to macro and micro disaster risks and their implications for city development planning.

Note: In case the facilitator chooses to use the attached case study on the Sundarbans, the key learnings from the case study are given in the technical notes for his/her reference.

Ask the participants to discuss the case study in their groups and come up with the group's analysis of the key learning from the case study, particularly from a city planning perspective. It is good to select a case study that highlights the efficacy of participatory approaches in developing disaster resilient development plans and processes.

Presentation and discussion (30 minutes)

Ask the working groups to make their group presentations. Wrap up the session with a closing discussion summarising the key learning from the session.

Technical Notes

Introduction

The rapid and often unplanned expansion of cities is exposing more people and economic assets to the risk of disasters and the effects of climate change. For city governments, increased climate variability imposes additional challenges to effective urban management and the delivery of key services, while for residents it increasingly affects their lives and livelihoods due to more frequent floods, landslides, heat waves, droughts, and fires. There is an urgent need for cities to consider disaster and climate change by streamlining assessments of related risks in their planning and management as well as delivery of services.

Challenges of Managing Disaster and Climate Risk in Urban Areas

City management is often reactive to disasters, with little consideration given to reducing or managing risk in a comprehensive, preventive manner. In spite of the potential impacts that disasters have on the financial resources of city governments and the functionality of the city, the management of disaster risk remains ex-post, with little attention to preventing or mitigating measures. Although some emergency and disaster response capability may exist, few cities in the developing world are truly prepared to manage disasters, in part due to the day to day challenges that most city governments face.

In addition, city governments are often constrained by a lack of up-to-date, comprehensive, and sufficiently detailed information about hazard and exposure in urban areas, particularly low-income settlements.

While there is a growing consensus that more investment is needed in upstream risk reduction, prevention, and climate adaptation, cities in developing countries rarely have the technical, institutional, and financial capacity to implement related programs. Those cities in developing countries that have created local units to manage disasters generally have little budget allocation or implementation power. This, coupled with centralized administration (in some urban areas), does not usually provide enough independence for the local bodies to amend laws or provide sufficient budgets for innovations in disaster risk management.

Cities can plan and respond better if the location and nature of risk is known, and also if risk assessment and management is mainstreamed in urban development and management programs. However, as previously mentioned, cities in lower and middle income countries rarely consider disaster vulnerability, and only a handful have initiated strategies and related programs to increase climate change resilience. Even if strategies exist, city management faces challenges in developing, implementing, and maintaining risk management as a result of (World Bank 2010):

- **Limited understanding of climate risks**: Many city governments lack an understanding of existing sources of risk and potential impact of climate change. The lack of standardized methodology for conducting risk assessments exacerbates this shortcoming and can contribute to haphazard development. Particular attention is also required to assess risk in areas of urban growth and informal settlements.
- **Limited institutional capacity and financial resources:** City governments have few resources to address urban growth. As such, disaster and climate change risk does not always emerge as a priority for city administration. Cities require technical and financial assistance in enhancing institutional capacities to assess and respond to disasters more effectively.

- **Absence of standard protocols for managing disaster risk and adapting to climate change**: Currently there are limited examples of cities that have standard procedures for incorporating disaster risk management and climate change adaptation in city planning.
- **Monitoring city's performance**: City managers are keen to learn best practices from other cities and want to know what will work in their own city. Currently there are limited systematic exchanges of information, best practices, and benchmarking of a city's performance for urban risk reduction.

When evaluating urban risk, it is important for city authorities to account for the dynamic character of cities. This supports the notion that risk assessments be undertaken at regular intervals so that the city governments can evaluate progress toward reducing risk and vulnerability. In countries with high population growth or high migration from rural to urban areas, planning the risk for cities involves a good understanding of the population dynamics of the country as a whole and of possible future growth. The role of adaptation to both rapid-onset hazards and those more gradual threats associated with climate change is therefore an integral part of proactive risk reduction planning for cities.

Key Learnings from the case study

1. No training had been imparted to community how to respond in such situations: apparently no mock drill had been conducted earlier.
2. Adequate user-friendly warning had not been given resulting in people being caught unawares.
3. District administration was not ready to meet such emergencies; the fact that relief materials could reach the community after 3 to 7 days speaks for itself.
4. The Cyclone Shelter was not properly maintained with inadequate toilet facilities. It may be better to have small multi-purpose shelters which can be maintained and are in close proximity of people.
5. People died after cyclone due to unhygienic conditions mainly due to open defecation, which resulted in cholera and diarrhoea. Apparently, even after disaster, adequate medical assistance was not provided to ensure that diseases are contained and hygiene is maintained.
6. A well-established institutional structure at state level (Directorate of Disaster Management) and time tested Codes (Relief Code, 1943) would not help unless preventive measures have been taken by way of awareness and training.
7. Hygiene, water and sanitation should be taken as an integral part of DRR Strategy. Otherwise, as experienced during AILA, the number of people who died in the aftermath of cyclone was much more than the number of people who died during the cyclone.

Key Learning Points

- City management is often reactive to disasters, with little consideration given to reducing or managing risk in a comprehensive, preventive manner.
- Cities can plan and respond better if the location and nature of risk is known, and also if risk assessment and management is mainstreamed in urban development and management programs.
- When evaluating urban risk, it is important for city authorities to account for the dynamic character of cities.

Session 2.2: Participatory risk assessment: hazard, risk, vulnerability, and capacity assessment (HRVCA)

Duration: 90 minutes (1.5 hours)

Objectives:
At the end of the session, the participants will be able to describe the process of participatory HRVCA assessment.

Methods:

- Group work
- Group presentation and discussion
- Summing up

Materials needed:
Flip charts, markers

Handouts:
Handout 7: What different aspects of urban poverty imply for everyday and disaster risk

Session Plan with Facilitator Notes

Starting the Session (5 minutes)

Explain the purpose and process of the session and its intended learning outcome/s.

Group work (40 minutes)

Form four working groups to work respectively on hazard, risk, vulnerability and capacity assessment. Ask each working group to carry out their respective assessments in the contexts of the cities that they come from.

The task will be to share individual experiences of carrying out hazard, risk, vulnerability and capacity assessments. 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 assessments related to hazard, risk, vulnerability and capacity.

Group presentation and discussion (40 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

Unidentified and unaddressed vulnerabilities are known to increase the impact of a hazardous event by enhancing the severity and scale of disasters. Vulnerabilities are complex, dynamic and multi-dimensional: they could be physical, locational, social, and economic and others. Poor, particularly women and children in poor communities, carry multiple vulnerabilities and are impacted most by disasters due to their low coping capacities. These vulnerabilities pose a veritable disaster threat. Identification of the real nature of threat is envisaged to help address them more effectively.

In order to identify threats, vulnerabilities have to be assessed and their impact on public, corporate and community assets and infrastructure have to be evaluated. This also entails the exercise of taking into account the probability of conversion of threat into a real emergency situation. In view of this, threat risk assessment will form an integral part of overall risk assessment that will be undertaken.

Disasters damage and destroy infrastructure, assets, services and cause massive loss of lives and livelihoods. In cities, the scale of disasters is often bigger due to high concentration of people and poverty with increasing pressure on public facilities including infrastructure and services. The impact of disasters is much more on socially and economically vulnerable segments of population including poor, elderly, children, expectant and nursing women and persons with special medical needs. Therefore, the success of any disaster risk reduction (DRR) and disaster management plan would depend on how well it has identified and addressed the needs of vulnerable groups of population.

Vulnerability assessments serve as the basis for developing strategies for reducing the risks of disasters. The assessment will facilitate:

- Estimating the number of people at risk, including people with special needs.
- Identifying the number and location of buildings at risk, including critical facilities such as hospitals, schools, public infrastructure and other lifeline buildings including key government establishment which needs to be fully operational following disaster related emergencies.
- Examining the communication links and networks that are vulnerable to disruption during and after a disaster, including informal networks of communications.
- In the HRVCA assessment process the key tasks involved are listed below:
  - ✓ Mapping of all possible hazards, related disaster threats, and the likely scale and impact of disasters in different scenarios.
  - ✓ Mapping all major sources and sites of vulnerabilities, mainly of people within communities at risk: focus of mapping will be on poor, particularly women and children and the disadvantaged, due to their multiple vulnerabilities (physical, social and economic and others). Vulnerabilities related to infrastructure and other facilities will also be assessed.
  - ✓ Mapping of existing capacities and resources to deal with climate related disaster risks and the possible ways of their development and deployment in times of need.

Process for Vulnerability Assessment

The detailed steps of the process are listed below:

- Identify communities at risk for undertaking community consultations and carrying out participatory hazard, risk, vulnerability and capacity (HRVCA) assessment: focus will be on the most vulnerable segments of population in various wards of the city;

identification will be done in consultation with city level officials in the municipal corporation as well as other stakeholders including different government departments, industries, and civil society groups and NGOs. In-depth interviews will be carried out with a select group of stakeholders. In addition, census data and other secondary datasets will be studied to identify the social and economic vulnerabilities of the communities at risk before interacting with them.

- Identify and rate hazards and rank them on the basis of their frequency and severity: a detailed list of disasters that have affected the city over past 100 years, or are likely to impact the city including cyclones, earthquakes, floods, fire incidents, industrial accidents, water and power supply facilities etc., be it natural, inadvertent or man-made, will be prepared. In order to get an exhaustive list of likely hazards and their impact, district and city level officials from municipal corporation/municipality and other line department will be interviewed as well as archival information accessed and analysed.
- Identify and map locations in the wards that are at a relatively greater disaster risk due to their vulnerable location along with other vulnerabilities. This exercise will aim at producing maps that show the locations of vulnerable areas and population that may likely be affected by such threatening disaster situations or disasters. This will help in demarcating areas of the city that are often cut off from the rest of the community during a disaster; for example by flooded roads. This exercise will be undertaken based on both primary and secondary data as also on the basis of interaction with the concerned officers of Government, Industry and Port Trust, besides participatory HRVCA with groups of vulnerable communities.
- Map social vulnerability: by cataloguing and mapping the specific social vulnerabilities that form part of the lives of some segments of society due to caste, class, gender and age; women, children, old and physically and mentally challenged, particularly from socially disadvantaged will be the focus of social vulnerability.
- Map environmental threat to critical services and facilities that may in turn pose a threat to the health and safety of the community, particularly if the facilities are located in hazard-prone areas. Such facilities could include hazardous industrial establishments related to chemical and other hazardous or toxic materials or others with threat of fire as recently in HPCL refinery in the city. Different industrial establishments will be assessed and ranked on the nature and degree of threat that they pose to the health of people in the city or their likely role in degradation of environment. While ranking these facilities the following aspects will be considered:
    - Nature of the chemical(s) located at the facility.
    - Quantity of chemicals at the facility.
    - Proximity to population centres or critical infrastructure which might be affected in case of an industrial disaster.
    - Capacity to contain, handle, and clean-up whatever hazardous materials are spilled or released.
    - Whether on-site and off-site plans are in place; if they are regularly updated; mock drills are conducted and necessary preventive measures undertaken including community awareness and training.

Exposure database at City level

Developing exposure database at the city level involves analyzing both the built environment (including land use patterns and infrastructure) and the multiple jurisdictions that govern outcomes. This involves drawing on multiple data sources related to planning

and governance; as well as image processing work generating data inputs for the modelling work.

In recent years it has become possible to model climate change risk for urban areas. However, at present these models suffer from two inter-linked limitations. First, lack of availability of reliable and real time data on many counts and second the time horizons at which risk scenarios can be developed for climate change with reasonable accuracy.

In view of the above, it involves two steps: first, integrate risk modelling from different causations into a single visualization tool (this also means working with multiple time horizons); and second, develop a framework that can add on new data sources over time.

Data cleaning and refinement and presentation of accuracy analysis

Many a time available data sets have obvious errors and internal inconsistencies. It must be recognized that available datasets for urban contexts in India are incomplete, fragmented and designed to involve expensive technologies and expert engagement. Often these databases do not have sufficient historical depth. Under the circumstances, it is very important to design databases and models for easy updation and self-correction through an iterative process as longitudinal data accumulates over the years.

Basic Civic Services provided by the Municipal Corporation and possible mismatch

Most of the municipal authorities function as an autonomous authority. It has certain functions to be discharged as obligatory functions as also other functions to be discharged as discretionary functions. The obligatory functions include water supply, street cleaning, drainage improvements, lighting, reclamation of unhealthy localities, prevention of infectious diseases etc. The discretionary functions include child welfare, urban forestry, library, education, housing for the poor, etc. The functional domain was expanded in 1994 as per the 12th Schedule of the 74th Constitution Amendment Act. The comprehensive functions entrusted to the Corporation include:

- Urban Planning including Town Planning
- Regulation of land use and construction of buildings
- Roads and bridges
- Water supply for domestic, industrial and commercial purposes
- Public health, sanitation, conservancy and solid waste management
- Slum improvement and up gradation
- Provision of urban amenities and facilities such as parks, gardens, play grounds
- Burials and burial ground; cremations, cremation grounds and electric crematoriums
- Cattle ponds; prevention of cruelty to animals
- Vital statistics including registration of births and deaths
- Public amenities including street lighting, parking lots, bus stops and public conveniences
- Regulation of slaughter houses and tanneries

In 2004, the Government after a review of functions of urban local bodies transferred five more functions to the urban local bodies. These are:

- Planning for economic and social development
- Urban forestry, protection of the environment and promotion of ecological aspects
- Urban poverty alleviation
- Safeguarding the interest of weaker sections including the handicapped and mentally retarded

- Promotion of cultural and aesthetic aspects

In evaluating the performance of each municipal department, the approach and strategy may be to assess the authority, responsibility, accountability and capacity of each department with a view to institutionalizing and mainstreaming all facets of disaster management in the functions of each department. A mismatch in the above mentioned four components is bound to adversely affect the efficient discharge of its normal functions by the respective departments, making it even more difficult for these departments to efficiently discharge their functions and responsibilities assigned to them in a disaster situation. Formal delegation of powers to ensure responsibility and accountability go hand in hand with delegation of powers in general and legal authority vested in these departments in particular. Role clarity of each department in normal and, even more, in any unforeseen situation is essential. Where more than one department or agencies are involved, their respective role clarity as well as institutionalized coordination mechanism becomes even more crucial.

