

COURSE SYNOPSIS

Making Cities Resilient

6th January to 19th January 2027

(2-week Training Course under ITEC Programme)

Course Introduction, Proposed Dates and Location:

HUDCO's Human Settlement Management Institute (HSMI) proposes to conduct a two-week training course for overseas professionals from ITEC partner countries on the theme – “Building Resilient Cities”. The course is scheduled from 6th January to 19th January 2027 at HUDCO's Human Settlement Management Institute, New Delhi.

Course Rationale:

In recent years, cities across the globe have experienced a sharp increase in vulnerability to a diverse range of environmental, health and economic crises. Natural disasters, such as floods, droughts, cyclones, and heat waves, have intensified due to climate change, while pandemics like COVID-19 have exposed significant gaps in urban infrastructure and planning. Unprecedented floods, droughts, and increasingly frequent cyclones have caused widespread destruction, displacement, and loss of life. These events have placed immense pressure on urban infrastructure, exposed vulnerable populations, and raised the urgency for cities to be resilient. From managing water resources to improving waste management, building resilient cities is imperative to safeguard livelihoods, reduce disaster risks, and protect the environment. These events have highlighted the urgent need for cities to adapt and build resilience against a growing range of shocks and stresses. The lack of affordable housing, poor infrastructure, and limited access to social services exacerbate the effects of disasters. Global cities face increasing inequalities, exacerbating vulnerabilities and creating barriers to recovery. Resilience planning must include not only physical infrastructure improvements but also strategies that address social equity, inclusion, and economic stability. Natural and technological solutions for addressing earthquakes, floods, as well as strategies to overcome challenges arising from the direct and indirect economic impact of natural disasters.

The course addresses the global importance of urban resilience in the context of rapid urbanisation and climate change. It would help participants to understand the key terms and concepts related to urban resilience, risk reduction, vulnerability, adaptation, and mitigation. It will expose participants to some best practices adopted across India for financing resilient cities.

Aim of the Course:

The program aims to equip participants with the knowledge and practical tools needed to create cities that are resilient to environmental, social, and economic challenges. It seeks to provide a deep understanding of urban resilience concepts and practices, while fostering a collaborative learning environment that encourages the exchange of best practices and ideas.

Objectives of the Course:

This two-week training program on "Making Cities Resilient" aims to provide participants with the essential knowledge and tools to understand urban resilience and the implementation of urban resilience strategies. Over the course of the training programme, participants will explore the core concepts of urban resilience, including its importance in the face of climate change, economic shifts, and social challenges. They will gain insights into key components such as climate, seismic

resilience, urban floods, man-made disasters, economic, and social resilience, and learn how to analyse vulnerabilities and risks within urban environments. The program also delves into best practices for financing resilient infrastructure. The main objectives of the programme are:

- To understand how rapid urbanisation shapes city-level risks and resilience challenges, and how these dynamics influence long-term urban sustainability.
- To build practical skills for assessing, mapping, and prioritising urban vulnerabilities as a foundation for resilience planning.
- To develop a comprehensive understanding of key urban hazards such as floods, earthquakes, heatwaves, and man-made disasters and explore both engineered and nature-based resilience solutions.
- To gain knowledge of resilient and green building practices that reduce risk, enhance adaptive capacity, and support climate-responsive urban infrastructure.
- To analyse the direct and indirect economic impacts of disasters on cities and identify strategies, policies, and investments that strengthen urban resilience.
- To familiarise participants with national and global programmes, frameworks, and best practices that advance the Making Cities Resilient agenda.
- To explore innovative financing mechanisms, partnerships, and tools that enable cities to plan, fund, and implement resilience initiatives effectively

Course Outcomes:

By the end of this two-week training program on urban resilience, participants will gain a comprehensive understanding of urban resilient cities. Participants will develop an understanding to differentiate between the three key components of urban resilience, climate and economic resilience, and understand how each contributes to ensuring cities remain sustainable amid environmental, financial, and social challenges. During the training sessions, they will develop the skills to assess and map urban vulnerabilities, taking into account environmental risks and socio-economic disparities. Additionally, participants will gain knowledge of disaster preparedness strategies, including risk reduction, early warning systems, emergency response, and recovery planning. They will develop an understanding of social vulnerabilities such as poverty and inequality. Participants will acquire a deep understanding of the principles of economic diversification and financial resilience. They would also develop an understanding of the best practices for financing resilient cities.

