

# 4<sup>th</sup>

## WORLD CONGRESS

on

## DISASTER MANAGEMENT

29 January - 1 February 2019 | Mumbai | Maharashtra | India

JOINTLY ORGANISED BY



GOVERNMENT OF  
MAHARASHTRA

**DMICS**  
Disaster Management, Initiatives and Convergence Society  
Envisioning A Disaster Resilient Future



Tata Institute Of Social Sciences

**Ch. Vidyasagar Rao**  
GOVERNOR OF MAHARASHTRA



## **MESSAGE**

I am pleased to know that Government of Maharashtra is organizing the 4<sup>th</sup> World Congress on Disaster Management in association with the Disaster Management Initiatives and Convergence Society (DMICS), Hyderabad, the Tata Institute of Social Sciences (TISS) and the Indian Institute of Technology (IIT) Bombay in Mumbai from 29<sup>th</sup> January to 1st February 2019.

I wish and hope that the discussion on the theme of the Congress, namely, 'Building Resilience to Disasters: Bridging the Gaps between Promises and Action' will provide excellent opportunities to all delegates to critically evaluate the challenges as well as opportunities for the implementation of the development agenda at the ground level.

I congratulate the organizers and wish the participants fruitful deliberation.

**(Ch. Vidyasagar Rao)**

**Devendra Fadnavis**  
**Chief Minister**  
**Maharashtra**



### MESSAGE

It is an honour for Maharashtra to host the Fourth World Congress on Disaster Management in Mumbai in association with Indian Institute of Technology, Bombay (IIT - B), Tata Institute of Social Sciences (TISS), Mumbai and the Disaster Management Initiatives and Convergence Society (DMICS), Hyderabad.

Increasing frequencies and growing intensities of disasters around the world have been causing enormous losses of lives, livelihoods and assets. The State of Maharashtra is vulnerable to several disasters. It has borne the brunt of various natural disasters like the 1993 Latur Earthquake, the 2005 Floods, successive spells of Drought including man-made disasters like the Mumbai Terror Attacks, various industrial accidents, Oil Spills of the coast etc. in the recent past. The State Government has taken multiple steps towards mitigation as well as preparedness apart from effective response to reduce the impact of disasters. However, much more still needs to be done as climate change has brought newer challenges in the form of extreme weather events which are also rising, not just in India but also globally.

Despite several initiatives to mitigate and enhance the preparedness, the task of reducing risks of disasters and building resilience of countries and communities has remained a daunting task. The 2030 Global development agenda, woven around the Sendai Framework, Sustainable Development Goals and Paris Climate Agreement, promises to overcome these challenges with a clear set of goals, targets and indicators. The Ten Point Agenda declared by the Hon Prime Minister of India in the 2016 Asian Ministerial Conference on Disaster Risk Reduction in New Delhi has become the guideline for implementation of the agenda in India and globally.

In spite of this, challenges in actual implementation of the global agendas at the local level remain formidable and the fourth WCDM will focus specifically on the issues of implementation of global agendas of building resilience across sectors.

I call upon UN agencies, regional organisations, national governments, city mayors, academic and scientific institutions, civil society organisations, business houses, and media besides experts, policy makers, researchers and practitioners from around the world to attend the Congress and participate actively in its deliberations to enable us to move forward collectively to reduce the impacts of Disasters and make the world a safer place.

**(Devendra Fadnavis)**



# GLIMPSES OF PREVIOUS WCDM



# THE FUTURE WE WANT:

## Bridging Gaps between Promises and Action

### CONTEXTS

Despite the challenges, constraints and conflicts of the contemporary world the global community has steadfastly drawn a vision of the future that would promote 'sustained inclusive and resilient economic growth, social development and environmental protection for the benefit of all'. This vision of 'The Future We Want' was taken forward through five separate but interrelated global frameworks and agreements adopted during 2015-2016. Reducing risks and developing resilience to disasters is one of the common threads that bind these frameworks together.

The framework of Sustainable Development Goals (SDG) announced: 'We are determined to take the bold and transformative steps which are urgently needed to shift the world on to a sustainable and resilient path. As we embark on this collective journey, we pledge that no one will be left behind'. This path of resilience to disasters is firmly embedded in seven out of seventeen sustainable development goals and targets.