The role of each municipal department has to be examined keeping the above parameters in view, to ensure any mismatch thereof does not further contribute to the vulnerability of basic civic amenities being provided which would come under severe pressure in case of a calamity. This exercise will supplement the proposed HRVCA to ensure that institutional disabilities do not further contribute to the existing vulnerabilities of the city as also to ensure that the existing functions are discharged in a manner as to reduce vulnerabilities by mainstreaming disaster risk reduction in its functions in a comprehensive and inclusive manner.

This exercise should include FGDs/ IDIs with representatives of all concerned departments of the Corporation which will assist in preparing a roadmap for mainstreaming DRR in on-going functions of the Corporation.

Implications of HRVCA findings for preparation of effective city disaster management plan

HRVCA data and findings should be reviewed in the context of the following seven impact categories/criteria, which are outlined in the table below. The impact categories/criteria should be individually ranked on an ascending scale from one to four, one being the least severe and four being the most severe. The sum of these scores will be taken to create an overall consequence score, the score will then be contrasted against a likelihood rating of one to four, one being the unlikely and six being most likely. Details regarding the measure of likelihood are mentioned in the table below. The aggregate score of each hazard, combined with the hazard impact consequence and likelihood will provide the basis for a risk ranking of low, moderate, high or very high disaster risk.

Categories/Criteria of Impact	Score
Fatality	1-4
Injury	1-4
Critical Facilities (hospitals, fire/police services etc.)	1-4
Lifelines (water, gas, power, etc.)	1-4
Property Damage	1-4
Environmental Impact (particularly climate change impact)	1-4
Economic and Social Impact (with focus on livelihoods)	1-4

Measure of Likelihood	Return Period (yrs)	Score
Frequent or Very Likely	Every 1-3	4
Moderate or Likely	Every 4-10	3
Occasional, Slight Chance	Every 11-30	2
Unlikely, Improbable	Every 31-100	1

The table given below details each level of risk rating with a description of how these ratings should be interpreted.

HRVCA Risk Rating Interpretation	
1-10	Low risk: implementation of mitigation measures will enhance emergency preparedness, but less urgent; the concerned communities in the city can live with this level of risk.
10-15	Moderate risk: related hazards have intermediate levels of frequency and severity; hazards classified as moderate and are relatively of an urgent nature as compared to low risk hazards and are often commonplace concerns. Given this, moderate level hazards should be addressed with an appropriate level of urgency.
15-20	High risk: related hazards warrant review and development of mitigation actions to reduce the risk to an acceptable level: mitigation measures should be planned with a sense of urgency.
20-30	Very high risk: related hazards are both frequent and are of high severity; these hazards require immediate and urgent examination and mitigation measures to reduce the risk to an acceptable level.

Session 2.3: Risk to resilience: shift in urban development perspective and planning

Duration: 90 minutes (1.5 hours)

Objectives:
At the end of the session, the participants will be able to examine the concept of resilience in the urban context and explain the need for making a shift from a risk to resilience perspective in urban development planning.

Methods:

- Interactive lecture presentation
- Group work
- Group presentation and discussion
- Summing up

Materials needed
Flip charts, markers

Hand outs
Handout 8: Core Elements of the Urban Resilience Framework
Handout 9: Factors influencing resilience

Session Plan with Facilitator Notes

Starting the Session (5 minutes)

Explain the purpose and process of the session and its intended learning outcome/s.

Interactive lecture presentation (20 minutes)

Begin the technical part of the session with a quick brainstorming on risk and resilience with the participants. This will aim at mapping out the notions of risk and resilience as they are or should be applied in the context of urban development planning.

Group work (60 minutes)

Form 4-5 working groups of participants and ask them to identify the key policy issues and challenges related to urban development planning in view of the existing disaster risk and climate related risks in cities. These issues and challenges may relate to water, sanitation, health, energy, food supplies, environmental pollution etc. across different cities in India. Participants will be briefed to have an in-depth discussion within their respective groups to discuss policy issues and challenges regarding disaster management in general and disaster management during different phases of the disaster management cycle in particular in the process of making a shift from a risk to a resilience perspective.

The working groups will be advised to carry out a comparative assessment of the relative strengths and shortcomings of both risk and resilience approaches and the distinct advantages of making a shift in perspective from a risk to resilience approach to DRR and CCA in urban development initiatives.

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

Summing up (5 minutes)

Summarise the key learning points from the session.

Technical Notes

Risk is the probability of a damage and loss due to natural disasters and impact of climate change. Risk is articulated in a variety of ways in varying contexts. Some of the common categories for understanding and planning for risk assessment and mitigation include the following: macro-micro risks; avoidable and unavoidable risks; risks that can be managed and the risks that one has to live with.

In the specific context of disaster management (DM), disaster risk reduction (DRR) climate change adaptation (CCA), and sustainable development, hazard, vulnerability and capacity are the three basic constituents of risk. Risk carries the potential to disrupt the functioning of physical, social, economic and ecological systems in ways that has damaging consequences for the lives, livelihoods and well-being of women, men and children living in communities at risk. Risk could be present in the form of probability of damage and loss to infrastructure, services, resources and assets that shape and support the lives and livelihoods of people in varying degrees in different city contexts.

Resilience describes the ability of a system to withstand or accommodate stresses and shocks such as climate impacts, while still maintaining its function. In an urban context, resilience essentially means the ability of the municipal administration to maintain essential assets, as well as to ensure access to services and functions that support the wellbeing of citizens. This is particularly so for members of the population lacking access to financial, material, and social capital that can be used to buffer stresses.

Urban populations depend on interrelated and interdependent urban systems (infrastructure, ecosystems, institutions, and knowledge networks) that support and are supported by a city's actors or social agents (individuals, households, and private and public sectors). The resilience of a city depends on both the fragility of the urban system and the capacity of social agents to anticipate and to take action in order to adjust to changes and stresses, recognizing that their ability to act is constrained by access to resources and supporting systems. Cities that may be considered resilient exhibit the following key characteristics:

- **Flexibility and diversity:** The ability to perform essential tasks under a wide range of conditions, and to convert assets or modify structures to introduce new ways of achieving essential goals. A resilient system has key assets and functions distributed so that they are not all affected by a given event at any one time (locational diversity) and multiple ways of meeting a given need (functional diversity).
- **Redundancy, modularity:** The capacity for contingency situations, to accommodate increasing or extreme events, unexpected demand, or surge pressures; also, multiple pathways and a variety of options for service delivery, or interacting components composed of similar parts that can replace each other if one or even many fail.
- **Safe failure:** The ability to absorb shocks and the cumulative effects of slow-onset challenges in ways that avoid catastrophic failures; or where failures in one structure or linkage are unlikely to result in cascading impacts across other systems.
- **Resourcefulness:** The capacities to visualize and act, as well as to identify problems, establish priorities, and mobilize resources. Resourcefulness is also related to the capacity to recognize and devise strategies that relate to different incentives and operational models of different groups.

- **Responsiveness and rapidity:** The capacity to organize and reorganize, as well as to establish function and sense of order in a timely manner both in advance of and following a failure.
- **Learning:** The ability to learn through formal and informal processes, as well as to internalize past experiences and failures and alter strategies based on knowledge and experience.

Achieving urban resilience requires engaging the capacities of social agents to understand and act upon the urban systems through iterative cycles of understanding vulnerability and building resilience. Both processes strengthen systems while developing and enhancing the social agents' capacities to intervene effectively in them. External agents such as practitioners, donors, or consultants may play roles as enablers or catalysts in urban contexts.

Shift from risk to resilience

The shift in perspective from risk and resilience lies essentially in an enhanced focus on building capacities of institutions and people in a manner that enhances their capacities to take informed and prompt action to deal with emergencies effectively with minimum damage and loss.

Key Learning Points

- Resilience describes the ability of a system to withstand or accommodate stresses and shocks generated as a result of natural disasters (both sudden and slow onset) and climate impacts, while still maintaining its function.
- Achieving urban resilience requires engaging the capacities of different stakeholders including social agents to understand and act upon the urban systems through iterative cycles of understanding hazard, risk, vulnerability and capacity and building resilience

Learning Unit 3: Participatory planning for disaster and climate resilient city development plans (CDPs)

Objectives

- Articulate concept and framework of participatory DRR and CC resilience planning
- Identify instruments / provisions / measures facilitating DRR / CCA inclusive city development planning
- Explain processes and framework for inclusion of DRR and CCA in CDP

Sessions

- Participatory planning: concept, methods and tools (90 minutes)
- Mainstreaming DRR and CCA concerns into CDPs (90 minutes)

Estimated time: 180 minutes (3 hours)

Expected Outcome

Participants would have identified the major implications of the shift in perspective from risk reduction to resilience building for city development planning processes.

Session 3.1: Participatory planning: concept, methods and tools

Duration: 90 minutes (1.5 hours)

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

- articulate the concept of participatory planning
- explain the application of tools and methods of participatory planning in their work

Methods:

- Interactive lecture presentation
- Experience sharing by participants
- Discussion in the plenary
- Closing remarks

Materials needed:
Flip charts, markers

Handouts:
Handout 10: Making Decisions under Deep Uncertainty
Handout 11: Participatory Climate Change Adaptation Appraisal

Session Plan with Facilitator Notes

Starting the session (5 mins)

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

Interactive lecture presentation (20 minutes)

Start with inviting ideas on what is meant by participatory planning and how it works. Record all the points shared on white board or flip chart. Make a brief presentation on the topic summarising the key principles and practices related to participatory planning globally. This should cover the conceptual and practical context of participatory planning including the commonly used methods and tools.

Experience sharing by participants (40 minutes)

Follow it up by an experience sharing exercise by the participants. Invite volunteers to share their work experience related to participatory planning. Select only first 5-6 participants for sharing their experiences on a first come first serve basis. Each volunteer will be given 5 minutes for sharing. Participants will be requested to keep their focus on different methods and tools for participatory planning.

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. 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 city development planning processes.

Closing remarks (5 minutes)

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

Technical Notes

Urban development planning and governance entails action by a range of different stakeholders including citizens, particularly slum dwellers, service providers, city managers, elected representative, business people and others. As all these different categories of stakeholders together make a city function, their active participation in the urban development planning process is of critical importance. It is their active participation that is likely to create the required kind of ownership of the plan prepared by all the concerned actors and stakeholders.

Sound participatory assessment of the ground situation is the key to effective planning at the local level. Urban risk assessment provides a foundation for building long-term sustainable risk reduction plans that address a city's vulnerabilities to natural hazards. These assessments are structured to improve the knowledge base and increase the capacity to deal with short- and long-term hazards that any given urban environment may face. The key to making a URA successful is the transition from completing the assessment to creating and implementing a risk-reduction plan, using the knowledge gained and the catalytic nature of the assessment.

The action plan will ideally address the key risks raised in the urban risk assessment; while at the same time begin the process of mainstreaming risk reduction in municipal planning and service delivery. Completion of a risk assessment exercise, defining the action plan and mainstreaming risk-reduction measures, should not be considered as three discrete elements but rather as a process toward a common end driven and owned by the people who are going to be both impacted by the plans implemented and be involved in the process of their implementation.

Different ways of developing action plans tried out in different city contexts across the globe as shared in the following section offer some ideas and insights for moving forward.

Developing Action Plans: Experiences from various countries

The ability to use an urban risk assessment (URA) to create an action plan is critical to risk reduction, and its value will ultimately be judged through actions on the ground. Developing action plans is an in-depth process involving many stakeholders and can be a complex task.

- Vietnam: Vietnam illustrates where the national government in cooperation with the World Bank has created standard procedures that local officials can use to develop action plans. The approach, the Local Resilience Action Plan (LRAP), is being carried out in the cities of Hanoi, Dong Hoi, and Can Tho (World Bank 2010b). The LRAP is a planning document that helps a city to assess alternative adaptation and risk-reduction options, with economic assessment of the costs and benefits of each. The action plan will result in strategic short- (less than 1 year), medium- (1 to 3 years), and long-term (more than 3 years) structural and non-structural measures to increase resilience and reduce disaster risk. Ideally such plans would then be mainstreamed into broader urban planning and management practices.
- New York City provides an alternative example of moving from risk assessment to action planning to implementation. In 2008 Mayor Michael Bloomberg tasked the New York City Climate Change Adaptation Task Force with developing a plan to increase the resilience of the city's critical infrastructure. The task force was composed of 40 city, state, federal, and private-sector infrastructure operators and

regulators with the goal of identifying climate risks to the city's critical infrastructure and develop strategies to mitigate these risks.

- The Greater London Authority released a draft of the London Climate Change Adaptation Strategy in 2010 with the aim of providing a framework to identify and prioritize risks and then to deliver actions to reduce or manage them, land-use planning was placed at the centre of the climate-adaptation strategy with the objective of incorporating local actors such as municipal governments, community groups, and the private sector (Greater London Authority 2010).
- The Istanbul Metropolitan Municipality created a Strategic Plan for Disaster Mitigation in Istanbul (SPDMI) to reduce seismic risk focusing on building codes and disaster-resistant construction. Regulations that consider the use of proper building materials, building orientation, insulation, and ventilation can improve a structure's physical resilience, enhance public health, and increase energy conservation.

