MAINSTREAMING CLIMATE RESILIENCE

TERI-APN TRAINING PROGRAM ON
BUILDING URBAN CLIMATE CHANGE RESILIENCE
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BHUBANESWAR, ORISSA

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TERI

Climate resilient cities: a change in perspective

- The level of resilience of our cities and towns is dependent on the quality and performance of the overall urban system.
- Adaptation to climate change and focus on disaster risk reduction is becoming increasingly relevant as the negative impacts of climate change increase.
- “There needs to be a shift, in both adaptation to climate change and disaster risk reduction, from a singular and specific focus on affected infrastructures and locations towards a more integrated focus on overall risks, development conditions, and local area performance”*.

*Source: “ICLEI, 2011, Financing the Resilient City: A demand driven approach to development, disaster risk reduction and climate adaptation - An ICLEI White Paper, ICLEI Global Report“

Climate resilient cities: a change in perspective

- **This calls for :**
  - Mainstreaming climate and disaster risk reduction to become factors in conventional planning processes, project design and development decision making.
  - Developing specialized financial instruments for the risk-oriented components of these projects that cannot be addressed via mainstreaming measures.
  - Building local institutional capacity to prepare, structure and manage large scale redevelopment

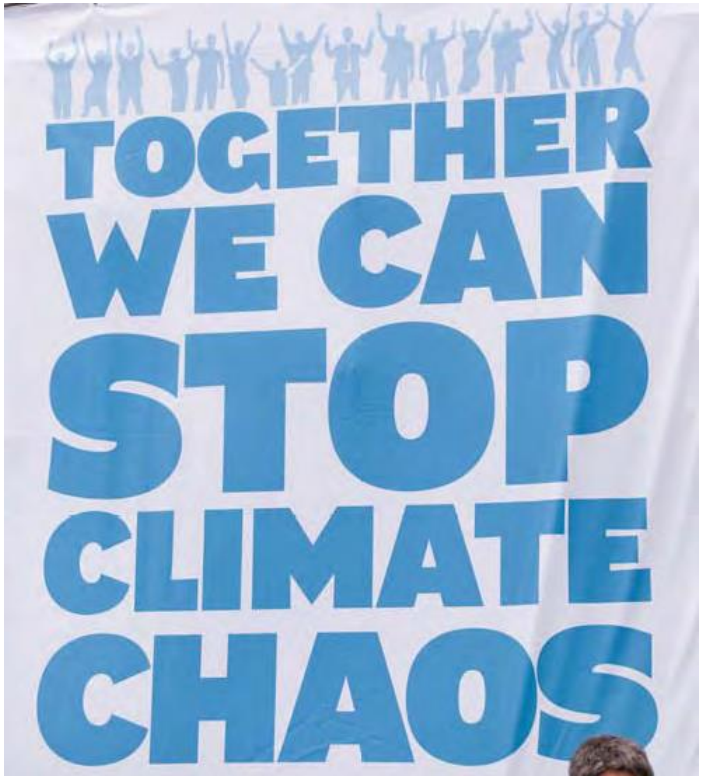
Source: “ICLEI, 2011, Financing the Resilient City: A demand driven approach to development, disaster risk reduction and climate adaptation - An ICLEI White Paper, ICLEI Global Report“

What is mainstreaming

Mainstreaming climate resilience is the iterative process of integrating considerations of climate change into policy making, budgeting, implementation and monitoring process at national, sector and subnational levels.

It is multi year, multi stakeholder effort grounded in the contribution of climate change to human well being, pro-poor economic growth and achievement of the MGDs.

It entails working with a range of government and non government actors, and other actors in the development field.



Definition adopted from the definition of mainstreaming climate change adaptation in mainstreaming climate change adaptation into development planning-a guide for practitioners(www.unpei.org)

Why do we need to mainstream climate resilience

- Recent calamities in Uttarakhand, Kashmir, and Visakhapatnam have brought out the need for building climate resilience into development systems and planning

- Climate change in urban areas interferes with a wide range of existing and emerging policy challenges, among them poverty eradication, water supply and sanitation, scarcity of food and water, and population growth.