The Sendai Framework sought to build resilience through an overarching goal of 'substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries'.

The Paris Agreement on Climate Change proclaimed its aim to 'halt the rise in global average temperature 2°C above pre-industrial levels' and 'foster climate resilience' for 'sustainable development and eradication of poverty'. It outlined eight action areas for enhancing 'understanding, action and support' for disaster reduction.

The New Urban Agenda focused on three 'transformative commitments' for sustainable urban development that include commitments for environmentally sustainable and disaster resilient urban development, while the Agenda for Humanity identified six specific action areas for enhancing investments for humanity.

Three years down the 2015 momentum, the euphoria of building the Future We Want is facing formidable practical challenges of implementation. Initiatives of achieving the sustainable development goals are beset with daunting challenges of striking balance of social, economic and environmental aspects of development, besides constraints of resources and capacities, particularly in the developing and least developed countries. The Paris Agreement received serious setback when the second largest emitter of greenhouse gases backed out of the agreement. No clear and definite road maps for achieving the seven global goals of Sendai

<sup>1</sup> Our Common Vision, the Declaration of the United Nations Conference on Sustainable Development at Rio de Janeiro, 20-22 December 2012

<sup>2</sup> Title of the outcome document of the UN Conference

<sup>3</sup> Transforming Our World: the 2030 Agenda for Sustainable Development, September 2015

<sup>4</sup> Sendai Framework for Disaster Risk Reduction, March 2015

<sup>5</sup> Article 1, Paris Agreement on Climate Change, December 2015

<sup>6</sup> New Urban Agenda, Habitat III, October 2016

<sup>7</sup> Agenda for Humanity, May 2016



Framework for reducing risks of disasters are in place.

Similarly, the transformative commitments of the New Urban Agenda and Agenda for Humanity are not backed by adequate and concrete actions by local and national governments and regional and international organisations. In short, the gaps between pledges and action are widely visible in almost every front especially in the contexts of fifteen-year time frame set for implementation of most of the goals and targets of the global development agenda.

Despite commitments for enhanced international cooperation for finance, capacity development and technology transfer, there are ominous signs of dwindling support amidst emergence of new nationalist political order in some countries. The mid-decade chorus for transformative changes have not been matched, in most of the countries, by significant national and local level policies, programmes and actions for effecting these transformations. Lack of desegregated data, absence of innovative research and actionable knowledge of various social, economic and environmental processes are constraining effective planning, designs and monitoring of policies, programmes and activities.

Notwithstanding all these constraints and challenges, there are rays of new hopes, aspirations, knowledge, initiatives and sound practices from many corners. These are significant and need to be documented, shared and replicated on a wider scale for building the future we want.

## WCDM 2019

Against this backdrop the 4th World Congress on Disaster Management (WCDM-2019) is being organised in Mumbai from 29 January to 1 February 2019 to deliberate on some of the most critical issues and challenges of implementation of the global frameworks on building resilience to disasters.

Organised jointly by the Government of Maharashtra, Indian Institute of Technology (IIT) Bombay, Tata Institute of Social Sciences (TISS) Mumbai, and Disaster Management Initiative and Convergence Society (DMICS) Hyderabad, WCDM-2019 has been designed to be the largest assembly on disaster management outside the UN system.

Building on the experiences gained in the preceding three Congresses, WCDM-2019 would involve national, provincial and local governments, scientific and technical organisations, academia, professional bodies, industry, civil society, practitioners and media from around the world, besides the UN bodies and multi-lateral and regional organisations.

WCDM-2019 would provide a platform for sharing critical understanding, research, innovation, and good practices on disaster risk reduction and promoting interaction among scientists, policy makers and practitioners, besides forging new partnerships and networks for building resilience to disasters. The Congress would further help articulate the priorities for integrated action for implementing the global frameworks and agreements of 2030 development agendas in the context of reducing risks and building resilience to disasters.