Key Learning Points

- Urban risk assessment provides a foundation for building long-term sustainable risk reduction plans that address a city's vulnerabilities to natural hazards.
- The key to making a URA successful is the transition from completing the assessment to creating and implementing a risk-reduction plan, using the knowledge gained and the catalytic nature of the assessment.

Session 3.2: Mainstreaming DRR and CCA concerns into CDPs

Duration: 90 minutes (1.5 hours)

Objectives: At the end of the session, the participants would be able to describe the key elements of mainstreaming DRR and CCA concerns into city development plans (CDPs)

Method:

- Brainstorming
- Discussion
- Critical reflection

Materials needed:
Flip charts, markers

Handouts:
Handout 12: Mainstreaming across administrative levels to enable national resilience in the Philippines

Session Plan with Facilitator Notes

This session aims at discussing the what, why and how of mainstreaming DRR and CCA into development planning in general and city development planning in particular.

Start with a quick brainstorming on the meaning and purpose of mainstreaming. Record all the responses from the participants on a flip chart. This could be done in round robin fashion where all the participants are expected to make one contribution each in one round. They are again asked to make one contribution each in subsequent rounds. And the rounds are repeated till no one has any contribution to make. (30 minutes)

After all the results of the brainstorming are there on the flip chart, get the points grouped into some key categories of: policy, plans, programmes, strategies, institutions, instruments, infrastructure, basic services, or any other as decided by the participants. And initiate a wrap-up discussion with a request to participants to share their experiences, if any, in the plenary to substantiate some of the points made earlier. (40 minutes)

Summarise the key points from the brainstorming conducted and introduce the concept of mainstreaming DRR and CCA and discuss the what, why and how of mainstreaming using the points made by the participants earlier and examples shared. 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 in a city development context. (20 minutes)

Technical Notes

A city's development planning process should be as participatory as possible, allowing all stakeholders to consider how best to integrate the DRR and CCA concerns into the city's development plans and activities. If the city does not have a development plan, this is the chance to think about preparing one. If a development plan does exist, the time is right to review the plan, making sure that it contains all necessary elements of disaster risk reduction.

The strategic planning process will allow local authorities to identify and focus on key disaster risk reduction priorities and explore what resources (human, economic, technology and natural) are available locally. During the planning process, the city can assess its strengths and weaknesses and take into consideration any external factors that need to be addressed to achieve concrete and practical results.

The planning process encompasses the following milestone phases and steps:

Phases	Milestone Phases	Steps
Phase one	Organizing and preparing to apply the Ten Essentials	1. 1.Prepare institutional setting, raise awareness 2. Convene actors, formalize participatory process 3. Plan and execute the process
Phase two	Diagnosis and assessment of the city's risk	4. Be acquainted with the city's risks 5. Conduct a risk assessment 6. Analyze the local environment and actors 7. Prepare an assessment report
Phase three	Developing a safe and resilient city action plan	8. Define vision, objectives and main actions 9. Define programmes and projects 10. Institutionalize and sustain the disaster risk reduction plan
Phase four	Implementing the plan	11. Implementation and resource mobilization 12. Ensure broad participation and ownership
Phase five	Monitoring and follow-up	13. Monitor, follow up and evaluate the plan 14. Disseminate and promote the plan

Planning Principles

It is important to think about implementing concrete disaster risk reduction measures throughout the entire planning process rather than waiting until the plan is completed. Priority should focus on actions for which resources and local capacity already exist, those which can and will quickly demonstrate visible results. This will motivate all stakeholders and create awareness of the importance of disaster risk reduction in the city. When this is recognized through collective consensus, the chances are much greater that the actions will be productive and sustainable.

It should be kept in mind that the preparation of a plan is a much more time-consuming process than most people anticipate. If the process is rushed, the opportunity may be lost to achieve participation and a sense of ownership. Applying the following principles throughout all phases will make for a more effective strategic planning process:

- Encourage local government to exercise leadership in developing local capacity to create resilience.
- Use participatory approaches and promote full participation of the historically underserved, including children, indigenous populations, the disabled and senior citizens to strengthen the social fabric of the city.
- Apply principles of gender equality and inclusion.
- Be flexible, transparent and accountable.

Key Learning Points

- A city's development planning process should be as participatory as possible.
- The strategic planning process will allow local authorities to identify and focus on key disaster risk reduction priorities and explore what resources (human, economic, technology and natural) are available locally.
- Planning through collective consensus results in productive and sustainable actions

Learning Unit 4: How to Mainstream DRR & CCA into City Development Plans (CDP)

Objectives
Equip the participants with the essential know how of mainstreaming DRR and CCA into city development plans and their implementation strategies.

Sessions

- Disaster risk reduction (DRR) and climate change adaptation (CCA) inclusive development: a conceptual overview (90 minutes)
- Building back better: concept and practice (90 minutes)
- Preparing strategic action plan outline for mainstreaming DRR and CCA into specific city development plans: institutions, instruments and incentives (90 minutes)

Estimated time: 270 minutes (4.5 hours)

Expected Outcome
Participants would have prepared a strategic action plan outline for mainstreaming DRR and CCA into specific city development plans.

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

Duration: 90 minutes

Objectives: At the end of the session, the participants will be able to describe the conceptual tools and frameworks available for ensuring DRR and CCA inclusive development.

Methods:

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

Materials needed:
Flip charts, markers, Hand outs

Handout:
Handout 13: Ethiopia's Productive Safety Nets Programme
Handout 14: Process of integrating climate resilience into development

Session Plan with Facilitation Notes

Introduction (5 minutes)

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

Experience sharing (40 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 city managers and municipal administrators carry some prior experience of implementing activities in the course of their regular work, which have significant implications for DRR and CCA inclusive development. These activities are likely to be based on some conceptual framework and are going to invariably involve the use of some tools and techniques: these need to be identified and brought forth for building on them.

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

This session will try and identify these activities in order to build on them in order to ensure effective mainstreaming of DRR/CCA concerns into city development planning exercise.

Reflection and discussion (40 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 with a focus on conceptual frameworks and tools.

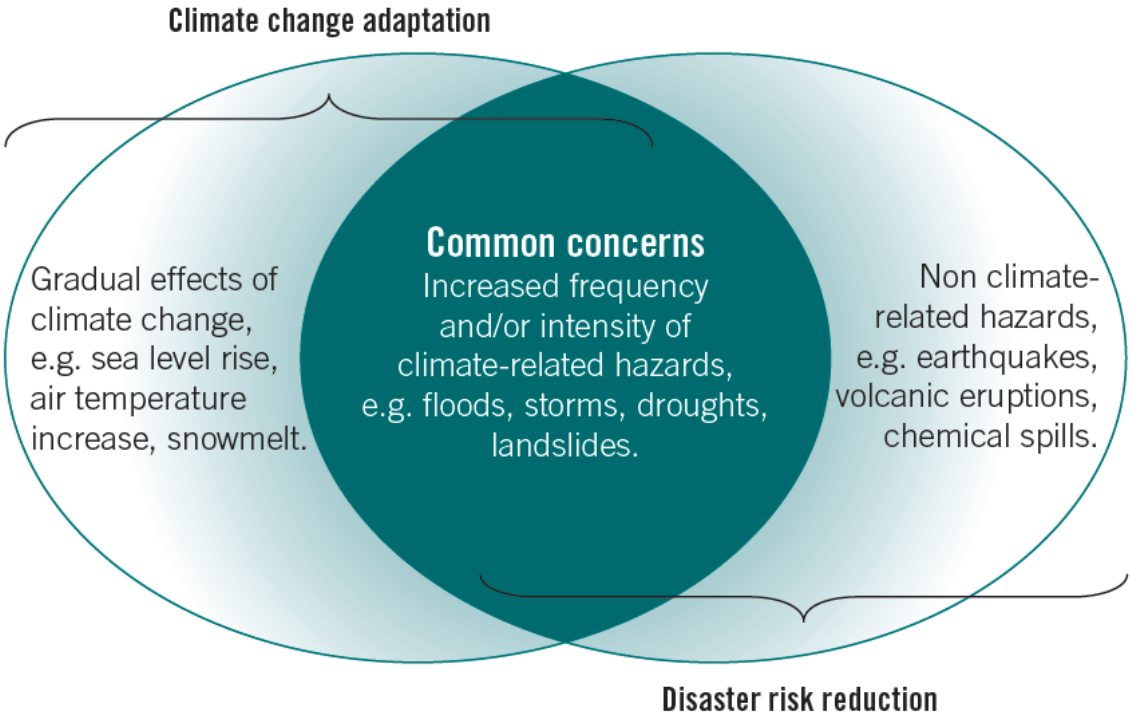
Summing up (5 minutes)

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

Technical Notes

There is significant convergence between the problems that disaster risk reduction and climate change adaptation seek to address. As shown in the figure given below, populations already exposed to climate-related hazards and effects will be at greater risk due to a projected increase in the frequency and/or intensity of those hazards and effects as a result of global climate change.

Figure 1: Common concerns of climate change adaptation and disaster risk reduction



Source: Toward Resilience A Guide to Disaster Risk Reduction and Climate Change Adaptation, *Marilise Turnbull, Charlotte L. Sterrett, Amy Hilleboe*

Furthermore, populations exposed to hazards may experience various stresses due to longer-term changes in the climate—such as changes in seasonality, unpredictable rainfall, and sea-level rise—that affect their livelihoods and health, making them more vulnerable to all types of shocks, events and further changes.

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.

Both exposure and vulnerability are compounded by other societal and environmental trends, for example, urbanization, environmental degradation, and the globalization of markets. 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.

Principles of an integrated approach to disaster risk reduction and climate change adaptation

As global commitment to and investment in disaster risk reduction has grown, so has practitioners' and policy-makers' knowledge of good practice, enabling factors, and barriers to success. Meanwhile, innovative action-research in the field of climate change adaptation is rapidly producing valuable indicators of the fundamental elements for effective adaptation programming.

1. **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.
2. **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.
3. **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.
4. **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.
5. **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.
6. **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.

7. **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.
8. **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.
9. **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.
10. **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.

Key Learning Points

- Disaster risk reduction and climate change adaptation share a common conceptual understanding of the components of risk and the processes of building resilience.
- Both exposure and vulnerability are compounded by other societal and environmental trends, for example, urbanization, environmental degradation, and the globalization of markets.

Session 4.2: Building back better: concept and practice

Duration: 90 minutes

Objectives: At the end of the session, the participants will be able to articulate the conceptual and practical aspects of 'building back better' approach for city development planning.

Method: Panel discussion

Materials needed
Flip charts, markers

Hand outs
Handout 15: Can Haiti Build Back Better
Handout 16: Case study: Better enforcement of building safety in Ahmedabad City, Gujarat State, India

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 city development planning.

Technical Notes

Introduction

Approximately forty years ago, major earthquakes struck Peru and Turkey, causing much damage and many casualties. In both cases, the government initiated large reconstruction programmes, often involving relocation, and received assistance from external humanitarian agencies on an unprecedented scale. In 1970, there was little previous reconstruction experience of similar magnitude to learn from. The approaches followed by governments and agencies alike were to build houses for people rather than with them. Evaluations of those programmes by, for example, Blaikie et al., (1994) and Aysan and Oliver (1987) have since highlighted that they often got it wrong, and many of the houses built remained unoccupied, whilst the affected people reverted to their old ways of building and remained vulnerable to future risks.

Theo Schilderman, Build Back Better, Practical Action

Key propositions for building back better

Proposition 1: Governments, donors, and aid agencies must recognize that families and communities drive their own recovery.
Proposition 2: Recovery must promote fairness and equity.
Proposition 3: Governments must enhance preparedness for future disasters.
Proposition 4: Local governments must be empowered to manage recovery efforts, and donors must devote greater resources to strengthening government recovery institutions, especially at the local level.
Proposition 5: Good recovery planning and effective coordination depend on good information.
Proposition 6: The UN, World Bank, and other multilateral agencies must clarify their roles and relationships, especially in addressing the early stage of a recovery process.
Proposition 7: Expanding the role of NGOs
Proposition 8: From the start of the recovery operations, government and aid agencies must create the conditions for entrepreneurs to flourish
Proposition 9: Beneficiaries deserve the kind of agency partnerships that move beyond rivalry and unhealthy competition
Proposition 10: Good recovery must leave communities safer by reducing risks and building resilience

Source: Key Propositions for Building Back Better: A Report by the UN Secretary-General's Special Envoy for Tsunami Recovery, William J. Clinton, United Nations, December 2006.

Principles of 'building back better'[4]

The notion of 'building back better' entails creating more resilient and capable communities in the aftermath of disasters. The seven principles that underpin the recovery and reconstruction work from a 'building back better' perspective are as follows.

1. **Do no harm:** learn from the past, and avoid unnecessary damage to future recovery: Emergency relief activities can, inadvertently, hinder future reconstruction and recovery prospects. Governments and humanitarian agencies should start thinking as early as possible about recovery needs and the impact of relief programmes. Build

[4] http://practicalaction.org/principles-building-back-better

on the best of local practices and avoid repeating past mistakes by learning from what existed before, and what survives the disaster.