- Climate change, therefore, should no longer be considered a solely environmental challenge, addressed in isolation from other social and economic issues.

Why do we need to mainstream climate resilience

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Flash floods throw city life out of gear

STAFF REPORTER

GUWAHATI, Sept 11 – A short spell of rains in the afternoon hours inundated the roads of Guwahati city, exposing the face of the Guwahati Development Department, the civic bodies and the district administration.

The tall claims of the administration to make Guwahati flood-free, submerged under the floodwaters that threw people's lives out of gear for several hours.

As always, the RG Baruah Road, GNB Road and MRD Road were completely submerged in water, with knee-deep density at places. Parts of GS Road also witnessed waterlogging.

A waterlogged street in Guwahati on Tuesday evening. – UB Photos

hours made the situation more chaotic.

"For Guwahatians, it is an

be a folly to expect anything from the State Government or

floods waters from the flood affected areas to provide some

Cities need to consider impacts of slow onset climate change as well as vulnerability to extreme events in their planning decisions, infrastructure planning and land use planning

A strong policy mandate and regulatory backing is needed to start this integration.

When climate change is embraced as an integral part of these challenges, solutions can be designed to more adequately reflect and address myriad impacts upon cities

Integration points for mainstreaming

Action to address climate change in urban areas should be multi-level, involving national-, state-, and city-level governments, as well as multi-sectoral including sectors such as infrastructure and services, urban planning, transport, disaster risk reduction, and housing and construction

1. **Policy**
2. **Regulations**(Building bye laws, Acts etc)
3. **Institutions**
4. **Schemes** like (JNNURM, RAY, Smart cities)
5. **Project level interventions** (DPR, Master plans, CDP

Integration points for mainstreaming

POLICY

An effective policy will :

- Be that which provides for capacity building, mainstreaming, facilitating data, tools, and techniques to enable risk assessment and climate projections.
- Draw out a structure of the institutions and regulations needed to implement the same, and identify windows for financing the actions.
- Facilitate preparatory actions like risk and vulnerability assessmentsto potential climate impacts in the near future.
- Informs the requirements of such assessments like data base, multi-sectoral and multi institutional coordination.
- Guide the overall mechanisms to support resilience mainstreaming into urban development discourse, it should also identify various entry points within existing institutional mechanisms and regulatory framework.

Integration points for mainstreaming

Key points that the policy should address

- **Making a case for climate-related actions and investment:** The need for risk and vulnerability assessments and data base management systems for facilitating the same
- **Capacity building :**The policy must ensure capacity building, competence, and adaptability at various levels of urban governance that would eventually be dealing with mitigation and/or adaptive practices on ground
- **Multilevel engagement:** policy should establish a mechanism to institutionalize the process of this multi-stakeholder engagement; e.g., the national government could incorporate climate resilience in the reforms agenda and resource planning under national schemes, and bring in incentive mechanisms for states and cities. They could also facilitate partnerships with international and non-government actors for technical and implementation support.

Integration points for mainstreaming

Key points that the policy should address

- **Integrating climate resilience into urban development laws and regulations :**

1. Integrating Climate-related issues through the state-level acts and regulations.
2. Resilience interventions could be included into the development regulations of the cities.
3. Integrating measures to bring in climate resilience into national and sub-national schemes and plans

- **Financing urban resilience:** Financial allocation for resilience building and adaptation projects would also be an integral part of the proposed policy. Policy should support and facilitate establishing national- and state-level climate funds and resource planning under various national schemes