# THEMES

WCDM 2019 will revolve around the overarching theme of The Future We Want: Bridging Gaps between Promises and Action and the Seven Pillars for Building Resilience to Disasters, as outlined in the Visakhapatnam Declaration and Plan of Action adopted at the WCDM 2017. These seven pillars are:

## A. RESILIENCE OF POOR

SDG goal to 'end poverty in all its forms everywhere' by 2030 is challenging by any means. There is significant convergence in the spatial distribution of poverty and disaster, indicating clearly double jeopardy of the poor: first, poor people are more exposed and hence suffer disproportionately in disasters; second, disasters perpetuate chronic and inter-generational poverty. Breaking this vicious cycle is the common goal of poverty eradication as well as disaster risk reduction.

## B. RESILIENT AGRICULTURE AND LIVELIHOOD

The second goal of SDG to 'end hunger, achieve food security and promote sustainable agriculture' has a specific target to strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters. Experts all over the globe are working to develop agricultural systems and practices that are sustainable in changing climates.

## C. RESILIENT HEALTH, EDUCATION AND WELL-BEING

The third and fourth SDG, namely, 'ensuring healthy lives and well-being for all at all ages' and 'inclusive and equitable education and lifelong learning opportunities for all' cannot be achieved unless health and education systems are resilient to the risks of disasters. Sendai Framework has called for enhancing the resilience of national health and education systems to disasters. Hospital and school safety programmes have been taken up in many countries, yet these are far from being safe, as seen in unacceptable number of deaths, damages and disruptions in schools and hospitals during disasters.

## D. RESILIENT INFRASTRUCTURE

Disaster resilient infrastructures play key role in minimizing economic losses and ensuring functional critical infrastructure following disasters. The developed economies are responding to the challenges of making existing and new infrastructure resilient to disasters. The developing countries are still coping with the challenge to provide basic infrastructure to meet social and economic needs at affordable cost.

## E. RESILIENT CITIES AND HUMAN SETTLEMENTS

Making cities and human settlements safe, resilient and sustainable is the eleventh goal of SDG. Cities are recognised as the economic growth centres of countries and their well-being is important beyond their borders. Both the SDGs and the Sendai Framework call for substantial increase in city-centric disaster risk reduction strategies. Sustainable development of countries is only feasible if cities are resilient.

## F. RESILIENT COMMUNITIES

Both rural and urban communities have developed inherent capacities for resilience through local and indigenous knowledge and practices. Nevertheless, communities in a rapidly changing

world are facing major challenges that have engaged the attention of various national governments and local organisations.

#### **G. RESILIENT BUSINESSES**

Most businesses are vulnerable to disasters. However, small and medium businesses lack capacity of early recovery and business continuity. These aspects including innovative and disruptive technologies, new business opportunities in disaster risk reduction, public private partnerships and corporate social responsibility are important issues of building resilience of business for sustainable development.

## **STRUCTURE**

WCDDM-2019 would be structured in a number of Plenary Sessions, Thematic Sessions and Special Feature Events. Besides poster presentations and exhibitions would also be organised.

#### **PLENARY SESSIONS**

Eminent thought leaders and experts will deliver keynote addresses and participate in panel discussions in the following Plenary Sessions

Plenary	Theme
1.	Researching Disasters
2.	Strengthening Governance for Effective Disaster Risk Management
3.	Leaving No One Behind: Inclusive Disaster Risk Management
4.	Resilient Health and Education Systems
5.	Resilient Ecology, Agriculture and Livelihoods in Changing Climates
6.	Disaster Resilient Infrastructure
7.	Response, Relief, Reconstruction, Recovery and Development
8.	Disaster Resilient Businesses
9.	Resilient Cities and Human Settlements

#### **THEMATIC SESSIONS**

The Thematic Sessions of the Congress would be aligned with the themes of plenary sessions. Researchers, policy makers and practitioners would present their papers in these sessions on a wide range of issues related to each of the plenary themes. Illustrative lists of these issues are suggested below; however the Congress would be open to accept original research papers and presentations on any other issue related to the themes.