2. **Agencies must be accountable to the people they seek to assist:** People who have suffered in disasters are not helpless victims waiting to be rescued. They have skills and capacities; and should be allowed to determine how they want to rebuild their lives and livelihoods. They know their needs and what is acceptable. People themselves should be the drivers of reconstruction and recovery.
3. **People affected by disaster should be the decision-makers:** All groups, including the landless, tenants, poorest, women and children need to be included in decision making in order to do the following: to facilitate inclusion and participation, in order to have an informed understanding of the existing social systems and local power structures; to enable people to make informed choices. NGOs, who work closely with affected communities, have an important role to play in promoting information sharing and community-based learning.
4. **Recovery of local economy and livelihoods must be a priority:** Helping people to recover their means of earning a living is central to reconstruction efforts. Economic recovery enables people to reduce their reliance on long-term relief; adding to self-motivation, dignity and a sense of purpose. Alongside direct relief to affected people, local markets, services and businesses that provide employment or support livelihoods more broadly also need to be assisted. Livelihoods recovery can be part of rebuilding homes and infrastructure, and is more likely when reconstruction avoids relocation of people or settlements.
5. **Reconstruction and recovery efforts must recognize diversity**: Communities and populations affected by disasters are not homogeneous. Different groups have different needs, skills and capabilities. Special and specific needs of women and other disadvantaged groups must be taken into account.
6. **Communities should be allowed to use their own resources wherever possible:** Recovery is more robust and sustainable when communities are able to draw on their own capabilities, social and economic resources. This provides an opportunity for local markets and businesses to grow, and for people to gain skills and confidence. Support to develop skills and capacities (through training) and access physical resources, encourages people to lead activities and take ownership of recovery processes.
7. **Reconstruction must take account of future hazards and risks:** Disaster risk assessments and decentralised disaster risk reduction (DRR) planning must be part of the reconstruction and recovery process. Decision-makers need access to intelligible forecasts about critical uncertainties such as the impacts of climate change.

Key Learning Points

- The notion of 'building back better' entails creating more resilient and capable communities in the aftermath of disasters.
- People themselves should be the drivers of reconstruction and recovery.
- Helping people to recover their means of earning a livelihood is central to reconstruction efforts.
- Recovery is more robust and sustainable when communities are able to draw on their own capabilities, social and economic resources.

Session 4.3: Preparing strategic action plan outline for mainstreaming DRR and CCA into CDPs

Duration: 90 minutes

Objectives: At the end of the session, the participants will be able to articulate different ways and means for mainstreaming DRR and CCA into development planning and policy making and use them to prepare strategic action plan outline for mainstreaming into specific city contexts.

Methods:

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

Materials needed:
Flip charts, markers

Session Plan with Facilitation Notes

Introduction (5 minutes)

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

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 at the city level.

The second part of the presentation will focus on policy issues and challenges related to DRR/CCA mainstreaming across different city contexts globally before making an in-depth analysis of the Indian context.

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 urban 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

In order to prepare an action plan for mainstreaming DRR and CCA into CDP some of the broad considerations are outlined below:

Inform and engage

1. Strengthen capacities to use existing information: Plans and strategies in developing should place an emphasis on strengthening the use of existing information and knowledge pool on climate change and disaster risk. Based on that specific recommendations can be made which includes expanding networks, developing tools and models for risk assessment, and introducing techniques for communicating the uncertainties associated with trends and projections and impact assessments.

   Development activities are often susceptible to changes in climate extremes, rather than average conditions. These are even less well understood. Future vulnerability and risk may not be closely related to historical patterns, and thus provide only a rough guide to adaptation actions. These challenges are not likely to disappear, but need to be considered.

2. Generate new information in consultation with the key stakeholders, particularly women, men and children from communities at risk, which are invariably the people living in urban slums, who live in precarious places near railroads, rivers, open drains, under flyovers and on roadsides, all of which are open to the vagaries of nature and impact of climate change. These people often know the best what affects them and how and what can be done to mitigate them. Their ideas and insights must inform the process of preparation of city development plans (CDP). In cases, where CDPs are already prepared and approved, or in cases where implementation of CDPs have already begun. these consultations can be made during mid-term review of the plans prepared.

Plan and prepare

CDPs are currently being prepared with the help of consulting agencies across most of the cities in India. These agencies are given a terms of reference (TOR) in response to which the short-listed agencies submit their technical and financial proposals, which are evaluated by the municipal authorities and the most deserving are given the task of preparing the city development plan (CDP) of the concerned city/town/municipality.

The need for participatory planning involving all the key stakeholders, particularly the communities at risk, should be included as a part of the process of developing the CDP and its implementation on the ground.

After the CDP is finalised, reviewed and approved, preparation for its implementation has to begin. In cases where mainstreaming DRR/CCA concerns into CDPs has been missed, it must be incorporated at the preparation stage using a multi-stakeholder consultation approach.

Implement and improve

Effective implementation is the key to effective mainstreaming. Even if the approved CDP provides for instruments, incentives and resources for mainstreaming, it is not likely to work unless it is effectively implemented on the ground.

Concurrent learning in order to improve the quality of planning and improvement in the course of implementation has to be in-built into the action planning process itself.

Own and act

Ownership of the plan prepared and its mainstreaming approach and strategy is a primary precondition for effective mainstreaming. A concerted action based on multi-stakeholder engagement is going to drive the agenda of mainstreaming of DRR/CCA concerns into the planning, preparation and implementation of CDPs on the ground.

Learning Unit 5: 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 5.1: Systematic Approach to Training (SAT) and Assessing Training Needs

Duration: 90 minutes (1.5 minutes)

Objectives:
At the end of the session, the 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 17: Systematic Approach to training
Handout 18: 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 the initial few sharing sessions.

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 assessed and 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:

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 5.2: Defining Training Aim and Objectives

Duration: 90 minutes

Objectives: At the end of the session, the 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 19: 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

Session 5.3: Deciding the content, methodology and resource persons

Duration: 90 minutes (1.5 hours)

Objectives: At the end of the session, the 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 5.4: Deciding the monitoring and evaluation indicators and processes

Duration: 90 minutes

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

- Articulate the relevance of developing monitoring and evaluation indicators
- Describe the process and method of develop monitoring and evaluation indicators.

Methods:

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

Materials needed:
Flip charts, markers

Session Plan with Facilitation Notes

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 skills like cooking and driving, which primarily involve motor skills.

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 sharp and SMART meaning: specific, measurable, attainable, realistic and time bound. Sharpness of the indicator lies in its inherent capacity to contain not only quantitative, but also qualitative information in one single indicator.

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 6: 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 6.1: 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 20: Johari Window
Handout 21: 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 6.2: 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 with Facilitation Skills

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 6.3: Sharing, Listening and Learning

Duration: 60 minutes (1 hour)

Objective(s): To 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 lecture presentation on the subject.'

Invite one of the 4 volunteers into the hall and ask the first one to tell her/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 5^{th} 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 6.4: Learning to listen and listening to learn

Duration: 60 minutes **(**1 hour)

Objectives: To 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 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 5 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. And have a discussion for about 10 minutes.

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.

Annexures

Annexure 1: Evaluation Forms

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 organised 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: Urban Myths and misconception

1. *"Cities are parasitic, growing everywhere without the economy to support them."* In general, the more urbanized a nation, the stronger and more productive its economy. The nations with the greatest economic success over the last few decades are generally those that have urbanized most rapidly; most of those with the smallest increase in their level of urbanization are those with the least economic success.
2. "Africa is the most rapidly urbanizing region and it is urbanizing without economic growth." Asia is the most rapidly urbanizing region, driven by urbanization in its most successful economies. Africa's rate of urbanization has slowed because many African nations have had little or no economic growth in recent years and are urbanizing slowly or may even have stopped urbanizing.
3. "Mega-cities are growing rapidly and will dominate the urban future." There are relatively few mega-cities (17 in 2000, the most recent year for which census data are available), they concentrate less than 5 per cent of the world's population and many have more people moving out than in, as smaller cities within their nation attract more new investment.
4. "More than half the world's population lives in cities." More than half the world's population lives in urban centres, not cities, and a large part of this is in small market towns or other urban centres too small to be considered a city.
5. "The speed of urban change in poorer nations is unprecedented with new cities mushrooming everywhere." Many high-income nations had periods with faster increases in their levels of urbanization than those taking place in recent decades in most low- and middle-income nations. There are relatively few new large cities; most large cities in Asia, North Africa and Latin America (and Europe) have been important cities for centuries. Several of the world's fastest-growing large cities over the last 100 years are in the United States.
6. "Urban development is opposed to rural development." Much of the demand that produces rural incomes comes from urban populations and urban enterprises. Many higher-paying jobs in rural areas (including off-farm work) come from urban demand. Successful farmers depend on urban-based facilities and services – markets, banks, processing plants, cold-storage facilities, supply and repair of machinery and agricultural inputs. Rural populations often depend on their local urban centre for access to hospitals, secondary schools, post offices and most consumer goods and services. Many low-income rural households have their incomes boosted by remittances from a family member working in urban areas.

   "Large and rapidly growing cities have the worst environmental problems." Large cities often have better standards of environmental health than most other urban centres in their nation (and most rural areas). Well governed cities have the world's best quality of life (and highest life expectancies). It is not the size and speed at which a city grows that determines environmental problems but the quality of its government and its relations with its low-income population.

Source: World Disaster Report, 2010

Handout 2: Possible Impacts of Climate Change on Cities

Projected Change in Climate Phenomena (Likelihood)	Consequences for Cities	Geographic Locations Most Affected
Warmer with fewer cold days and nights, more hot days and nights (virtually certain) Hot spells/heat waves — increased frequency (very likely)	• Exacerbation of the urban heat island effect, leading to increased risk of heat-related mortality and illness, especially for the elderly, chronically sick, very young, and socially isolated Increased demand for cooling, and reduced energy demand for heating • Declining air quality in cities • Greater stress on water resources, including those that rely on snowmelt, from increased water demand, declining water quality • Wider geographical incidence of vector-borne diseases (for example, malaria spreading to higher-altitude cities) • Less disruption to transport from snow or ice	All, especially inland cities and cities reliant on snowpack for water supply
Heavy precipitation events— increased frequency (very likely) Intensity of tropical cyclone activity increases (likely)	• Flooding, strong winds, and landslides • Disruption of public water supply and sewer systems, and adverse effects on quality of surface and groundwater • Damage and losses to physical assets and infrastructure: houses, public facilities, utilities • Increased risk of deaths, injuries, and illnesses (especially water-borne diseases) • Disruption of transport, commerce, and economic activity • Withdrawal of risk coverage in vulnerable areas by private insurers • Water stress may be relieved (short-term benefit)	Coastal cities, those on riverbanks or marginal land in floodplains, mountainous regions
Areas affected by drought increase (likely)	• Greater stress on water resources, from increased water demand, declining water quality • Reduced energy supply from hydropower generation • Land degradation, with lower agricultural yields and increased risk of food shortages, and dust storms • Potential for population migration from rural to urban areas	All, especially cities in regions unused to arid conditions
Rising sea level (virtually certain)	• Permanent erosion and submersion of land; and costs of coastal protection or costs of relocation • Decreased groundwater availability because of saline intrusion into aquifers • Exacerbated effects of tropical cyclones and storm surges, particularly coastal flooding	Coastal cities

Source: Guide to Climate Change Adaptation in Cities, World Bank

Handout 3: Potential Impacts of Climate Change on Urban Development and Impacts on Urban Planning

- Changes in the frequency and intensity of floods and sea-level rise can reduce the land area available for planning and development through risks of inundation.
- Reduction in rainfall and increased temperatures can cause land subsidence as water table's fall, rendering land unstable for development.
- Higher temperatures and longer warm spells can intensify the urban heat-island effect, with negative implications for energy and water consumption and human health.
- Increased wind strength, flooding, and storm surges can interrupt connectivity in transport, energy, and water system services in urban and peri-urban areas, including increased frequency of breakdown of power transmission lines, water pipelines, and road infrastructure.

Impacts on Water Systems

- Climate change may threaten the sustainability of water use in urban centers by reducing water availability and quality from surface and groundwater sources, while water demand for household and industrial use may simultaneously increase as temperatures rise.
- Increases in the intensity of precipitation can put pressure on urban drainage systems and cause local flooding.
- Urban flash floods may inundate the sewerage systems, damaging infrastructure and spreading water and vector-borne diseases.
- Ocean discharge from treated wastewater outfalls can be impaired by sea-level rise, particularly during high tides or storm surges.

Impacts on Energy Systems

- Warmer temperatures may increase energy demand for cooling during the summer and decrease demand for heating in the winter.
- Increases in the intensity of extreme events such as flash floods or storm surges may cause the breakdown of power transmission lines, oil and gas pipelines, and generation facilities.

Impacts on Transport Systems

- Increases in the intensity of precipitation and floods may inundate transport infrastructure, causing disruptions in traffic and economic activity.
- Changes in temperature, precipitation, and the intensity and distribution of extreme events may damage critical infrastructure, disrupting the level of services provided and shortening its useful life.
- Ports may be affected by sea-level rise and the intensification of storm surges.