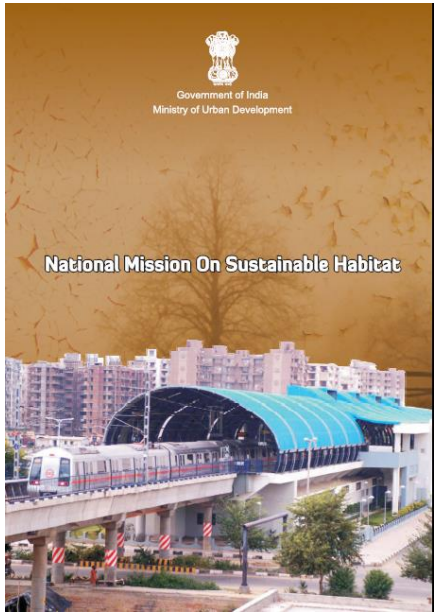
Integration points for mainstreaming

Regulations

Integration of elements that support climate resilience into:

- National level Acts like the Disaster Management Act, National Mission on Sustainable Habitat
- State Level Acts those govern land-use and town planning, defines development regulations and environmental zoning, sector specific regulations like solid waste management, ground water, water supply, waster water and sanitation .
- Example

1. Town and Country Planning Acts
2. Coastal Regulation Zone Notification, 2011
3. Regulation on Land Development and Building Construction
4. Ground Water Regulation Act
5. Building Byelaws and codes



Integration points for mainstreaming

Institutions

- Once mandates are created at national , state and local level; Institutionalization of the same needs to be carried out by creating necessary institutions to implement resilience options and to drive resilient city planning practices in a city.

http://uhcrc.org/home

Surat:

- Surat city is a part of Asian Cities Climate Change Resilience Initiative(ACCCRN).
- The city engaged with The Rockefeller Foundation and the technical partners to come up with a city resilience strategy that identified critical challenges for the city in the wake of climate change
- This led to the formal adoption of the strategy by the municipal corporation and creation of the :

1. **Urban Health and Climate Resilience Centre (UHCRC) and**
2. **The Surat Climate Change Trust (SCCT).**

SCCT

- SCCT is a city level multi-stakeholder public trust, having its office at the City Engineer's Office
- Formulated with the objective of addressing problems arising out of urbanization and climate change and to facilitate capacity building of Surat to address these challenges

S C C T

Surat Climate Change Trust

UHCRC

URBAN HEALTH & CLIMATE RESILIENCE CENTER

UHCRC

- Establishing the UHCRC in order to provide support to the state and central-level urban health support systems to incorporate climate change resilience issues
- Established within SMC's Health Department, this first-of-a-kind institution in the country aims to address public health and climate change adaptation issues
- In February 2013, the SMC announced that it would allocate INR 10 million to UHCRC for its functioning

Integration points for mainstreaming

Schemes

Either floating new schemes or integrating elements of resilience /climate response into the existing schemes of the government like:

- Centrally sponsored schemes like UIDSSMT (Urban Infrastructure Development Scheme for Small and Medium Towns), etc.

- In case of large scale urban transport projects (e.g. metro rail, bus rapid transit), industrial zones, Special Economic zones (SEZ), etc. economic policies or manifesto of the national/ state governments

Integration points for mainstreaming

Project level interventions

- **Master plans-** The land-use plans should be prepared giving due cognizance to the climate risks and vulnerability.
- The development regulations spelt out in the master plans must spell out the vulnerable locations and restrictions/ guidelines thereof for development should be drawn up

- **CDPs-** The city development plans provide details for various projects that need to be implemented and for which central and state level grants have to be sought. The CDPs therefore can integrate climate adaptation projects

International CASE STUDIES

Case studies- Rotterdam

- The Rotterdam Climate Initiative creates a movement in which government, organizations, companies, knowledge institutes, and citizens collaborate to achieve a 50 per cent reduction of CO2 emissions, adapt to climate change, and promote the economy in the Rotterdam region.
- In the area of adaptation, the Rotterdam Climate Proof programme participates in the Rotterdam Climate Initiative, collaborating with knowledge institutes and companies from the water management sector and, the water boards in the Rotterdam region.

