



## Proceedings of COP 21 Dialogue

## Cities Resilience to Climate Change



## COP 21 DIALOGUE - Cities Resilience to Climate Change

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The seminar on “*Cities Resilience to Climate Change*” was organized by the French Embassy in India in collaboration with Integrated Research and Action for Development (IRADe) and Asian Cities Climate Change Resilience Network (ACCCRN)

The seminar was inaugurated by H.E. Mr. François Richier, Ambassador of France to India. The distinguished **panelists include** the following:

Moderator & Chair: **Dr. Sudhir Krishna**, Former Secretary, Ministry of Urban Development

- **Dr. Jyoti K Parikh**, Executive Director & **Mr. Rohit Magotra**, Assistant Director, IRADe
- **Smt. D Thara**, Municipal Commissioner, Ahmedabad Municipal Corporation
- **Prof. Jagan Shah**, Director, National Institute of Urban Affairs
- **Mr. Mahesh Babu**, Managing Director, IL&FS



Panelists: Mr. Mahesh Babu, Prof Jagan Shah, Dr. Sudhir Krishna, Ms. D Thara, Mr. Rohit Magotra (Left to right)

## Inaugural remarks by H.E. Mr. François Richier



**Mr. François Richier**

H.E. Mr. François Richier inaugurated the session by welcoming the panelists and guests. He provided insights on how these dialogues series are crucial in addressing a range of themes and issues that are relevant to the upcoming negotiations in Paris. He informed that a series of dialogues are being held which will be compiled in a report and released before COP 21 so as to provide greater visibility to the perspective of Indian stakeholders on issues pertinent to the global climate negotiations. He reminded the audience that COP 21 is very important as it focuses on the issue of financing for adaptation and mitigation, which has remained one of the most crucial issues in the climate change negotiations.

Mr. Schichan Francois introduced Dr. Sudhir Krishna, Former Secretary, Ministry of Urban Development and welcomed him to start the session.

## Setting the Context

### Dr. Sudhir Krishna, Former Secretary, Ministry of Urban Development

Dr. Krishna commenced the session with a comprehensive six point introduction that covered a wide range of topics that are crucial to address from an Indian context at the COP 21.



Dr. Sudhir Krishna

- **Measuring Urbanization in India:** Contrary to the popular belief on urbanization, many fail to realize that high growth takes place in the census towns. Separate strategies for evaluation complemented with policy decisions to handle such growth must be developed.
- **Growth of peri-urban areas:** Provisions should be made to not only recognize the importance of identifying peri urban areas but to also pave ways for amalgamation and use it as a platform to exchange and adopt best practices for their development.
- **Drainage Plan:** Planning is an essential component to build a sustainable city. Emphasis should be laid on integrating the use of GIS and related tools that will assist in both city and country planning that could lead to improved infrastructure including that of drainage systems.
- **Waste Management:** Management of waste, especially solid waste and sewage in cities should be implemented. It is suggested that 100% recycling models practiced in France could be adopted by Indian cities.
- **Financial Sustainability:** There is a need for economic growth oriented projects in the country, especially initiatives supported by the government. One such successful example was JnNURM which has been taken further through Smart City Mission of Government of India.
- **Strong Local Governance:** Capacities and results to address these issues cannot be achieved through a unilateral approach; there is a strong need for the intervention of local governments and bodies who support the cause at the grassroots level.

## Discussions

**Smt. D Thara**, Municipal Commissioner, Ahmedabad Municipal Corporation



**Ms. D Thara**

Ms. Thara started the panel discussion highlighting that Ahmedabad city is well-known for planning and boasts a long history of tradition of planning for over hundred years. She shared that Ahmedabad is one of the lowest carbon emitters in the country largely attributing it to the results of planning. In her opinion, rigid structures lead to reduced results and hence the city decided to implement a regulatory framework for villages in and around the city with some scope to work around it. The infrastructure services should be inclusive and accessible to poor as well.

She further said there was a need for close cooperation among national, local authorities and civil societies including NGOs to formulate efficient action plans and ensure that they are implemented at every level. These efforts have not gone unrecognized; presently there are over 100 buildings that are in the transit zone while simultaneously addressing multiple issues including drainage, water, waste etc. She said proper drainage system, waste management, rain water harvesting and educating the local people is the foundation of any well-planned city. Ahmedabad has taken some remarkable initiatives towards minimizing the effect of natural hazards including robust implementation of heat action plan; she pointed that more efforts are needed for ensuring climate resilience.