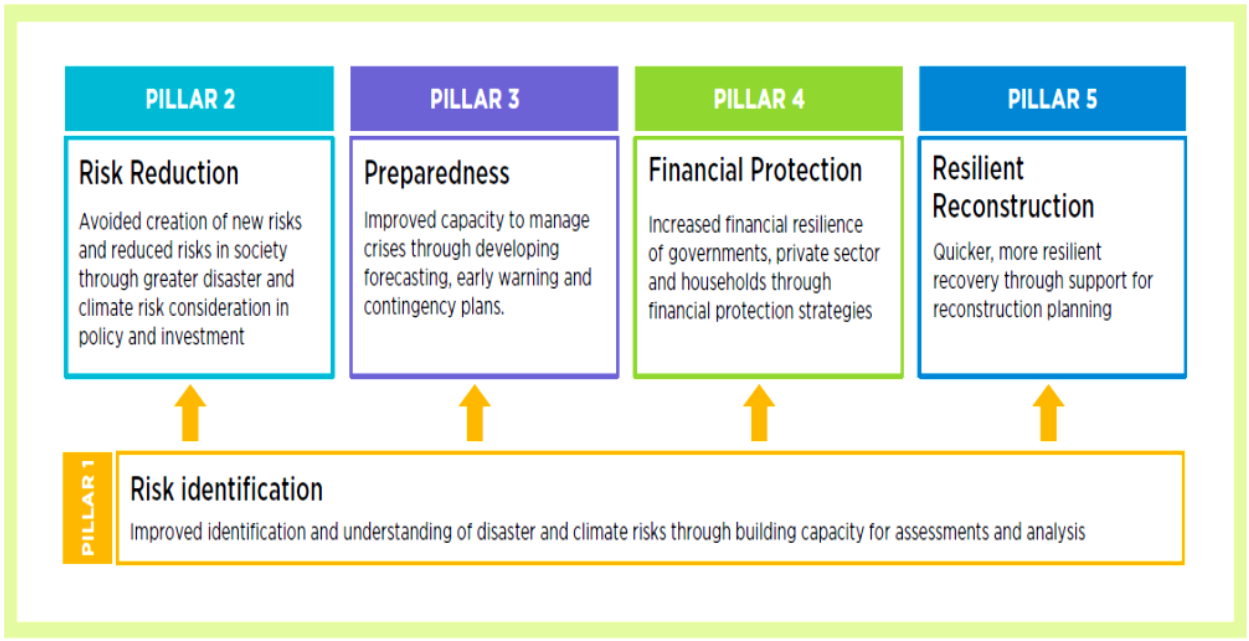
Impacts on Health and Social Systems

- An increase in the frequency and duration of heat waves during summer is likely to increase mortality and morbidity, particularly for the elderly and urban poor.
- High temperatures and worsening air quality can contribute to widespread heat stress and smog-induced illnesses among urban populations.
- Increases in the intensity of floods may result in the contamination of water resources and may increase the incidence of waterborne and water-related diseases.

Impacts on Social Systems

- The poor and elderly in urban areas are highly vulnerable to climate change because of limited access to profitable livelihood opportunities and safe and healthy dwellings. Consequently, they are more exposed to risks from heat waves, floods, and other climate-related hazards.
- Climate change may worsen living conditions for natural resource-dependent rural communities, potentially causing rural-to-urban migration.

Handout 4: An operational framework for managing climate and disaster risk



Source: The Sendai Report (World Bank 2012c)

Handout 5: Major considerations for managing risks to development

The World Development Report 2014 provides five insights on managing global risks (including climate and disaster risks) to development.

1. Taking on risks is necessary to pursue opportunities for development. The risk of inaction may well be the worst option of all.
2. To confront risk successfully, it is essential to shift from unplanned and ad hoc responses when crises occur to proactive, systematic and integrated risk management.
3. Identifying risks is not enough: the trade-offs and obstacles to risk management must also be identified, prioritized and addressed through private and public action.
4. For risks beyond the means of individuals to handle alone, risk management requires shared action and responsibility at different levels of society, from the household to the international community.
5. Governments have a critical role to play in managing systemic risks, providing an enabling environment for shared action and responsibility, and channelling direct support to vulnerable people.

Handout 6: Cyclone AILA hits Sundarbans--Case Study

Sundarbans is the world's largest delta region that spreads over India and Bangladesh covering around 25,500 sq. k.m. The Indian part is approximately 9,630 sq. k.m. The Indian part of Sundarbans is not confined to one single district. Sundarbans also covers 6 administrative blocks of the adjacent North 24 Parganas district, besides 13 blocks in South 24 Parganas.

Cyclone Aila hit the Sunderbans on 25th May 2009. More than three years later, the poor communities residing here have yet to recover from its onslaught.

It was evident from discussions with residents of three sites visited - Luxbagan, Kumirmari and Jharkhali - that despite the high speed winds, heavy rains and the breaching of embankments, which caused flooding for several days, the number of lives lost in the storm was relatively low. Communities say that this was primarily because the storm struck during daylight hours, allowing people to make their way to safer areas. People took shelter wherever they could– on roads up on the embankments, in schools, boats, neighbors' *pucca* homes and flood shelters, when they could reach them.

> *"We have yet to return to normal. For 3 years, there has not been a proper harvest. The fruit trees - mango, jackfruit – are all dead,"*
>
> A Member of the Jharkhali GP.

A two-storey flood center constructed in 2005 in Kumirmari became the refuge for nearly 2000 people. However, as the building had never been used or maintained it was in a state of disrepair. The toilets were not functioning and there was no clean drinking water. Some travelled long distances to find tube-wells that had not been contaminated and tried to bring clean water back to the shelter. Others survived by drinking rainwater in vessels they could salvage from their homes. People had to urinate and defecate outdoors, thus creating unhygienic conditions and exacerbating health risks. The study team was told repeatedly that the absence of clean drinking water, sanitation facilities and the rotting carcasses of livestock unleashed a diarrhoea epidemic in which several hundreds died in the days that followed the cyclone. In Kumirmari alone, residents estimated that 100 people had died from diarrhoea.

During the 3 days after the cyclone, floodwaters swept into the villages inundating the mud houses. As the salt water seeped into the mud walls, the mud structures gradually weakened and collapsed. Only a handful of *pucca* houses remained unharmed in the cyclone affected villages.

Most people in the Sundarbans depend on agriculture, animal husbandry and fishing for their livelihoods, all of which were severely damaged by the cyclone. Residents reported that the saline ingress combined with poor rainfall that prevented the salt from being flushed out of the soil, had ruined the harvest for the last 3 years. Women and gram panchayats members both reported that the soil salinity had killed their fruit trees along with their crops. Many appear to be surviving on vegetables from gardens and small fish from local ponds. But the paddy crop, which has traditionally been the main source of income for farmers, is barely enough to feed their families.

While the surface water in small ponds is no longer saline, ground water continues to be highly saline. This imbalance between freshwater and salt water has adversely affected fish stocks. The tiger prawns, once the most profitable catch for fisher folk here, have considerably dwindled. In addition, the Forest Department has requested fisher folk to stop using the areas near damaged embankments, as this will further erode them. These losses in livelihoods combined with the need to rebuild houses have led the major proportion (70-90%) of households in the area to migrate to cities where they work either as domestic or as construction labour.

External assistance – whether from NGOs, private sector or government –arrived several days after the cyclone, leaving survivors to fend for themselves for anything between 3 to 7 days after the cyclone, demonstrating the need for robust, responsive emergency response and relief arrangements within local communities who must fend for themselves.

While most external organizations provided relief services in the form of food, water, clothing, and vessels for cooking, a few also put in place long term DRR measures such as raised water pumps to prevent contamination of groundwater in future floods. While grateful for the support of NGOs and corporations that helped them survive, communities could not recollect ever being consulted by external agencies on their needs or priorities and implied that these organizations were never accountable to local communities. During a discussion with panchayat members in Jharkhali, one of the participants stated that *"50-70 NGOs came here, but we never heard from them again."*

Farmers and fisher folk have for the most part been left to adapt to new adverse conditions by growing crops that flourish in saline soil and cultivating fish that do better in salt water. However, there are programs led by both the Government and locally focused NGOs such as Tagore Society for Rural Development to plant mangroves in order to regenerate the coastal eco-system, crucial for the sustenance and the development of poor communities.

What kinds of local institutions exist among communities of the Sundarbans? A few youth have been given emergency preparedness training. District officials state that 100 volunteers have been trained in emergency response and preparedness, acknowledging that it is a woefully inadequate number. But the research team found no evidence of village disaster management teams or task forces. We did however encounter youth clubs who can, with small investments, be trained to lead effective emergency preparedness and response teams. Youth clubs in the Sundarbans have a long history of organizing social activities, primarily around for religious festivals or sporting events and there is at least one club for 300-400 households. In Jharkhali the gram panchayat appointed a local youth club to distribute relief.

Disaster management investments that provide communities with skills and infrastructure that prepare them to respond to emergencies are certainly welcomed by local communities. They suggest that several, smaller, more accessible flood shelters be constructed in their villages rather than a single shelter for each village that could mean that some settlements are 2 or 3 km away from the shelter. Communities are also advocating for TSRD's innovative flood shelter model that constructs flood shelters above school buildings so that the buildings are used regularly and that school maintenance funds can be used to ensure the upkeep of these shelters, adding that the shelters should have power supply, toilets and clean drinking water. District officials suggest the need for new housing technologies

coupled with a subsidy such as under the Indira Awas Yojana to promote cyclone and flood-safe housing.

Equally critical are issues of livelihoods and incomes. Communities are clearly struggling to make a living, while the Government's flagship social protection program fails to deliver. Jharkhali gram panchayat members report that wageworkers under NREGS have not received their wages for two months. Young men recommended the creation of a disaster management center that could employ youth while enhancing disaster preparedness and response in the community.

While the West Bengal Government has a Directorate of Disaster Management with an elaborate, sophisticated institutional infrastructure that includes district and block disaster management officers and a Relief Code that dates back to the Bengal Famine of 1943, there is little evidence of these arrangements on the ground. Indeed, communities report that three years later, a third of the households affected by the cyclone are yet to receive their compensation. The point is that even if an effective DRM program were in place, is a program focused on early warning, rescue and relief adequate to build the resilience of isolated, marginalized communities living with a high level of disaster risk? While early warning, evacuations and access to clean food and water would have saved lives, three years since the cyclone the communities of Sundarbans are in desperate need of solutions to restore their homes, natural resource base and livelihoods.

As pointed out by an officer in the Directorate of Disaster Management from Government of West Bengal *"We are not yet ready to accept that risk management should get priority over crisis management."*

Handout 7: What different aspects of urban poverty imply for everyday and disaster risk

Aspect of urban poverty	Implications for everyday risk	Implications for disaster risk
Inadequate and often unstable income and thus inadequate consumption of necessities, including food and, often, safe and sufficient water. Often, problems of indebtedness, with debt repayments significantly reducing income available for necessities. Inability to pay for insurance.	Very limited capacity to pay for housing which in urban areas means living in the worst-quality and most overcrowded homes in illegal settlements on dangerous sites lacking provision for infrastructure and services – so very high levels of environmental health risk.	In most cities and many urban centres in low- and middle-income nations, most low-cost housing is on dangerous sites, e.g., at high risk from flooding or landslides. The lack of public provision for infrastructure and services adds to such risks, particularly for flooding.
Inadequate, unstable or risky asset base (e.g., property, skills, savings, social networks) for individuals, households or communities.	Very limited capacity to cope with stresses or shocks in everyday life – including rising prices or falling incomes, injuries and illnesses.	Very limited capacity to cope with disaster events when they occur including lacking assets that are not damaged or destroyed by the disaster and having no insurance.
Inadequate, unstable or risky asset base (e.g., property, skills, savings, social networks) for individuals, households or communities	Very limited capacity to cope with stresses or shocks in everyday life – including rising prices or falling incomes, injuries and illnesses.	Very limited capacity to cope with disaster events when they occur including lacking assets that are not damaged or destroyed by
Poor-quality and often insecure, hazardous and overcrowded housing (often rented) located on dangerous sites such as flood plains, steep slopes and soft or unstable ground.	High risk levels from physical accidents, fires, extreme weather and infectious diseases – with risks often increased by overcrowding.	Housing is often of poor quality so at risk from storms/high winds, earthquakes, landslides, floods, fires and disease transmission which may cause epidemics.
Inadequate provision of 'public' infrastructure (piped water, sanitation, drainage, roads, footpaths, etc.), which increases the health burden and often the work burden.	High levels of risk from contaminated water, inadequate sanitation, house flooding from lack of drainage.	Lack of protective infrastructure against flooding. Lack of roads, footpaths and drains inhibiting evacuation when disaster threatens or happens.
Inadequate provision of basic services – day care, schools, vocational	Unnecessarily high health burden from diseases and injuries because of lack of	Lack of healthcare and emergency services that should provide rapid

training, healthcare, emergency services, public transport, communications, policing and good information on safe building practices.	healthcare and emergency response	response to disaster (and should have had a role in reducing disaster risk and in disaster preparedness).
Limited or no safety net to ensure basic consumption can be maintained when income falls; also to ensure access to housing, healthcare and other necessities when these can no longer be paid for (or fully paid for).	Very limited capacity to cope with stresses or shocks in everyday life – including rising prices or falling incomes, injuries and diseases.	Very limited capacity to recover from disaster, for instance to afford food and water, rebuild homes and livelihoods. Lack of documentation often means not getting post-disaster support.
Lack of influence over what government does, including what it does in post-disaster responses.	Low-income survivors often not allowed to move back to their former settlement and rebuild their homes and livelihoods.	Little external support for low-income groups and their organizations to rebuild in ways that reduce disaster risk.
Limited influence over external civil society actors such as international aid agencies during disaster risk reduction and response.	Lack of local input can lead to inappropriate development investments or missed opportunities to reduce risk and to build more secure local economies and livelihoods.	International humanitarian actors can overwhelm local government and civil society organizations alike. Lack of partnership inhibits good governance.

Source: World Disaster Report, 2010

Handout 8: Core Elements of the Urban Resilience Framework

These four core elements in the CRF (urban systems, agents, institutions, and exposure) provide distinct lenses through which to consider your urban climate change resilience. Each aligns with specific interests and backgrounds associated with key practitioners and decision makers responsible for planning and keeping your city functioning. As a result, separation of these major components provides a practical basis for engaging with key actors in urban areas about climate resilience. Collectively they provide a holistic view of urban resilience: urban systems relate to what will be managed (infrastructure, ecosystems, etc.); agents relate to who will take action or be affected by actions (e.g., businesses, government organizations, NGOs, communities, etc.); institutions relate to how action is structured or enabled (legal or regulatory frameworks and processes, laws, authority, agreements, customs, etc.); and exposure relates to climatic drivers of change (parameters, magnitudes, locations, with what level of uncertainty).