Case studies- Rotterdam

Partners

- The Rotterdam Climate Initiative is a partnership between:
- The City of Rotterdam
- The Port of Rotterdam,
- DCMR Environmental Protection Agency Rijnmond,
- Deltalinqs (representation of the corporate sector in Rotterdam)

- The Rotterdam Climate Initiative participates in the C40 Climate Leadership Group- a worldwide alliance of large cities all over the world collaborating on the issues of climate change.

- The RCI closely cooperates with cities such as New York, Shanghai, Singapore, Jakarta, Hong Kong, London and New Orleans

Case studies- Rotterdam

Implementation partners

- Implementation of the programme is a joint activity of two Rotterdam departments:
- The Municipal Public Works Department
- The Department of Urban Development.
-
- In addition there is active collaboration with the Municipal Health Service (GGD), Sports and Recreational Department, Water Boards and various government bodies, NGOs and knowledge institutes. They report to the Municipal Executive. The RCI board are jointly responsible for the coherence, quality and progress of the programme.

Case studies- Rotterdam

Organization structure

- A small-scale project office is responsible for streamlining the activities of the Rotterdam Climate Initiative. For this purpose, the four partners make funds, manpower, knowledge and networks available. A management team including representatives of the four partners takes the decisions.
- The management team reports to an Independent Board. The Board consists of the highest level representation of the four partners. Mayor of Rotterdam is the Chairman.
- The Board of the Rotterdam Climate Initiative have top specialists in their field of expertise as members. Former Prime Minister of the Netherlands, Ruud Lubbers, is the chairman of this RCI council

Case study- Quito Climate Change Strategy

Risks

- Recurrent floods
- Earthquakes
- Landslides
- Increased mean temperatures in Quito between 1.2°C and 1.4°C over the last 100 years causing significant changes in weather patterns and the consequent impacts.

Source: City Level Climate Change Adaptation Strategies: The Case of Quito, Ecuador, 2013
ELLA: Evidence and Lessons from Latin America

Case study- Quito Climate Change Strategy

In response to the anticipated adverse climate change impacts in the future, the Municipality of Quito through its Metropolitan Council adopted the **Quito Climate Change Strategy in 2009.**

The QCCS was established to integrate the adaptation and mitigation policies into Quito's planning policy to address climate change. It establishes guidelines, criteria and principles which the citizens of Quito are expected to adopt in order to address climate change under one comprehensive strategy

Case study- Quito Climate Change Strategy

Focus areas

- Information, Generation and Management:
  - Research and Information Gathering
  - System of Environmental Information
  - Management of Risks and Extreme Climate Events
- Use of clean technology and good environmental practices for climate change adaptation and mitigation
  - Reduction of Emissions
  - Mitigation and Adaptation
- Focus on communication, education and citizen participation
  - Communication and Citizen Participation.
  - Education: Design and implementation of education programs to sensitize the citizens to face climate change
- Strengthening institutional capacities for climate change adaptation.
  - Institutional Capacities: Aimed at including Climate Change considerations into planning and regulatory institutional frameworks.

Case study- Quito Climate Change Strategy

Implementation

- Nodal agency: The Secretariat of Environment under the Municipality of the Metropolitan District of Quito
- Design of policies: Municipal government
- Implementation and execution: concerned agencies such as Municipal Secretariats, City Agencies and Public Companies
- Access to climate data: through an extensive interdisciplinary network which includes the National Institute of Meteorology and Hydrology, Municipal Corporation for Air Improvement and the Quito Observatory Meteorological station

Case study- Quito Climate Change Strategy

Finance

- The funds for the implementation of this Climate Change strategy is mainly mobilized though the city's own financial resources
- Public Companies like Quito Water Supply and Sanitation Company execute their adaptation policies through the funds mobilized from the incremental levies and taxes
- presence of International donors to complement the financial resources of the city.

THANK YOU