##### **1. Researching Disasters: Themes and Perspectives**

Disaster research is now transiting from addressing traditional domain-specific issues to investigating cross-cutting and complex interdependence of causes and their implications. The Congress will discuss the contemporary issues regarding disaster research, as suggested below:



- Conceptual debates on hazards, vulnerabilities, exposures, risks and resilience;
- Post-colonial theories and disasters;
- Disasters as nature's response to unsustainable development;
- Laws, institutions, policies and practices on disaster management;
- Integration of disaster risk reduction and climate change adaptation;
- Disaster discourse, power and social justice;
- Human rights of vulnerable groups and at risk populations;
- Multi disciplinary approach to risk management and ethical dilemmas;
- Methodological issues and challenges in disaster research;
- Global, national and local database in disaster management.

## **2. Strengthening Governance for Effective Disaster Risk Management**

Risk-sensitive governance is an essential requirement for effective disaster risk management. Topics under this theme would include:

- Whole-of-Government approach and issues of coordination;
- All-of-Society approach and issues of multi-stakeholder participation;
- Decentralization of disaster risk management;
- Capacity development for holistic management of disasters;
- Main streaming disaster risk reduction in development;
- Financing disaster risk management;
- Insurance and other risk transfer mechanisms;
- Leveraging science and technology for disaster risk management;
- Transparency and accountability in disaster management;
- Regional cooperation for disaster management.

## **3. Leaving No One Behind : Inclusive Disaster Management**

The global communities have pledged that 'no one will be left behind' in the collective journey of building the future we want. These inclusive agendas of development are particularly important for disaster management as the marginalized and vulnerable segments of society suffer more in disasters. The issues to be discussed under this theme would include:

- Disaster and poverty;
- Vulnerabilities and capacities of women in disaster management;
- Children and disasters;
- Disability and disasters;
- Aging and disasters;
- Disasters and other marginalized sections of society;
- Policies and practices of social protection for disaster risk reduction;
- Gaps and challenges in inclusive disaster management;

- Building resilience of communities to disasters;
- Good practices on inclusive disaster management.

#### **4. Resilient Health Care and Education Systems**

Protecting health care and education systems from the vagaries of natural and manmade hazards is extremely important for building resilience to disasters. Under this theme discussions would include the following issues:

- Structural and non-structural safety of health-care facilities;
- Emergency health management;
- Mass casualty management;
- Surveillance for epidemics: experiences of Zika, Ebola, swine flu, etc.;
- Post-disaster psycho-social care;
- Making schools safe in disasters;
- Disaster management in school education;
- Disaster management in medical education.

#### **5. Resilient Ecology, Agriculture and Livelihoods in Changing Climates**

Rising temperature and uncertain rainfall are increasing the frequencies and intensities of extreme climatic events with adverse impacts on agriculture and livelihood of people, particularly in the developing countries. The issues to be discussed for building the resilience of ecology, agriculture and livelihood would include the following:

- Climate change adaptation in agriculture - policies, planning and good practices;
- Mitigating risks of drought, flood, cyclone, hailstorm etc on agriculture;
- Climate smart agriculture: research, innovation, experimentation and learning from indigenous practices;
- Strategies for building livelihood resilience: technology, risk hedging, extension services, partnerships;
- Risk monitoring, early warning and decision making;
- Strengthening of agricultural supply chains and livelihood diversification;
- Environment degradation, natural resource management and ecological sustainability;
- Protecting livestock in disasters;
- Unsustainable and negative coping strategies.

#### **6. Disaster Resilient Infrastructure**

Resilience of infrastructure is extremely important for sustainable development as damages to infrastructure account for most of the economic losses due to disasters. The topics of discussion under this theme would include:

- Performance of built environment and multi-hazard considerations;
- Safety audit and retrofitting of existing infrastructure;

- Standards of design, construction and maintenance of risk resistant infrastructure;
- Cost-effective and cutting edge technologies for resilient infrastructure;
- Techno-legal and techno-financial regimes for infrastructure resilience;
- Risk management strategies of inter-connected infrastructure;
- Globalization of risks in trans-border infrastructure projects;
- Sensitivity to nature and environment for addressing issues of built environment;
- Land-use planning and zoning regulations;
- Risk management of cultural and natural heritage sites, and protected areas.