SYSTEMS in a city include infrastructure, services, and functions (e.g. water supply and wastewater treatment systems, roads, power lines, food distribution, health, education, finance) and ecosystems (e.g. agricultural land, parks, wetlands, fishing grounds). Systems are designed and managed by people, but their performance depends on a multitude of factors that are difficult to manage, including human behaviour and institutional context, which often lead to unintended side effects like pollution. Systems are fragile if they are easily disrupted or broken, though their basic functioning may look very stable.

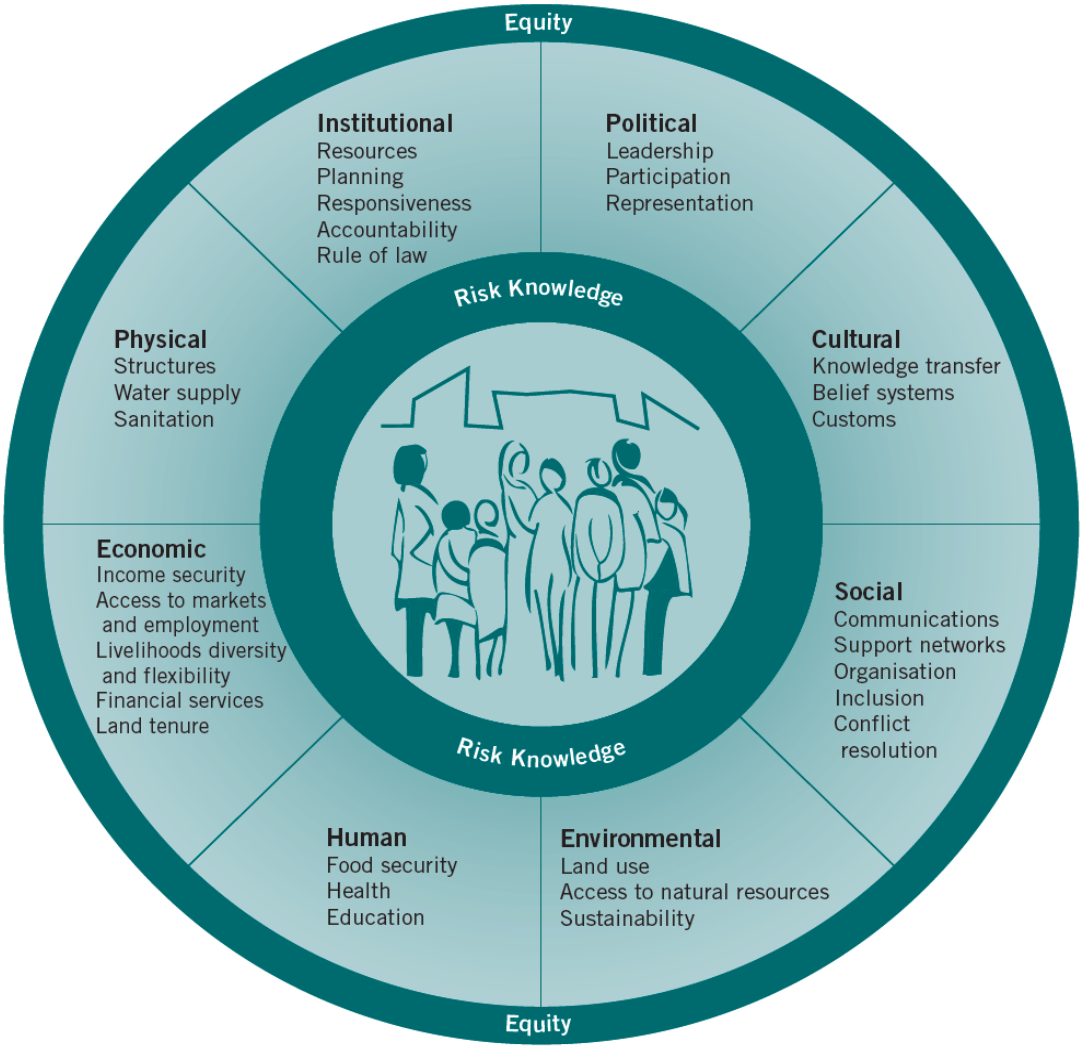
AGENTS are individuals, households, communities, the private sector, businesses, and government entities— they are people functioning either alone or in groups. People, unlike systems, are capable of careful thought, independent analysis, voluntary interaction, and strategic choice in the face of new information. This makes agent behaviour more difficult to predict than system behaviour. People's thinking, analysis, interaction and choice often reflect their location and structure within society, their preferences, and the opportunities and constraints they perceive.

INSTITUTIONS are the rules, laws, customs, social norms and conventions that guide, enable, and constrain people's behaviour, defining the range of perceived possible responses or actions in a given situation. Institutions are created to reduce uncertainty, to maintain continuity of social patterns and social order, and to make our interactions more stable and predictable.

EXPOSURE is whether or not a system or person is in a location that is prone to particular climate hazard, such as temperature increases, rainfall variability and change, or changes in the frequency or intensity of tropical cyclones and storms. Future exposure can be systematically explored through scenarios that explore potential climate changes in relation to specific systems, specific groups of agents, and specific institutional structures.

Source: Climate Resilience Framework: Training Materials, Series 1: Establishing Resilience Principles

Handout 9: Factors influencing resilience



Source: Toward Resilience: A Guide to Disaster Risk Reduction and Climate Change Adaptation

Handout 10: Making decisions under deep uncertainty

Many approaches to decision making focus attention on reducing uncertainty, for example by making predictions of factors and model parameters that affect decisions. But when uncertainty is difficult, if not impossible, to characterize (e.g., the likely climate and land use in specific locations in a century from now), focusing on predictions can lead to gridlock. Approaches like robust decision making (RDM) are different in that they seek to acknowledge and manage deep uncertainties by identifying decisions that are robust across a wide range of potential futures. Analysts run models over hundreds or thousands of different sets of assumptions to understand how strategies and plans perform in a wide range of conditions. They use statistical analysis and visualizations to identify the specific conditions that would lead to selecting one decision over another. This information is shared in an iterative process with decision makers in an effort to identify and build consensus around robust strategies. The World Bank is presently using RDM in flood risk management studies in Ho Chi Minh City and in infrastructure investments in Africa.

Source: Lempert et al. 2013a and b; Hallegatte et al. 2012.

Handout 11: Participatory Climate Change Adaptation Appraisal[5]

The PCCAA approach uses participatory methodology to identify "bottom up" asset vulnerability to climate change, as well as strategies for asset adaptation in order to build long-term resilience, protect assets during adverse weather, and rebuild those assets. The objective of the PCCAA is twofold: first to understand the asset vulnerability of poor households, businesses, and community organizations as they relate to severe weather associated with climate change; and second to identify the types of asset adaptation strategies implemented by the same social actors to address this issue. The PCCAA comprises two components that (1) identify the links between different vulnerabilities and the poor's capital assets, and (2) explore and classify the asset-based adaptation strategies as households, small businesses, and communities develop resilience and resist, or recover from, the negative effects of climate extremes. Following is a generic methodology used

in the PCCAA:

1. Selection of researchers and local teams

Foremost, participatory research requires collaborative research partnerships with researchers (and their counterparts) that have had research experience using participatory urban appraisal (PUA) techniques. Constructing research teams to undertake PUAs requires skills in judging local capacities.

2. Fieldwork and research

Once all the preparation and fieldwork is completed, the actual research takes place, lasting five weeks. This breaks down into the following tasks:

- Week 1: Capacity building of local researchers to train them in the conceptual framework and participatory tools and techniques used in the study
- Week 2: Study of pilot community
- Week 3 and 4: Study of communities
- Week 5: Analysis of data and completion of preliminary research results

3. Research techniques

The research techniques include group discussions, semi-structured interviews (one on one), direct observation, ethno-histories and biographies (one on one), and local stories, portraits, and case studies.

4. Locations for conducting a PUA in communities

Two main ways exist for implementing a PUA in a community: (1) conduct formal focus group discussions in a local community centre or communal building; and (2) conduct informal focus groups, identified while walking through the community, as well as in shops and bars, at sports fields, or outside people's houses.

5. Analysis of the research data

The analysis proceeds through four stages: creating daily field notes, developing preliminary research findings, reworking the data, and developing a final report.

[5] Urban Risk Assessment, The World Bank, Eric Dickson, Judy L. Baker, Daniel Hoornweg, and Asmita Tiwari

Rapid risk and institutional appraisal: A top-down review of the policy domain, in terms of the institutions tasked to deal with climate change, the relevant national, regional, and municipal policies, regulations, and mandates relating to climate change, as well as associated programs and budgets.

Consultation and validation of results: A process dependent on the level of commitment by different social actors.

Handout 12: Mainstreaming across administrative levels to enable national resilience in the Philippines

The Philippines is one of the most disaster-prone countries in the world: weather-related disasters account for 90% of annual damages and cause on average 0.7% of losses to GDP growth. At least 60% of the country's total land area is exposed to multiple hazards, and 74% of its population is considered at risk. Rapid urbanization has led to urban squalor and the proliferation of unplanned, informal and overcrowded settlements, often situated in high-risk areas. Poor urban practices have also aggravated flooding risk over the past years and are expected to worsen in the future. Furthermore, 70% of the 1,500 municipalities located along the coast are vulnerable to sea level rise. The country is already witnessing longer episodes of drought and El Niño events, causing a large drop in the volume of agricultural production and sharp declines in GDP.

In October 2009, the Philippines was hit by the devastating Tropical Storm Ondoy (Ketsana) and Typhoon Pepeng (Parma), resulting in recovery and reconstruction requirements totaling US$4.4 billion, including US$2.4 billion in public spending needs. In the aftermath of the typhoons, the Government of the Philippines, with support from the World Bank, GFDRR and partners (Asian Development Bank, the Australian Agency for International Development and the Japanese International Cooperation Agency), undertook a PDNA resulting in a series of recommendations to strengthen the country's resilience to natural disasters. The PDNA was followed by a flood management master plan for metropolitan Manila to build the resilience of surrounding areas to future flood events.

In 2010, the Government of the Philippines signalled a policy shift from post-disaster response to prevention and risk reduction. It enacted the Disaster Risk Reduction and Management Act and adopted a Strategic National Action Plan for Disaster Risk Reduction, effectively institutionalizing a comprehensive and integrated approach to risk reduction. The Government recognized that reforming the policy and action framework on disaster risk management must be a national priority, requiring a cross-sectoral national strategy that applied a unified approach across administrative levels. In addition, a March 2013 National Summit for Local Chief Executives agreed to a comprehensive understanding of their role in disaster risk management, as well as mechanisms for the transparent and accountable use of resources.

Prioritizing the strengthening of local level governance, the Philippines is now pursuing the integration of climate resilience into local ordinances, policies and plans. Targeted actions include the operationalization of laws, policies, plans and other legal documents highlighting the Local Chief Executive's responsibilities in disaster risk management, standardization of a local disaster risk management plan template, optimizing trade-offs, employment and tourism priorities, and enhanced coordination and communication in times of disasters.

The Philippines is planning to continue focusing on mainstreaming with specific emphasis on integrating disaster risk management and climate resilience into the Comprehensive Land Use Plan and other local laws, policies and plans. Local communities and stakeholder coordination and communication will be strengthened through a common platform, and a whole-of-nation approach to DRM decisions pursued.

Handout 13: Ethiopia's Productive Safety Nets Programme

The Productive Safety Nets Programme (PSNP) is a large national social safety net program that responds to both chronic food insecurity and shorter-term shocks (mainly droughts) among Ethiopia's poor. It targets a highly climate-vulnerable population, offering a practical model of how social safety nets can be designed to meet the social protection needs of the most vulnerable, while simultaneously reducing risks from disaster- and climate-related impacts.