Dr. Thara mentioned that Ahmedabad Municipal Corporation is financially sound and emphasized the importance of audits and setting up monitoring systems for the cities. The city government was easily able to save over INR 5 crores just by conducting audits and setting up compliance procedures. Further, she said these small actions accumulate to results and Ahmedabad is the closest city to reality in terms of planning.

Ms. Thara also mentioned that Ahmedabad city has well built road infrastructure; devoid of traffic congestions and in coming future the available road space and quality of life a city offers will become essential parameters for rating smartness of the cities. BRTS, a rapid bus transit is a great example to show that reserving space for public transit is a priority in the city's plan.

**Prof. Jagan Shah**, Director, National Institute of Urban Affairs



**Prof Jagan Shah**

Mr. Shah, steering the discussion towards COP 21 pointed out that the COP document contained two exclusive paragraphs directed at urban development which he believed is a great start towards the work that will proceed. He emphasized that the government should recognize and include 'regional' in their approach and is confident that this will create a paradigm shift. The smart city mission incentivizes compact city development and Prof. Shah suggested that as a next step we must focus on co-benefits and agglomerate a lot of actions. Prof Shah mentioned that cities are the growth engines of a country; hence their resilience to changing Climate must be a point of concern for all developmental plans and missions. The top priority of cities must be to go towards minimum waste generation mode; this demands a change in behavioral pattern of the citizens; wherein a cut in demand can be an option for them.

He specifically brought to notice the need for decoupling; growth from consumption. He concluded raising two important concerns that needs to be addressed a) The urban development sector is plagued with lack of data and this will remain a problem and obstacle unless and until tools are identified and implemented b) There needs to be a demand and delivery balance with changing lifestyles.

**Mr. Mahesh Babu**, Managing Director, IL&FS



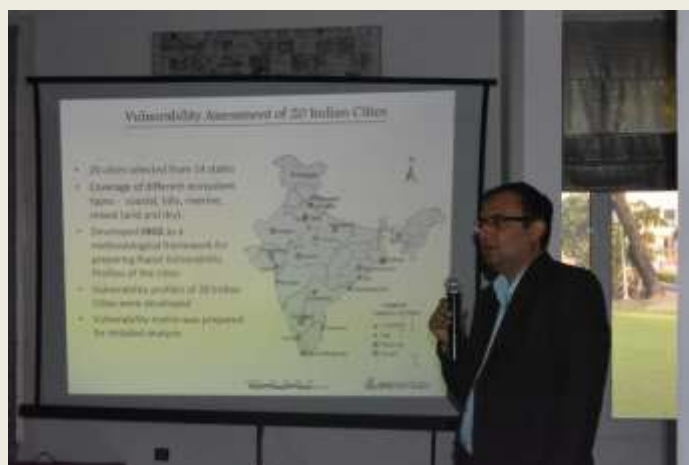
**Mr. Mahesh Babu**

70 million tonnes of municipal waste is generated per year in the cities, which is estimated to increase to 165 million tonnes per year by 2030. He shared that huge land area is currently used for dumping waste and just by implementing waste clearance drives and management of waste, the city alone will recover a space of 165000 acres of land. Mr. Babu highlighted that Waste management is critical to enhance resilience of the city.

He provided an example of integrated waste management with Construction and Demolition Debris (C&D) waste and informed that IL & FS has taken pioneering initiative by starting a C&D waste management plant at Burari, Delhi. The Burari plant processes mixed Indian C&D waste which was earlier being dumped in River Yamuna; it is engineered to process 2 million tons of waste which would save over 25 acres of land valued at over Rs. 250 crores. On a more positive note, the waste is now being used to produce tiles, pavement blocks and road sub-bases for using them in building city infrastructure and a pilot project is being carried out by IL& FS for constructing roads in Delhi.