### **7. Response, Relief, Reconstruction, Recovery and Development**

Post-disaster response, relief, reconstruction and recovery are becoming increasingly difficult and complicated due to rising frequencies and intensities of disasters. Better preparedness for effective response and pre-disaster recovery planning can make these tasks efficient, responsive, participatory and transparent. The issues under these themes would include:

- Early warning systems and crisis communication;
- Search, rescue and evacuation;
- Role of armed and other special forces in disaster response and relief;
- Post-disaster damage, loss and need assessment;
- Logistics of disaster response and supply chain management;
- Minimum standards of relief and rehabilitation;
- Humanitarian assistance – policies, practices and experiences;
- New Agenda for Humanity and Grand Bargain;
- Build Back Better in post-disaster reconstruction;
- Lessons learnt in post-disaster reconstruction around the world;

### **8. Disaster Resilient Businesses**

The Sendai Framework highlights the need to integrate disaster risk reduction into the management practices of every type of business to enhance their resilience to disasters.. The issues identified under this theme would include the following:

- Main streaming disaster risk reduction in industries, trade and commerce;
- On-site and off-site risk management plans in hazardous industries;
- Principles and practices of business continuity planning;
- Corporate Social Responsibility: incentives, regulations, scopes and opportunities;
- Public private partnerships for disaster risk reduction;
- Agile and adaptive supply chains for effective response to disasters;
- Capacity development for resilient business;
- Integrating community emergency plans into business emergency plans;
- Disaster risk insurance business;
- Best practices and strategies of integrated business continuity and disaster recovery planning in private sector.



## 9. Resilient Cities and Human Settlement

More than half of world's population resides in cities. Concentrations of people, assets and opportunities in the cities have tremendously enhanced risks as well as capacities to withstand the shocks of disasters. The issues to be discussed under the theme would include the following:

- Resilience in complex urban environment;
- Hazard, vulnerability and risk assessments;
- Preparing for the unexpected;
- City information database;
- Climate change adaptations for urban areas;
- Vulnerability of informal and squatter settlements;
- Resilient urban amenities and infrastructure;
- Legal and institutional framework for disaster risk management in cities;
- Impact of social changes and rapid urbanization on disaster risk;
- Urban-peri urban interactions in disaster risks and resilience.

### SPECIAL FEATURES

Parliamentarians on Disaster Management	Members of Parliament, Legislative Assemblies and Legislative Councils will present their visions of making their countries and constituencies resilient to disasters
Mayors on Disaster Management	City Mayors and administrators will share their experiences and good practices for making their cities resilient to disasters and climate change
Youths on Disaster Management	Youth leaders and volunteers will narrate their experiences of working with communities for managing risks and building resilience to disasters
Innovators and Startups on Disaster Management	Disaster risk management promises unprecedented opportunities for bottom-up innovative solutions. The innovators and startup teams aiming to address risk management will share their ideas and initiatives.
Technologies for Disaster Management	Innovative technologies can bring paradigm shift in disaster risk management. From real-time risk assessment and now-casting to post-disaster reconstruction and recovery, technologies can help to leapfrog existing constraints and significantly enhance risk management.
Media and Disaster Management	Leaders from media will discuss the role of media as enabler and partner of both government and community to improve information on disaster risk management. The media can also be an effective watchdog to facilitate implementation of inclusive disaster management plans.

# CALL FOR PAPERS

WCDM 2019 invites researchers, policy makers and practitioners to contribute papers for oral and poster presentations in different Thematic Sessions of the Congress. Accepted full-length papers will be considered for publication in Scopus-Indexed Conference Publications.

## GUIDELINES FOR ABSTRACT SUBMISSION:

- Abstract not exceeding 500 words to be submitted online at the WCDM 2019 website
- Cite Abstract title, Author(s) name, Affiliation and Contact details (email, mobile)

## TIMELINE

Event	Date
Call for papers	Now Open
Last date for submission of abstracts	10 November 2018
Last date for intimation of acceptance of abstracts	15 November 2018
Last date for submission of full-length draft papers	15 January 2019
Papers presentation in the conference	29 January - 1 February 2019
Submission of full length final papers for review	31 March 2019
Acceptance of full-length papers for publication	31 May 2019

Please refer to the website of the 4<sup>th</sup> WCDM - [www.wcdm.co.in](http://www.wcdm.co.in) for more details.