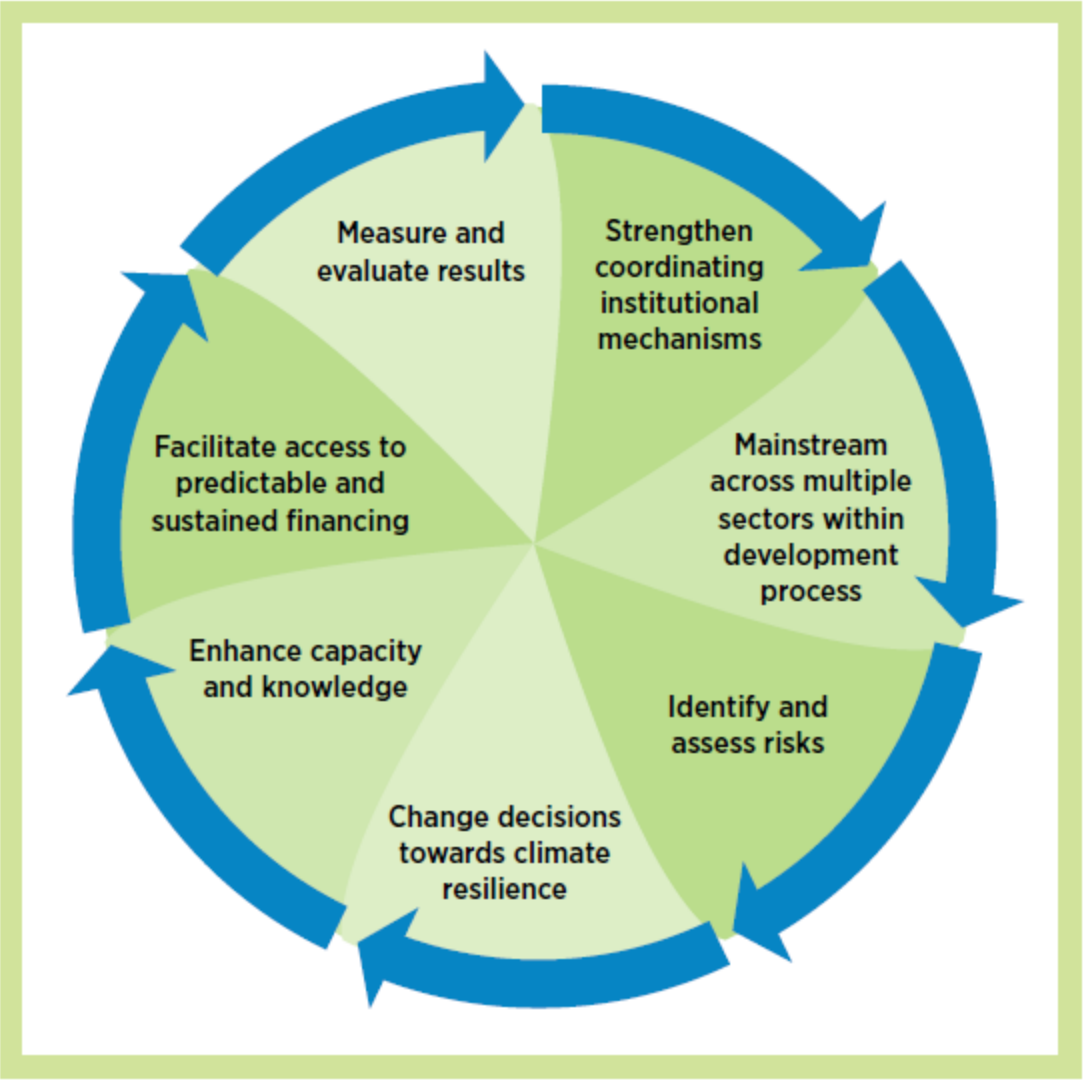
The PSNP incorporates a number of interesting features, including: public works activities geared toward improving climate resiliency; a risk financing facility to help poor households and communities, including households outside of the core program, better cope with transitory shocks; and targeting methods that help the most climate-vulnerable households obtain the full benefits of consumption smoothing and asset protection. The program works through and strengthens existing government institutional systems at all levels rather than creating separate systems.

The PSNP entitles poor households to a secure, regular, predictable government transfer, protects them against the impacts of natural disasters, and significantly improves management of the natural environment that contributes to these risks. It has enabled core beneficiaries to meet consumption needs, mitigate risks and avoid selling productive assets during crises. Evidence shows that livelihoods are stabilizing and food insecurity is decreasing among these households. A related pilot program associated with the PSNP allows poor beneficiaries to work in lieu of paying premiums for crop insurance.

The PSNP is expected to cover 8.3 million people by 2015, and is supported by the Livelihoods, Early Assessment and Protection (LEAP) program. LEAP is a food security early warning system that calculates expected crop yields early in the country's dry season. The information helps humanitarian organizations forecast community needs in drought-prone areas, and can be used to scale up the PSNP if a severe drought is anticipated.

Source: Building Resilience to Disaster and Climate Change through Social Protection, World Bank, May 2013.

Handout 14: Process of integrating climate resilience into development



Source: World Bank, 2013. Building Resilience: Integrating climate and disaster risk into development. Lessons from World Bank Group experience. The World Bank, Washington DC.

Handout 15: Can Haiti build back better

All eyes are on Haiti to see if some good can come of the tragedy which overtook the country on 12 January 2010 when its capital, Portau- Prince, was shaken to its foundations by an earthquake that killed 230,000 people and left some 1.5 million people homeless, according to Haitian government figures. Can the impoverished nation 'build back better' in the years to come? Can it, in collaboration with the international humanitarian community, restore not just its physical infrastructure but also rejuvenate its urban governance and risk reduction capability? In a country that has a slum prevalence rate of 70 per cent, there had been previous attempts to coordinate urban planning projects between the Haitian government and international aid agencies. But these efforts failed.

According to the 2009 UN-Habitat report Strategic Citywide Spatial Planning, "Lack of coordination between the implementing agencies has been one major reason, but the lack of public participation, weak accountability and transparency, low staff capacity and the centralized system have contributed to the inertia." That inertia hopefully evaporated with the 12 January cataclysm. The long-term question now is how the government and its international partners can implement a post-quake plan comprehensive enough to cover the needs of not just the affected population but the entire nation in the years to come. While short-term relief goals were met – including the provision of temporary shelter materials and food – the long-term shelter needs are complicated by unresolved issues concerning land ownership, urban density and debris clearance to allow families to return to the sites of their original homes. Designed to hold 250,000 people, Portau- Prince grew to become one of the most densely populated cities in Latin America. Its 2 million people consumed nearly all of Haiti's resources. A mass influx to the capital began in the early 1980s following the swine flu alert worldwide and the subsequent slaughter of more than 2,000 native 'Creole' pigs – the peasants' emergency cash-in-hand. There they built homes with no regulatory oversight, creating new slum areas and further weakening a fragile environment. This unplanned growth hindered the immediate rescue efforts because there were no access roads between streets, just a patchwork of unmarked 'corridors'.

The capital's eight municipalities which, before the quake, shared responsibility for citymanagement with numerous central government bodies, were even less sure of their rolesand mandates after the quake. "It was, in effect, the collapse of what was already a house of cards," said Charles Clermont, who leads the government-appointed commission, charged with housing and relocation. "We didn't even have communication. On top of that, we had to figure out how to communicate with the international community. They have their own rules of the game and we had to figure out how to understand each other." Much of the success of the reconstruction and recovery effort depends on involving and engaging the Haitian people themselves. Quake survivors pulled people from the rubble moments after it happened but they need to work together now and in the years ahead for the long-term good of their communities. Haiti is limping from emergency to temporary shelter to reconstruction, a process that could take several years before all the people affected by the quake are re-housed. Some say it will take five years; others say 25.

Handout 16: Case study: Better enforcement of building safety in Ahmedabad City, Gujarat State, India

In 2001, the Bhuj earthquake in Gujarat State, India, caused the collapse of 80 buildings, over 1,000 flats and 80 houses, including disruption to utilities and services and the deaths of nearly 1,000 citizens. Facing severe criticism due to the damage and loss of lives, the Ahmedabad Urban Development Authority (AUDA) and the Ahmedabad Municipal Corporation (AMC) took immediate steps to amend the General Development Control Regulation (GDCR) of Ahmedabad, and introduce new legislation. In this process, the Gujarat State Disaster Management Authority (GSDMA) played a key role.

How was DRM integrated into the building regulations framework?

Review of building codes. The GSDMA commissioned the Indian Institute of Technology (IIT) Kanpur to review relevant codes for earthquake, fire and wind safety provision and make suggestions for modification. The IIT provided the GSDMA with a wide range of policy recommendations for improved building safety against earthquake hazards. The code was subsequently revised by the State government and following the adoption of the revised code, a public awareness raising campaign was undertaken. This involved the use of television, radio and pamphlets to explain the reason for the revision and the importance of adequate DRM provision for building safety.

Gujarat Professional Engineers Act 2006. In 2003, with no previous legislation to regulate the profession of civil engineers, GSDMA initiated a study to work out a system for licensing engineers through conduct of practical and written tests. After three years the Gujarat Professional Civil Engineers Act 2006 was passed and the Gujarat Council of Professional Civil Engineers was established to test the competency of engineers and issue licenses. Licensing and registration now have clear cut requirements in terms of qualification, experience, competence and responsibilities. Registration is valid for a period of five years and is renewable, but may be revoked if a person is found guilty of negligence or fails to carry out duties.

Building safety checklist. Changes have been made to the process of plan approval. Checklists for building approval have been created by AMC, consisting of about 160-200 fields, and are available online. These checklists simplify the process, and clarify the role of DRM in development.

What should be considered when replicating Ahmadabad's actions?

Defining responsibilities. It is the responsibility of the GSDMA to control and enforce the implementation of the National Building Code. While regulatory processes have been effective, enforcement is lacking. Regular inspection by trusted professionals should identify non-compliance or technical incompetence, and punitive measures should be taken against offenders to discourage this. The construction process must be monitored as closely as possible to ensure adherence.

Easy to follow mechanism. A simple, clear procedure will encourage compliance. Following distinct guidelines set out by the GDCR on the certification of professionals, plan approval, code of conduct and progress monitoring will ensure safe development.

Source: ADPC. 2013. Integrating Disaster Risk Management into Urban Management. Disaster Risk

Management Practitioner's Handbook Series. Bangkok.

Handout 17: 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.

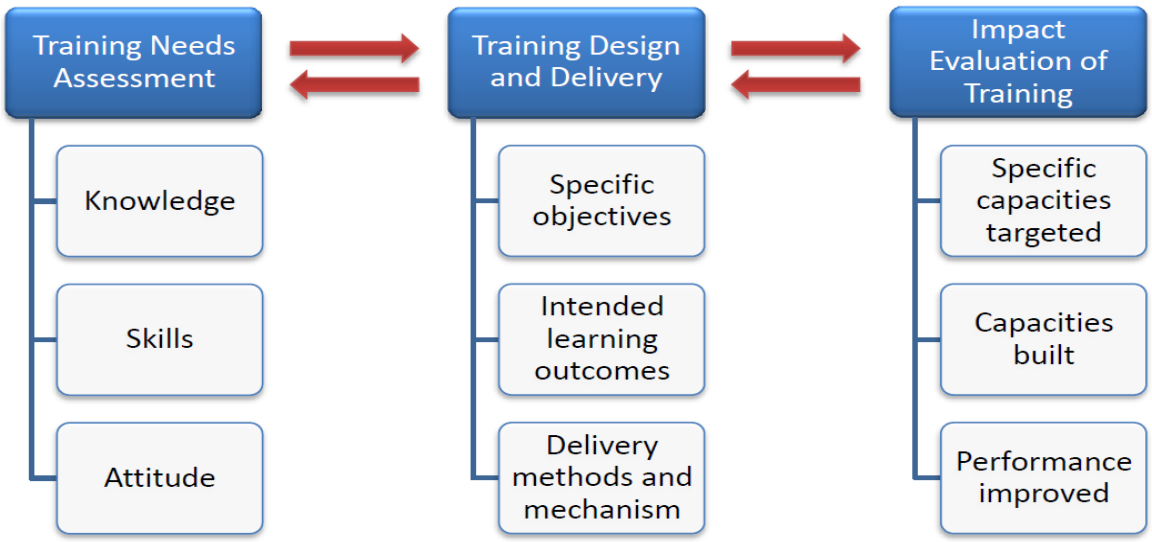
A systematic approach to training (SAT) pre-supposes the following:

- 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.

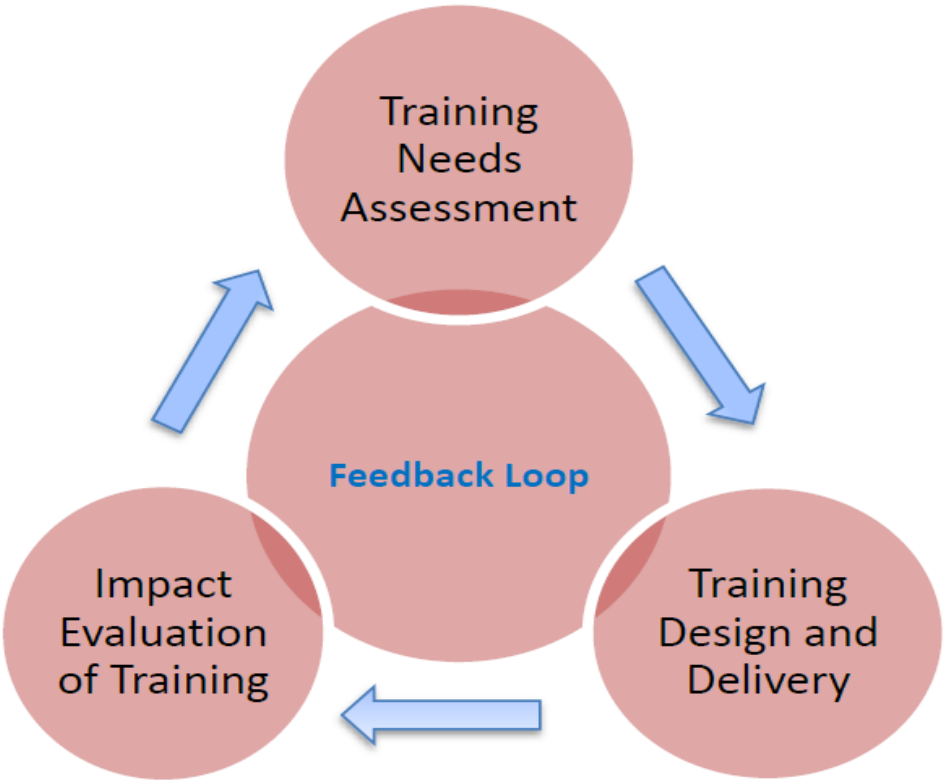
Strategic Framework for Implementation of Training (SFIT)



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.