Citing another example Mr. Babu also talked about the Ghazipur waste to Energy plant constructed by IL&FS with a targeted processing capacity of 2000 TPD of waste, production of 700 TPD of RDF (Refuse Derived Fuel – RDF) and generation of 12 MW of power. He concluded with a note on achieving circular economy through local solutions where the compost generated through waste processing is being supplied to the farmers by using the same transport used to supply vegetable and fruits in the city from the villages. IL&S MSW Composting plant is first plant to be issued with Carbon Credits.

**Dr Jyoti K Parikh and Mr. Rohit Magotra, Assistant Director, IRADe**



**Mr. Rohit Magotra**

IRADe shared work done as Centre of Excellence for Urban Development and Climate Change in 19 Indian states and 29 cities on various issues related to city resilience. IRADe's vulnerability assessment analysis of 20 cities in India highlighted that all these cities were prone to multiple hazards such as flood, cyclones, droughts, thunderstorms, heat waves, cold waves etc. These hazards would further aggravate the strains cities face like poverty, inadequate services, infrastructure deficits and environmental stress due to climate change.

Cities contribute around 58 per cent to the country's GDP, which is expected to grow to 70 per cent by 2030, Moreover Urban India, will swell to 600 million by 2030, adding an additional 223 million new inhabitants and building, 70 per cent of the infrastructure of these future cities over the same period of time. He further added that it is necessary to build climate resilient cities because it has been evident that the frequency and intensity of Climate induced hazards have increased globally and none of the cities can afford to lose the progress it has made in years. Stressing on the issue he cited the economic losses caused by cyclone Hudhud in Vishakhapatnam which were estimated to be around 11 billion USD while losses due to floods in Srinagar in Jammu and Kashmir, were around 16 trillion USD.

Mr. Magotra shared details of the project Climate Resilient Smart Cities (supported by Rockefeller Foundation under ACCCRN), wherein IRADe is engaged in providing inputs for integrating Climate resilience in smart city framework of Govt. of India and presented an exhaustive list of smart solutions (sector wise) needed by Indian cities. He stressed on the need for working towards integration of climate resilience, mitigation & adaptation strategies in the smart cities framework so that, Indian cities are not only smart but also responsive to its local environment & citizens. Mr. Magotra further added:

- There is need to improve basic infrastructure (solid waste management, water supply, and sewerage storm water drainage), efficient public transport, promoting usage of low emissions vehicles like electric cars, promoting cycling and sidewalks for pedestrians offer solution towards reduction of Green House Gases. Smart city plans should include a road map of how Service Level Benchmarks can be achieved by each city. SLBs can be used as indicators to measure the resilience of city



- GIS based city mapping is an important indicator for climate resilient infrastructure and be included in the planning framework. GIS is an important tool that offers decision-making system for city authorities and citizens to map and update the status of natural and manmade infrastructure.
- Multihazard Hazards based vulnerability mapping is needed for understanding the risks and preparedness of cities. IRADe's study of 10 cities found that none of the cities have documented multihazard timeline and city development plans are devoid of this. Hence, it is must to develop data management system for maintaining and updating related data to help city decision makers and citizens. Decentralized multihazard early warning systems should be planned for the cities adopting citizen oriented communication technologies.
- Critical service mapping is an essential component considering worst scenarios. IRADe has mapped the location of critical services for 10 cities in India.
- Contingency plans are important attribute of resilience and such plans should be salient feature for smart city plans.

He concluded by highlighting the importance of inter-department information and co-ordination to ensure collective work in different capacities can help towards achieving a sustainable future.

## Concluding the session

Dr Jyoti K Parikh, Executive Director, IRADe discussing some of the findings IRADe's projects was able to provide to key decision makers pointed out that climate resilience cities are of significant importance and needs to be addressed at all levels. She believes that Climate change could become a strategic political and economic concern as it starts to erode the country's economic performance and affect the lives and livelihoods of millions of people, hence resilience should be discussed at the COP 21 invoking discussions and suggestions paving the way forward. She concluded by saying that **"If we are to meet future challenges with effective solutions and sufficient level of preparedness, we must begin today to devise mitigation and adaptation strategies for the cities which will lead way to development of climate resilient and low carbon cities"**.



**Dr. Jyoti K Parikh**

The seminar concluded with vote of thanks by Dr. Sudhir Krishna.