



**DEPARTMENT OF GEOGRAPHY,  
DEPARTMENT OF ENVIRONMENTAL STUDIES**

**AND**

**CENTER FOR ENVIRONMENT AND DISASTER MANAGEMENT (CEDM)  
SHIVAJI COLLEGE (UNIVERSITY OF DELHI)**

*in collaboration with*

**National Institute of Disaster Management**

**Ministry of Home Affairs, Government of India**

*is organizing*

**TRAINING  
PROGRAMME**

*on*

**"MITIGATION MEASURES FOR URBAN  
RESILIENCE TO DISASTERS:**

**With focus on Earthquake and Fire"**

**26-28th April, 2023**

**WORKSHOP**

*on*

**BUILDING DISASTER RESILIENT  
INFRASTRUCTURE**

**29th April, 2023**



**VENUE**

**NEW AUDITORIUM,  
SHIVAJI COLLEGE  
(UNIVERSITY OF DELHI)**

**RING ROAD RAJA GARDEN NEW DELHI - 110027,  
INDIA**



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## **INTRODUCTION**

Disasters are on the rise, and their impact is becoming more severe. They can strike anytime, anywhere and can cause significant damage to infrastructure and lives. Universities, being the educational hubs, have a responsibility to not only prepare themselves for such disasters but also ensure that their infrastructure is resilient enough to withstand any natural or man-made calamity. With this aim, a workshop is being organized to discuss and develop a Disaster Management Plan for Resilient Infrastructure in universities.

## **BACKGROUND**

Cities represent a large and dense concentration of human population. As their population grows and land becomes scarce, horizontal expansion of city limits is accompanied by vertical growth. Multi-storied and high-rise buildings dominate the urban landscape. While such buildings may offer certain advantage for urban planning, they pose many challenges for disaster response and emergency planning and management. The problem may be compounded in the less developed world due to unplanned urban growth, poor compliance with as well as enforcement of building laws and lack of awareness among key stakeholders and public at large. City dwellers are prone to a number of hazards both natural and anthropogenic. Buildings in cities are at risk from fires and those in zones of high seismicity also face threats from earthquakes. The National Crime Records Bureau 2019 data of India has accounted for a total of 11037 accidental fires, with 69 per cent of these fires being in the structures of schools or commercial, residential, and governmental buildings. Out a total of 10,915 deaths from fires, 62 per cent occur in structural fires. Buildings themselves and objects within them represent potential hazards during earthquakes. However, through proper planning and preparation, loss of life and damage to property can be reduced to a great extent.



# OBJECTIVES

- To understand the concepts of risk, hazard, disasters and importance of DRR for urban resilience;
- To identify structural and non-structural risks in existing infrastructure;
- To learn the mitigation measures to reduce the risks associated with earthquakes and fires and role of Disaster Mitigation Plan for the same.

## Approach and Methodology:

- The sessions will be interactive and will consist of lectures and group exercises
- On-hand training sessions will educate participants for formulation of Disaster Management Plans for the institutional buildings.
- A field trip will be conducted in nearby areas to understand risks in commercial buildings.

## Target Audience:

The programme will target the faculty members & research scholars from Universities, research institutions, government officials and other stakeholders who play a key role in preparedness, mitigation and response to disasters.

## ABOUT SHIVAJI COLLEGE

Shivaji College is a premier institution in West Delhi, accredited with grade 'A' by NAAC. It was ranked as one of the top 10 science colleges of the country in a survey conducted by India Today in 2017. Shivaji College functions under the trusteeship of the Government of Delhi. It was established in 1961 by Hon'ble Dr Panjabrao Deshmukh, Union Minister for Agriculture and a renowned social activist and farmer-leader. His vision was to provide higher education for boys and girls in the predominantly rural area of Matiala. The Government of Delhi took the trusteeship of Shivaji College into its possession and relocated it to Karampura in 1967. Shivaji College was further shifted to the present campus in Raja Garden in 1976.



## **DEPARTMENT OF GEOGRAPHY**

Geography is a bridge between the natural and social sciences, encompassing the atmosphere, lithosphere, hydrosphere, cryosphere, and biosphere. Students study the processes that link them together to create life on Earth, and how this delicate balance is disturbed by human activity. Today, human-environment interaction has greatly increased the risk of disasters, and Disaster Risk Reduction is an integral part of Geography. Shivaji College offers undergraduate honours and programme courses in geography. The Department of Geography at Shivaji College is more than 38 years old and has a well-equipped cartography laboratory, library, project work, field trips, and seminars. The faculty is actively engaged in teaching and research activities.

