

Summary Report on the joint AICTE-GTU online Faculty Development Programme on “Disaster Risk Reduction for Sustainable Development”

Conducted by

Adani Institute of Infrastructure Engineering

March 21st, 2022 -March 26th, 2022

Genesis

The Gujrat Technological University invited proposals for a joint AICTE-GTU online faculty development programme via circular number [GTU/Conference/AICTE-GTU FDP F.Y. 2021-22 /2022/469](#) dated 01st February 2022 for the F.Y. 2021-22. The Department of Civil and Infrastructure Engineering, Adani Institute of Infrastructure Engineering Ahmedabad submitted a draft for the same via [proposal number 2535](#) dated 05th February 2022 with Prof. V. M. Patel and Dr. R. R. Nath as coordinators. The topic of the proposed FDP was finalized as “Disaster Risk Reduction for Sustainable Development” for six days duration starting from 21st March 2022 to 26th March 2022. GTU via circular number [GTU/Conference/2022/935](#) dated 14th February 2022 approved the proposal, and selected Adani Institute of Infrastructure Engineering as one of the eleven host institutes pan Gujrat to conduct the joint AICTE-GTU online FDP on “Disaster Risk Reduction for Sustainable Development” from 21st March 2022 to 26th March 2022.

Aim and Objectives

The preceding two decades witnessed unprecedented growth in India’s infrastructure systems which subsequently has placed it as one of the strongest economies in the south Asian region. With the ingress of new infrastructure systems into the more remote corners of the country, the question of their sustainability invariably arises, especially sustainability against natural disasters, which this vast country is recurrently susceptible to. As the population of India continues to expand at a geometric progression, due diligence must be placed towards the increasing risk of natural phenomena, that have the potential to impact the socio-economic environment in a catastrophic proportion. This is imperative now that the greater stakeholders of the society be sensitized about the concepts of hazards, vulnerability, exposure, and risk so that a better framework of sustainable development and capacity building could be established, in which both preparatory and mitigatory measures are properly ensured. The Government of India’s policies on disaster management also accentuate the same philosophy, which strives to promote a national resolve to mitigate the damage and destruction caused by natural and man-made disasters, through sustained and collective efforts of all Government agencies, Non-Governmental Organizations, and People’s participation.

The main objectives of the course are:

- *To exhibit a critical understanding of the key components in disaster risk reduction.*
- *To initiate an understanding of the Response, Recovery, and Reduce cycle of disaster management.*
- *To develop an understanding of principles of humanitarian response and practical relevance in specific types of disaster circumstances.*
- *To understand the processes of some specific natural hazards and their significance in the Indian context.*

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Registration of participants

Total 55 participants have successfully completed the FDP out of which 40 participants were from Gujarat and remaining 15 participants were from outside Gujarat states.

Programme Schedule

Date & Day	10.00 am – 10.45 am	Session – I (10:45 am – 12:15 am)	Session – II (12:15 am – 1:45 pm)	Session – III (2:30 pm – 4:00 pm)
21/03/2022 Monday	Inaugural Function	Introduction to Disaster Management Dr. B.K. Rastogi, Former DG, ISR	Disaster Resilient Society and Sustainable development Mr. Bharat J Pathak	Understanding Hazard, Vulnerability and Risk of Natural phenomena Prof. M L Sharma IIT Roorkee
	Session – I (10:00 am – 11:30 am)		Session – II (11:45 am – 1:15 pm)	Session – III (2:30 pm – 4:00 pm)
22/03/2022 Tuesday	Role of national forces in disaster Management Brigadier Muthukumar (MES, Gandhinagar)		National disaster management policies Dr. A.P. Singh, Scientist E, MoES	IoT for Disaster Management Mr. Govind Rathore, IIT Roorkee
23/03/2022 Wednesday	Earthquake Hazards Dr. Sumer Chopra, Director, ISR		Learnings from the 2001 Bhuj earthquake and way forward Capt. C. S. Sanghvi, LDCE, Ahmedabad	Codal provisions for Earthquake Resistant Design of Structure Prof. Mitesh Surana IIT Ropar
24/03/2022	Structural Risk Reduction		Remote	Flood hazard