# EXHIBITIONS

WCDM-2019 would provide space and facilities to national, state and local government organizations and agencies, UN agencies, regional organizations, financial institutions, public sector undertakings, academic and research organizations, scientific institutions, non-government organizations, humanitarian agencies, private companies, publishing houses, media and other organizations to display their products, services, activities on various aspects of disaster management, climate change and sustainable development.

# AWARDS OF EXCELLENCE

Awards would be given to recognize outstanding contributions to the WCDM 2019 in the following categories:

- 3 best paper awards
- 3 best young researcher awards
- 3 best exhibitor awards
- 3 most innovative startup awards
- All registered paper presenters, exhibitors, start-ups and participants would receive Certificate of Participation

# VENUE OF WCDM 2019

WCDM 2019 shall be held in Victor Menezes Convention Centre,  
Indian Institute of Technology Bombay, Powai, Mumbai - 400 076



## ABOUT IIT BOMBAY

(Venue of 4<sup>th</sup> WCDM-2019)

Indian Institute of Technology (IIT) Bombay is recognised worldwide as a leader in the field of education and research in science, engineering, humanities, design and management. Established in 1958, the Institute provides state-of-art infrastructure and environment for teaching, research and innovation across a wide range of disciplines and inter-disciplinary subjects. With a student body of over 10,000 including nearly 3,000 doctoral students, IIT Bombay is considered as the most sought-after academic institution in India. In 2018, the Government of India has accorded IIT Bombay with the highly prestigious status of Institute of Eminence.



## ABOUT TISS

The Tata Institute of Social Sciences (TISS) was established in 1936 to create human service professionals to work with and enable people overcome poverty, deprivation and unemployment. Today, the institute keeps this vision alive through its extensive teaching, research, policy support, and field action programmes. TISS produces committed high quality human service professionals in a range of social and human development sectors that include: disaster management, regulatory governance, health, mental health, social epidemiology, clinical psychology; education and vocational skill development; human resources management, media and cultural studies, rural and urban development, livelihoods and social entrepreneurship, climate change, focused work on women, children, adolescents, youth, the aged; disability studies; etc.

The Jamsetji Tata School of Disaster Studies consolidated six decades of committed work of the Institute in disaster situations and offers a full-time multidisciplinary Masters' programme in Disaster Management since 2007 and more recently a doctoral programme in Disaster Studies.



## ABOUT DMICS

Disaster Management Initiatives and Convergence Society (DMICS) was established in 2005, in the aftermath of India Ocean Tsunami, to enhance understanding and awareness among the people about the risks of various types and dimensions of disasters, and the measures to be taken for reducing the risks, and for better preparedness, response and recovery through multi-disciplinary research and publications, and multi-stake holder's consultations.

DMICS is engaged in conducting series of workshops, seminars and conferences on a wide range of issues of disaster risk management and networks with communities, governments, NGOs, academic and research institutions, media, public and private sectors. DMICS had been privileged to organize three World Congresses on Disaster Management, each attended by more than 1000 delegates from around the world.



## ABOUT MUMBAI

Mumbai is the capital of Maharashtra, the second largest State of India. Mumbai is also the financial, commercial and entertainment capital of India. It is the most populous city of India with an estimated population of 12.4 million in core city area and 21.3 million in its greater urban agglomeration. It is one of the world's top ten centres of commerce in terms of global financial flow. The city houses important financial institutions such as the Reserve Bank of India, the National Stock Exchange, and headquarters of numerous Indian companies and multinational corporations. The city also houses the Bollywood entertainment industry, which is credited with production of largest number of feature films in the world.

Mumbai's business opportunities, as well as its potential to offer a higher standard of living, attract migrants from all over India, making the city a melting pot of many communities and cultures. Mumbai is also the home of some of India's premier scientific and technological institutions such as Bhabha Atomic Research Centre, Tata Institute of Fundamental Research, and the Indian Institute of Technology Bombay.

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# 4<sup>th</sup> WORLD CONGRESS on DISASTER MANAGEMENT

29 January - 1 February 2019 | Mumbai | Maharashtra | India

## 4<sup>TH</sup> WCDM - SECRETARIAT

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