## **DEPARTMENT OF ENVIRONMENTAL STUDIES**

Department of Environmental Studies has been constituted to provide compulsory environmental science education to all the undergraduate courses. Apart from theory classes, field work is the key component of the course where students get practical exposure to natural and man-made environment and learn to understand the impact of human activities on environment. Department of EVS is taking proactive initiatives in implementation of green practices in the college campus. The Department is currently managing Paper Recycling, Vermicomposting and Bio-composting facilities of the college.

## **CENTER FOR ENVIRONMENT AND DISASTER MANAGEMENT (CEDM)**

The Centre for Environment and Disaster Management is a paramount center of Shivaji College, University of Delhi which provide learnings through its various activities such as training programs, workshops, conference, symposia and extended activities (community awareness, outreach programs) related to complexities of environmental challenges, various unenviable disasters. The centre was instituted towards the end of year 2022 for working in the direction of achieving the common objectives of sustainable development, climate change actions, disaster management and also for contributing in the national policy formulation focusing environment.

The environment and disaster management are interconnected and have a significant impact on each other.



As our planet faces increasing environmental challenges such as climate change, deforestation, pollution, and natural resource depletion, the frequency and intensity of disasters such as floods, hurricanes, wildfires, and earthquakes have also been on the rise. In this context, the newly established Centre for Environment and Disaster Management (CEDM) holds great relevance and importance.

The CEDM serves as a specialized centre dedicated to the study, research, and management of environmental issues and disasters. It plays a crucial role in understanding the complex relationship between the environment and disaster management and developing strategies to mitigate and adapt to the risks associated with environmental degradation and disasters.

One of the key aspects of the CEDM's relevance is its role in raising awareness and promoting education on environmental issues and disaster management including disaster risk reduction. Through research, training, and capacity-building programs, the CEDM aims to help individuals, communities, and policymakers to understand the importance of protecting the environment and building resilience to disasters. This awareness is crucial in promoting sustainable practices, reducing vulnerabilities, and promoting effective disaster preparedness, response, and recovery measures.

Another significant aspect of the CEDM's relevance is its role in fostering collaboration and partnerships among various stakeholders. Environmental issues and disasters are complex and multifaceted, requiring the involvement of various sectors, including government agencies, non-governmental organizations, academia, private sector, and local communities.





## ABOUT NATIONAL INSTITUTE OF DISASTER MANAGEMENT (NIDM)

The National Institute of Disaster Management (NIDM) was constituted with a vision to play the role of a premier institute for capacity development in India. The efforts in this direction that began with the formation of the National Centre for Disaster Management (NCDM) in 1995 gained impetus with its redesignated as the National Institute of Disaster Management (NIDM) for training and capacity development.

Under the Disaster Management Act 2005, NIDM has been assigned nodal responsibilities for human resource development, capacity building, training, research, documentation and policy advocacy, both as a national Centre and then as the National Institute. The Institute believes that disaster risk reduction is possible only through the promotion of a "Culture of Prevention" involving all stakeholders. The Institute works through strategic partnerships with various ministries and departments of the central, state and local governments, academic, research and technical organizations in India and abroad and other bi-lateral and multi-lateral international agencies. The Institute's vision is to create a Disaster Resilient India by building the capacity for disaster prevention and preparedness at all levels.



# ORGANISING TEAM

## PATRONS

**Shri Rajendra Ratnoo, IAS**

(Executive Director, NIDM, MHA, Govt. of India)

**Prof. Shiv Kumar Sahdev**

(Principal, Shivaji College University of Delhi)

## GUIDANCE

**Prof. Chandan Ghosh**

(Head, Resilient Infrastructure Division, NIDM, MHA, Govt. of India)

## COURSE COORDINATORS

**Dr. Garima Aggarwal**

Senior Consultant (RID) NIDM, MHA, Govt. of India

**Dr. Preeti Tewari**

(Department of Geography, Shivaji College, University of Delhi )

**Prof. Pratima Rani Sardar**

(Director, CEDM & TIC, Department of Environmental Studies)

## PROGRAMME COORDINATORS

**Mr. Shreyash Dwivedi**

(Junior Consultant (RID), NIDM, MHA, Govt. of India)

**Dr. Prabuddh Kr. Mishra**

**Dr. Bharat Ratnu**

**Dr. Himanshu Mishra**

(Department of Geography)

**Dr. Ashwani Sharma**

**Dr. Virat Jolli**

(Member, CEDM & Faculty, Department of Environmental Studies)