National Institute of Urban Affairs

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SUDSC WEBINAR SERIES 7

Climate-proofing Urban Infrastructure (focus on Flood Resilience)

Time
15:00 to 16:30 Hrs (IST)

Date
23rd February, 2024

Mode
Online

Background

The escalating pace of urbanisation and the resultant anthropogenic influences, coupled with hydrologic extremes owing to climate change, have significantly amplified the frequency and intensity of natural disasters. The unpredictable nature of these risks necessitates the integration of climate resilience measures into existing and proposed urban infrastructure. India, notably, grapples with recurrent vulnerability to extreme weather events, including floods, storms, heatwaves among others affecting vast areas of the country. Statistics indicate that floods have affected over 40 million hectares out of its total geographical expanse of 329 million hectares.

The report on Global Infrastructure Resilience: Capturing the Resilience Dividend, published by the UNDP and CDRI in 2023 states that most of the infrastructure that will be required by 2050 is yet to be built. Recent estimates of the annual investment required to address infrastructure deficits, achieve the SDGs, and achieve net zero by 2050, amount to $9.2 trillion of which $2.76 trillion must be invested in low- and middle-income countries (LMICs).

The Report also emphasises on how resilient infrastructure fosters growth, reduces poverty, improves air quality, and creates jobs. Sustainable infrastructure designs today will shape climate resilience for future generations.

Effectively addressing these challenges mandates adoption of resilient planning and policy interventions, fostering iterative, inclusive, holistic, and integrated processes, capable of adeptly responding to the social, economic, political, or technological changes. Undertaking risk assessment is an important step for understanding the likelihood and extent of the potential impact and consequences of the disaster. Such assessment helps in identifying a range of possibilities in terms of measures, resources, and scale of interventions required.

Link to join the Webinar

Platform: Microsoft Teams-Online
https://shorturl.at/eiry0
Meeting ID: 318 188 943 305
Passcode: npYSJF

With regards to flood management, Government of India (GoI) has undertaken many initiatives. For instance, the National Action Plan on Climate Change (NAPCC), launched in 2008, recommends approaches to address challenges posed by climate change. Similarly NDMA crafted the National Disaster Framework in 2008, for addressing flooding through institutional mechanisms, disaster prevention strategies, early warning systems, disaster mitigation, preparedness & response, among others. Notably, the Guidelines on Urban Flood management were also issued in 2010.

In response to the devastating Chennai floods in 2015, the TCPO of the Ministry of Housing and Urban Affairs (MoHUA) devised the Standard Operating Procedure (SOP) focusing on preparation of city-level action plans for urban flooding. In 2016, the government launched the National Disaster Management Plan (NDMP), featuring a dedicated section on strategies for mitigating urban flood risks. The MoWR/CWC has been designated as the nodal ministry/ agency responsible for flood management in cities. These initiatives collectively underscore the imperative need for developing a comprehensive and coordinated effort for climate-proofing urban infrastructure, with a specific focus on enhancing flood resilience. Prioritising flood resilience and climate-proofing of urban infrastructure will be a step towards building sustainable, climate-resilient cities that can withstand future climate challenges.

About the Webinar

NIUA has entered into a strategic partnership with GIZ for the Sustainable Urban Development in Smart Cities - Phase II (SUDSC II) project, which is jointly implemented by the Ministry of Housing and Urban Affairs (MoHUA), Government of India, and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). Under this project, NIUA and GIZ have jointly initiated the "SUDSC-II Webinar Series" to support setting up of Communities of Practice. The webinar series is a set of curated dialogues/ discussions focusing on urban topics related to municipal finance, climate resilience, digital innovations for urban governance.

Under this series, the 7th webinar titled **"Climate-proofing Urban Infrastructure (focus on Flood Resilience)"** will largely delve into the following discussions:

- need for developing a baseline understanding of the flooding pattern in urban areas, by undertaking a flood risk assessment (including parameters, potential data sources, criteria, and the process, etc.); with special emphasis on risk for vulnerable groups (like children, elderly, women, economically weaker section, etc.);
- interventions and techniques for building required flood resilience (including technical, financial, and governance aspects) that can withstand and adapt to the challenges posed by flooding.

The webinar will emphasise on importance of multi-stakeholder collaboration, policy integration, capacity building, and innovative financing mechanisms to mitigate urban flooding. Furthermore, real-life case studies from cities that have successfully implemented flood resilience measures will be discussed and deliberated.

Session	Speakers	Discussion Points
Introduction (10 mins)	Moderation by NIUA Team	• Introducing the Webinar and the topics to be covered • Introducing the Speakers
Plenary 1 (20 mins)	**Ms Amparo Samper Hiraldo** Senior Disaster Risk Management (DRM) Specialist, The World Bank	• Need/ purpose of undertaking flood risk assessment: including parameters, potential data sources, criteria, process, etc. • Key challenges in undertaking the assessment (with special emphasis on vulnerable groups)

Session	Speakers	Discussion Points
Plenary 2 (20 Mins)	**Dr Umamaheshwaran Rajasekar** Advisor, Urban Resilience CDRI	• Urban planning/ design related interventions and emerging technologies for integrating flood resilience into development of new infrastructure as well as retrofitting existing infrastructure; • Policy and governance frameworks that support effective flood resilience planning and implementation at the local/city, regional, and national levels; • Challenges/ limitations of implementing interventions
Plenary 3 (20 Mins)	**Dr Sekhar Lukose Kuriakose** Member Secretary, Kerala State Disaster Management Authority (ex-officio) & Head (Scientist), State Emergency Operations Centre	• Case study on climate-proofing urban infrastructure for flood resilience and sharing of learnings (including specific recommendations pertaining to vulnerable groups)
Q&A (20 Mins)	Moderated discussion	• Q&A session and open discussion

Profile of Speakers

Ms Amparo Samper Hiraldo
Senior DRM Specialist,
The World Bank

Ms Amparo Samper Hiraldo holds a Bachelors Degree in Civil Engineering-Hydrology Line and a Masters in Hydraulic and Environmental engineering. She has over 15 years of experience working in Flood Risk Assessment and Management including urban space. In the last years as World Bank Staff she has been supporting and advising different governments in Europe and South Asia in flood risk management matters. She worked in more than 10 countries (e.g., Spain, Mozambique, Cambodia, Lao PDR, Viet Nam, Thailand, Albania, Kosovo, North Macedonia, Montenegro, Poland, Turkiye, Romania, etc.)

Dr Umamaheshwaran Rajasekar
Advisor, Urban Resilience
CDRI

Dr. Umamaheshwaran Rajasekar is Urban Resilience Adviser at the Coalition for Disaster Resilience Infrastructure (CDRI). He has over two decades of experience developing country engagement strategies for bilateral and multi laterals, national policies on climate actions, disaster resilience and early warning systems. He has been the team leader and project manager for over 70+ projects and spearheaded some of India's pioneering resilience efforts, including establishment of Climate Centre for Cities at National Institute of Urban Affairs and development and implementation of climate assessment framework across 126 cities through Smart City Mission, Govt. of India.

Dr Sekhar Lukose Kuriakose
Member Secretary,
KSDMA

Dr. Sekhar Lukose Kuriakose is serving as the Member Secretary (Ex-Officio) of Kerala State Disaster Management Authority. With extensive experience, he lead climate change adaptation efforts through the Kerala State Climate Change Adaptation Mission. Dr. Kuriakose's commitment to decentralising risk management and fostering resilience is evident in collaborations with institutions like the Kerala Institute for Local Administration. His contributions, including the Kerala Warnings, Crisis, and Hazards Management System, continue to shape disaster preparedness in Kerala and beyond.