Course Contents:

Module 1: Understanding Resilient Cities

This module serves as the foundational introduction to the concept of resilient cities and lays the groundwork for understanding why resilience is crucial in today's rapidly evolving urban environments. A perspective of global frameworks will be provided, like the Sendai Framework for disaster risk reduction, Kyoto protocol, Paris agreement, etc., highlighting different approaches and best practices from cities worldwide, illustrating how resilience is shaped by local contexts. The module emphasises the growing necessity for cities to be resilient, particularly in the face of challenges like rapid urbanisation, resource scarcity, and the increasing frequency of extreme weather events caused by climate change. Using risk mapping and hazard assessment techniques, participants will learn to identify potential disaster hotspots, assess vulnerability factors, and understand the likelihood and impact of various disasters. This allows for more informed decision-making in the design and implementation of resilience strategies. Risk mapping and hazard assessments also help cities prioritise resources and develop mitigation plans. The module will cover the following key areas:

- What are Resilient Cities?
- Characteristics of Resilient Cities

- Why do cities need to be resilient?
- The Drivers of Urban Resilience
- Disaster Risk Assessment and Mapping Techniques

Module 2: Disaster Resilience & Preparedness

It is designed to provide participants with a comprehensive understanding of disaster resilience and the essential strategies for preparing cities to respond effectively to emergencies. This module focuses on both proactive measures to reduce vulnerabilities and enhance a city's capacity to withstand and recover from disasters. The module involves understanding the concepts of risk reduction, adaptive capacity, and the importance of integrating disaster resilience into urban planning and development. Participants will explore the different types of disasters and how they affect urban systems, infrastructure, and communities. The participants would also be exposed to natural and technological strategies to address disasters. The module will cover the following key areas:

- Urban Floods
- Seismic Resilience
- Man-made Disasters
- Climate change and disaster risk
- Urban Adaptation Strategies
- Mitigation Measures
- Recovery, Reconstruction, and Building Back Better

Module 3: Social and Economic Resilience

The module explores how cities can develop socio-economic resilience by addressing vulnerabilities and strengthening both social infrastructure and financial systems to weather future challenges. The module also talks about best practices for financing resilient cities, showcasing successful case studies from around the world that highlight how cities have secured funding for resilience through innovative approaches and multi-stakeholder collaborations. By the end of the module, participants will be equipped with the knowledge to strengthen socio-economic resilience in their cities. The module will also introduce Innovative Financing Mechanisms for building resilience, beginning with Green Bonds and Climate Bonds, which are financial instruments used to raise funds for projects focused on environmental sustainability and climate adaptation.

- Green Buildings for Risk Reduction
- Resilient Infrastructure
- Direct and indirect impact of disasters
- Innovative Financing Mechanism
- Best Practices for Financing Resilient Cities

Eligibility Conditions:

This programme is primarily designed for Engineers, Architects, Town Planners, Landscape Architects, Urban Designers, Community Development Professionals, Land Managers, GIS technologists and Urban and Environmental Managers working with national, provincial or urban local governments and other relevant organisations from ITEC partner countries.

- The eligible participants should have at least a relevant bachelor's degree or equivalent in the mentioned disciplines with a minimum of 5 years of experience.
- Preferred age group: 25-50 years

Course Faculty:

HUDCO's HSMI has a core faculty exclusively for undertaking training, research, documentation and networking activities, who are working with HSMI. Further, eminent sector experts, officers, functionaries and researchers also act as resource persons in various activities. The officers posted in HUDCO Corporate Office and Regional Offices are also a resource pool for HUDCO's HSMI, and these officers are continuously guiding and strengthening HUDCO's HSMI by way of sharing their rich practical experience in the field of urban development. The profile of HSMI faculty and external resource persons is being given separately.

USP of the Course:

This two-week "Building Resilient Cities" training program offers a unique opportunity for participants to gain essential knowledge and practical tools for creating cities that can withstand environmental and economic challenges arising from disasters. Through a comprehensive curriculum, participants will dive deep into the core concepts of urban resilience, including the impact of climate change, social issues, and economic shifts. The program provides hands-on techniques for analysing urban vulnerabilities, assessing risks, and implementing effective resilience strategies. By fostering a collaborative learning environment, participants will engage with global best practices and expert-led insights, enabling them to design actionable solutions for building resilient infrastructure. By the end of the course, participants will be fully equipped to lead transformative changes and develop cities that are stronger, more resilient, and better prepared for future challenges.