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Thursday	Against Fire Mr. Abhay Purandare		sensing for Natural Hazards Prof. A Goswami, IIT Roorkee	Prof. A. K. Singh AIIE, Ahmedabad
25/03/2022 Friday	Motivational Address by Prof. Navin Sheth, VC, GTU 10.00 to 10.15	Environmental Hazards and Protective Measures Cmtd. A K Saxena Indian Coast Guard (Retd.) 10.15 to 11.45	NEP session Prof. K. Parmar AIIE, Ahmedabad 12.00 to 1.30	Earthquake Resistant Infrastructure Prof. R Goswami IIT Madras
26/03/2022 Saturday	Landslide hazard Prof. R R Nath AIIE, Ahmedabad		Cyclone hazards and Protective Measures Mr. V. Kapadia, Sardar Sarovar Narmada Nigam, GoG	Tsunami hazards and protective measures Prof. V.M Patel, AIIE, Ahmedaba d 2.30 to 4.00
				Valedictor y Function 4.00 to 4.45

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Schedule of FDP Inaugural function

Timings (21/3/2022)	Event Detail
10.00 am to 10.10 am	Prayer & lighting lamp, Dignitaries
10.10 am to 10.15 am	Welcome address by HOD - CIE, Prof. H R Varia
10.15 am to 10.20 am	About the Workshop by Coordinator, Dr. V M Patel
10.20 am to 10.30 am	Motivational Address by Chief Guest, Dr. B K Rastogi, Former DG, ISR
10.30 am to 10.40 am	Presidential address by Director AII, Prof. Dr-Ing. Anupam Kumar Singh
10.40 am to 10.45 am	Vote of thanks by co-coordinator, Dr. Ritu Raj Nath

Schedule of FDP Special function

Date & Time (25/3/2022)	Event Detail
10.00 am to 10.04 am	
10.04 am to 10.08 am	Welcome address by Principal AIIIE, Prof. Dr-Ing. Anupam Kumar Singh
10.08 am to 10.18 am	About the FDP by Coordinator, Dr. V M Patel Dignifying Address by Director AII, Prof. Dr. M Muruganant
10.18 am to 10.28 am	Motivational Address by Hon'ble Vice Chancellor- GTU, Prof. Dr. Navin Sheth
10.28 am to 10.30 am	Vote of thanks by co-coordinator, Dr. Ritu Raj Nath

Schedule of FDP Valedictory function

Date & Time (26/3/2022)	Event Detail
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4.00 pm to 4.05 pm	Welcome address by HOD – CIE, Prof. H R Varia
4.05 pm to 4.15 pm	Recommendations and Panel Discussions (Coordinators, Participants, Experts, GTU Representatives)
4.15 pm to 4.25 pm	Valedictory Speech by Brigadier (Dr.) Muthu Kumar
4.25 pm to 4.30 pm	Concluding Remarks & Vote of Thanks

Programme Outcomes and Summary

The speakers of the FDP mentioned various important points relating to hazards, vulnerability, risk, and different aspects of disaster risk reduction during their sessions which are summarized below:

- One common point which each of the speaker has emphasized in their talk is rather than focusing on disaster management now the time has reached where we should focus on Disaster Risk Reduction for sustainable development. Even Sendai Framework 2015-2030, Principles for Resilient Infrastructure developed by The United Nations office for Disaster Risk Reduction (UNDRR) along with National Disaster Management Act (NDMA) 2005 are also guiding us towards the same path.
- In their sessions Dr. Rastogi, Brigadier Muthu Kumar and Mr. Pathak have given importance to action towards capacity building and road map towards resilient society in India which may not be possible from one single disciplinary effort but we require multidisciplinary approach with inherent involvement of different stakeholders of society like administrators, response forces, industries, academia, and civilians.
- Prof. M L Sharma, Dr. Singh, Dr. Chopra, Prof. Sanghvi, Prof. Surana, Prof. Goswami, Prof. Singh, Mr. Kapadiya have tried to convey the message during their presentations that rather than waiting for next hazard either of EQ, Flood, Fire, wind, landslide, tsunamis or so to become a disaster we should work on developing different possible scenarios in advance with the help of available latest software along with different GIS & IOT tools so that just at the time of hazard, the response mechanism is ready and we can reduce the risk.
- Cmdt Saxena, Prof. Goswami and Mr. Purandare have conveyed the message that in addition to natural hazards, other manmade hazards like Chemical, Biological, fire etc need to be address while working for sustainable development.
- Prof. Parmar and other speakers have mentioned that National Educational Policy (NEP) 2020 emphasized on incorporating courses on environmental science and risk reduction practices with

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practical demonstrations in schools and particularly colleges to develop safe and sustainable growth of nation.