Feedback Loop



Handout 18: Capacity Needs and Training Needs Assessment

Capacity, Capacity Needs and Training Needs[6]

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-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

[6] Strategic Framework for Implementation of Training(pg 20-21), Deliverable 6, Preparing Long Term Training and Capacity building Strategy, NCRMP

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 Prasar 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 19: Training/Behavioural Objectives: Verbs to Describe Complexity of Behaviour

1. **Knowledge:** The recall of information.

define	name	order
describe	recite	recognize
label	recall	record
list	relate	reproduce
match	repeat	state
arrange		underline

2. **Comprehension:** The translation, interpretation or extrapolation of knowledge.

arrange	explain	interpret
classify	express	locate
describe	indentify	report
discuss	indicate	restate
sort	translate	extrapolate

3. **Application:** The application of knowledge to a new situation.

apply	practice	solve
Choose	prepare	use
Illustrate	schedule	demonstrate
Operate	sketch	measure

4. **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. **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. **Evaluation:** Judgments about the value of material and methods for given purposes.

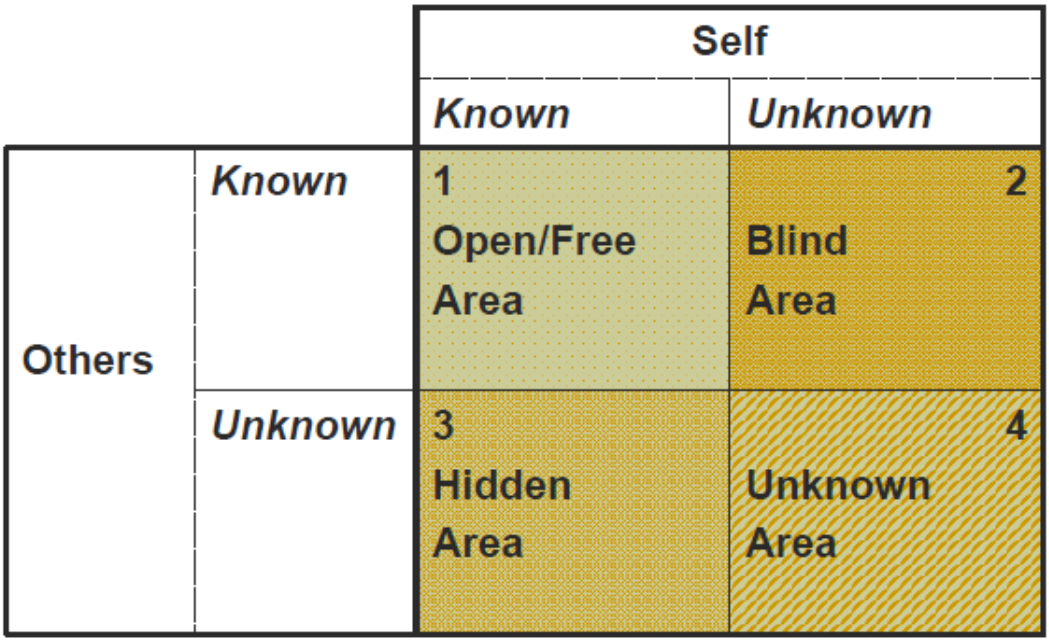
appraise	estimate	select
argue	evaluate	support
assess	judge	value
attack	predict	score
compare	rate	defend

Handout 20: 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



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 21: Stephen Covey's seven habits of highly effective people

Stephen Covey's Seven Habits of Highly Effective People[7]

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

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.

[7] http://www.businessballs.com/sevenhabitsstevencovey.htm

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?

This training module is developed as a tool to train city managers for mainstreaming disaster risk reduction (DRR) and climate change adaptation (CCA) into city development plans (CDPs) and their implementation strategies in India.

Increasing urban population in the country is putting an enormous amount of pressure on limited infrastructure and services. High density of population in cities accompanied with the ever increasing flux of migrant people in search of jobs and opportunities adds to the overall complexity of urban governance. A high percentage of urban migrants live in slums without basic services such as water, electricity, sanitation and health care. During the field study in Kolkata slums in January 2013, people said that 'their daily life in slums is a bigger disaster than any that could hit them in future'.

Administratively India is divided into 35 States and Union Territories, which comprise of 640 districts, 7935 towns including 4041 statutory towns and 3894 census towns (Census 2011). Out of 4041 statutory towns 468 are categorized as class I towns (towns with 100,000+ population) and 70 percent (265 million) of urban population is living in these towns. Out of the 468 class I towns 53 towns are million plus population towns and 45.5 percent (160.7 million) of total urban population are living in these towns (Census 2011). Among the million plus cities three are categorized as mega cities with population of 10 million plus. These are Greater Mumbai (18.4 million), Delhi (16.3 million) and Kolkata (14.1 million). The urban local bodies (ULBs) are categorized as Municipal Corporation, Municipal Councils and Nagar Panchayats on the basis of population of respective municipal areas.

74th constitutional amendment has provided constitutional recognition to the Urban Local Bodies and they are expected to be empowered as units of local self-governance or city Government. Government of India's flagship program Jawaharlal Nehru National Urban Renewal Mission (JNNURM) aims at strengthening of ULBs and development of urban infrastructure including water, sanitation, waste management, storm water drainage, roads, transportation etc. considering long term perspective plan of the city. Rajeev Awas Yojana (RAY) aims at making cities slum free through provision of in-situ development, provision of services, relocation and redevelopment considering whole city approach. Urban Local

Bodies (ULBs) are responsible for preparation of City Development Plan under JNNURM and slum free city plan under RAY.

Generally disaster risk reduction (DRR) and climate change adaptation (CCA) are missing from the urban planning process: these include CDP (City Development Plan), CSP (City Sanitation Plan), SFCP (Slum Free City Plan) and ward plans, which offer a very good opportunity for the integration of DRR and CCA in the city planning processes.

Fast track urban reforms mainly focused on strengthening of the urban local bodies were started in 2005. Preparation of city development plan (CDP) is one of the most important tasks to be completed at the ULB level under this reform initiative. City Development Plans including CSP and SFCP are an opportunity for the integration of disaster risk and climate change resilience in urban planning and sectoral and sub-sectoral development programs. Development/service benchmarking has been initiated under the sector reform programs and inclusion of elements of DRR and CCA in city development plans could be included as capacity benchmarks.

AIM

Training of 175 resource person will be organized NIDM, IIPA and LBS Academy of Mussoori. These resource persons will then organize direct training programs of 68,723 elected representatives at the regional level through state DM units in consultation with State urban development department / directorate.

WHO IS INVOLVED?

Trainee Profile

Group A officers involved in project management at city / town level may be trained by RCEUS in guidance of NIDM. State DM units in consultation with State urban development department / directorate urban local bodies collect State specific information about number of local bodies and elected representatives and 3 days district level training programs for the elected representatives can be organized. After arriving on the number of elected ULB numbers to be trained in span of 5 years required numbers of trainers and master resource persons may be calculated. Master resource persons may be trained at NIDM and trainers training may organized at regional level in collaboration with RCEUS (Regional Center for Urban and Environmental Studies).

Overall Numbers of Trainees in the ULB Sector

ULB sector	
No. of elected members to be trained	**68,723**
Training programme to be organised in five years	4,000
No. of annual training programmes	800 (23 for each state/ UT on an average)
No. of trainers	175*
No. of training modules (one for each state)	35**
No. of master resource persons	NIL***
No. of refresher trainings	1600

*175 trainers are dispersed over 35 states/ UTs @ 5 trainers for each state/ UT.

**One training module for each state/ UT

***Since only 5 trainers are to be trained for each state/ UT, the State Urban Development Department/State Urban Development Institute can take care of it easily, if necessary by involving sector/ subject specialists.

Duration

This Training of Trainer (TOT) module is designed as a set of two sub modules:

1. A base sub-module of 3 days;
2. A TOT sub-module of 2 days;

Number of trainees per course

The training module will be conducted in a batch of 24 participants.

Resource Persons

Identified training experts from leading training institutes including: NIDM, NDMA, IIPA, SIRD and others.

Constraints

Assessment of vulnerabilities related to disasters and climate change are generally missed within the urban planning processes. In most of the cases, an emergency response approach is followed for addressing disaster and climate related emergencies.

Moreover, almost for six decades the development planning process remained largely rural focused. An integrated urban development planning including infrastructure development with provision of housing and basic services for urban poor was initiated in 2005.

This is both a constraint as well as an opportunity for integration of DRR in city development planning.

BASE SUB-MODULE

Aim

To equip resource persons with requisite knowledge and skills and enable them to organize direct training programs for elected representatives on mainstreaming disaster risk and climate change resilience in implementation of sectoral plans and strategies.

Objectives

Performance objectives	Training objectives	Enabling objectives
Trained functionaries (officials and elected representatives) are able to integrate DRR and CCA concerns in their respective city development plans (CDPs).	*By the end of the training, the participants will be able to:* • Relate the disaster risk and climate change with respect to their combined and potential effect on urban vulnerability and development. • Identify the various factors and issues involved in disaster risk and climate change resilient city development planning. • Articulate the relevance of disaster risk reduction and climate change adaptation for sustainable city development planning. • Identify instruments and incentives that facilitate DRR and CC resilience city development planning.	*During the training, the trainees will learn to:* • Approach the issue of disasters and climate related risks from the perspective of an opportunity for sustainable and resilient city development planning and administration. • Importance of participatory planning approaches and methodologies in general and their application in an urban context in particular.

Training Needs

This base module seeks to address the following training needs identified during the study:

At Central and State policy level:

- Disaster - development link and need for mainstreaming DRR into development planning

- Knowledge about instruments and incentives that facilitate mainstreaming DRR into development planning

At Implementation and Operations Level:

- 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
- Preparation and implementation of City / Urban DM action plans and integration of it with DMPs, and DDMAP, SOPs and EOC
- Benefits of mainstreaming DRR into development planning
- Knowledge about instruments and incentives that facilitate mainstreaming DRR into development planning
- Participatory planning and management / Community based disaster management planning

Duration

The base sub-module will be run over a period of 3 days.

Trainee Profile

City managers and town planners working with the municipal administrative setup

Entry behaviour

The present module is aimed at mainstreaming of DRR and CCA into sectoral plans and strategies for the persons involved in policy making, program / project designing at Central, State and City level. The training programs would be organized at two levels one for the officials involved in policy making at central and State level and two for officials involved at city level.

Urban centres are classified in various categories and level of understanding of functionaries may vary according to experience or involvement. Some may have received training in disaster management and for some it might be an unheard approach.

Detailed Training Outline and Learning Units of the ToT Module

Learning units	Objectives	Session(s)	Method	Media / performance aids	Assessment measures	Time
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: Urban Development, Disasters, and Climate Change: Critical Reflection						
	•Examine the linkages between urban development, disasters, and climate change in the context of India with a global perspective •Articulate the	1. Urban development in India: a critical reflection 2. Growth of cities and disaster risks including development induced disaster vulnerabilities	Interactive presentation Questions and Answers Group work Presentation in the	Markers, A4 size sheets, hand-outs and flip charts.	Internal validation	3 hours 50 minutes

	implications of rapid urbanisation on disaster and climate change related risks in India	3. Climate change: implications for urban development and safe cities	plenary			
Learning Unit 2: Disaster Risk Assessment and Management: approaches and strategies						
	•Assess hazard, risk and vulnerability using participatory tools and methods •Recognize the need for a risk aware approach to city development planning •Examine available approaches and strategies for making a shift from risk to resilience in urban development perspective and planning	1. Macro and micro disaster risk assessment: issues and implications 2. Participatory risk assessment: hazard, risk, vulnerability, and capacity assessment (HRVCA) 3. Risk to resilience: shift in urban development perspective and planning	Interactive presentation Questions and Answers Group work Presentation in the plenary	Markers, A4 size sheets, hand-outs and flip charts.	Internal validation	4.5 hours
Learning Unit 3: Participatory planning for disaster and climate resilient city development plans (CDPs)						
	•Articulate the concept and framework of participatory DRR and CC resilience planning	1.Participatory planning: concept, methods and tools 2.Mainstreaming DRR and	Interactive presentation Questions and Answers	Markers, A4 size sheets, hand-outs and flip charts.	Internal validation	3 hours

	•Identify instruments / provisions / measures facilitating DRR / CCA inclusive city development planning •Explain processes and framework for inclusion of DRR and CCA in CDP	CCA concerns into CDPs	Group work Presentation in the plenary			
Learning Unit 4: How to mainstream DRR and CCA into city development plans (CDPs)						
	Equip the participants with the essential know how of mainstreaming DRR and CCA into city development plans and their implementation strategies.	1. Disaster risk reduction (DRR) and climate change adaptation (CCA) inclusive development: a conceptual overview 2. Building back better: concept and practice 3. Preparing strategic action plan outline for mainstreaming DRR and CCA into CDPs	Interactive presentation Questions and Answers Group work Presentation in the plenary	Markers, A4 size sheets, hand-outs and flip charts.	Internal validation	4.5 hours
EVALUATION AND FEEDBACK						
	Evaluation Gather feedback					

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.

Performance objective	Training objectives	Enabling objectives*
In their jobs, the resource persons will: 1. Design and develop training module 2.Facilitate training programs/workshops	*After the training course, the trainees will be able to:* 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 with intended effectiveness.	*During the training, the trainees will learn to:* • Conduct training need assessment • Design a training program in terms of its content, methodology • Evaluate and monitor the training program • Facilitation skills for training

Objectives

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 5: 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 6: 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	• Individual Exercises • Group work • Discussion • Simulation/ Role play	• Handouts • Power point	Internal validation	5 hours

		learning including: creating a learning event and environment 4. learning to listen and listening to learn; receiving and giving feedback; consolidating learning;				
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.

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