Final Recommendation of the FDP

The joint GTU-AICTE sponsored online FDP on “Disaster Risk Reduction for Sustainable Development” incorporated technical sessions on a very relevant issue of disaster management. The FDP was an excellent pedagogical exercise which certainly have enriched the participants in terms of technical knowledge. Based on the inputs from different experts in the field of disaster management, the FDP has recommended the following course of action:

- As per the national policies of disaster management and Sendai DRR Framework 2015-2030, we must strive for capacity building and community resilience against both natural and manmade disasters.
- Disaster Risk Reduction (DRR) requires multidisciplinary approach with intrinsic involvement of civil administration, response forces, industries, and academia.
- Interdisciplinary course of action must be prepared before advent of any natural or manmade disaster.
- Educational Institutes especially higher education institutes have a pivotal role in this context in terms of awareness sharing and dissemination of knowledge.

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Some Snippets of FDP



Figure 1 Snippet from VC Sir Presence



Figure 2 Snippet from Day-01 Session

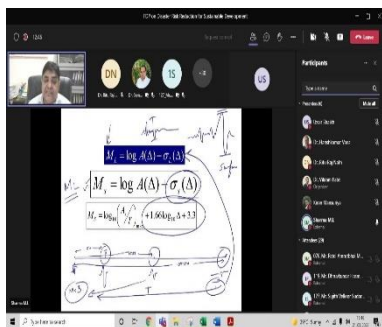


Figure 1 Snippet from Bharat Pathak Session



Figure 2 Snippet from Brigadier Muthukumar Session



Figure 3 Snippet from A.P, Singh Session

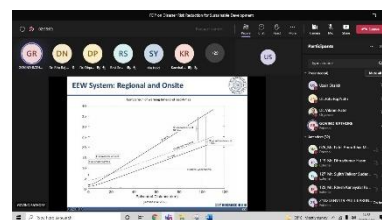


Figure 4 Snippet from Mr. Govind Rathore Session

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Figure 5 Snippet from Dr. Sumer Chopra Session

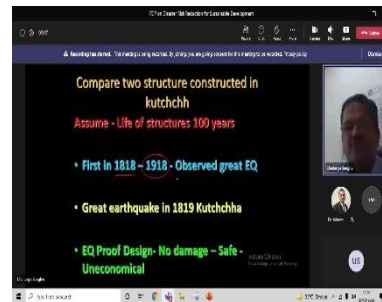


Figure 6 Snippet from Capt. C. S. Sanghvi Session

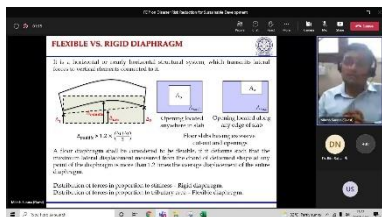


Figure 7 Snippet from Prof. Mitesh Surana Session



Figure 8 Snippet from Mr. Abhay Purandare Session

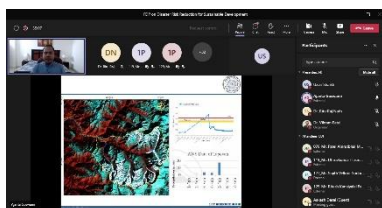


Figure 9 Snippet from Prof. A Goswami Session

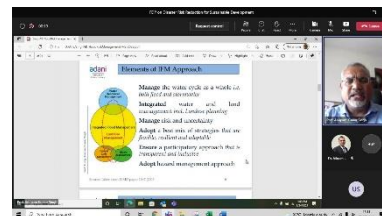


Figure 10 Snippet from Prof. A. K. Singh Session

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Figure 11 Snippet from Prof. Rupen Goswami Session

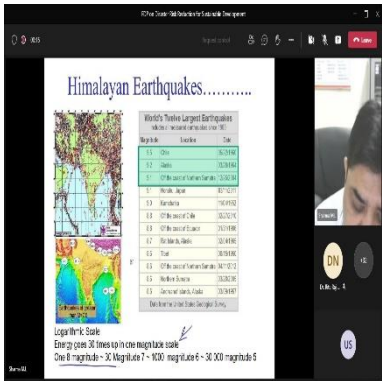


Figure 12 Snippet from M.L. Sharma Session



Figure 13 Snippet from A.K. Saxena Session

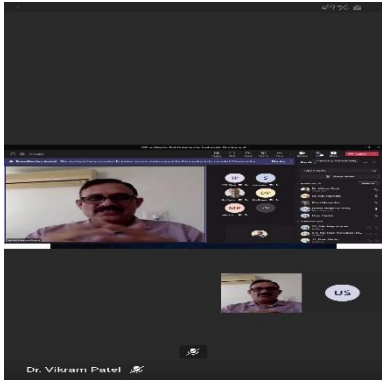


Figure 14 Snippet from Dr. V M Patel Session

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Figure 15 Snippet from Vivek Kapadia Session



Figure 16 Snippet from Prof. V. M. Patel Session



Figure 17 Snippet from Valedictory function