



NDMA Pakistan
1st National Seminar
Disaster Resilient Infrastructure
23 Sep 2024

Infrastructure Advisory & Project Development Wing

Strategic Intent

- Strengthen national resilience through disaster-resilient infrastructure
- Promote proactive, multi-stakeholder collaboration across government institutions, private sector, academia and humanitarian organizations
- Integrate global best practices, sustainable engineering and advanced technologies in infrastructure projects
- Develop and enforce disaster-resilient bylaws and policies
- Enhance early-warning systems and public awareness for disaster-prone areas

National Seminar - Disaster Resilient Infrastructure**23 September 2024****1. Context**

- a. NDMA Pakistan organized a *national seminar on Disaster Resilient Infrastructure* to foster a dialogue towards disaster-resilient Pakistan through proactive disaster management approaches specifically addressing quality of vulnerable infrastructure in all domains of :-
 - (1) Residential / Communal
 - (2) Industrial
 - (3) Communication
- b. The session held *at Bahria University Islamabad*, focused on need to *predict, mitigate, and adapt* to climate change, emphasizing a *shift from reactive responses to proactive strategies* for enhancing infrastructure resilience.

2. Environment

- a. Pakistan is ranked as *5th most vulnerable country* to climate change globally (UNDP-2024).
- b. Growing *unpredictability of extreme weather* events, seismic activities and other environmental hazards place communities, economies and infrastructure at severe risk.
- c. *Disaster resilience in infrastructure* has become a paramount concern due to increasing frequency and intensity of natural disasters.
- d. Pakistan faces *heightened urbanization, unplanned development and aging infrastructure* with little or no maintenance regime.
- e. Massive shift is warranted to *integrate disaster resilience* into infrastructure *methods & materials selection* leading to *optimized balance of efficiency & risk evasion*.

3. Key Outcomes

- a. It brought together the *subjects experts, policymakers, engineers and stakeholders* to discuss following :-
 - (1) *Innovative solutions* for stronger yet economical designs and features.
 - (2) *Global best practices* for retrofitting & restorations.
 - (3) *Policies required* for building infrastructure which can withstand the impacts

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- of natural disasters and *retain ability* of quick recovery.
- b. It emphasized *necessity of all-inclusive and multi-stakeholder approach* to foster collaboration between :-
- (1) Government entities
 - (2) Private sector
 - (3) Construction material industry
 - (4) Architect groups
 - (5) Academia
 - (6) Military infrastructure developers
 - (7) Rural area development organisations
 - (8) Urban infrastructure development experts
 - (9) Corporate partners from international businesses
- c. Seminar provided an *essential platform to discuss current challenges*, future opportunities and *doable strategic steps* needed to safeguard infrastructure and communities from future disasters.
- d. There is a *rising demand and expectations from global community* for Pakistan to strengthen its infrastructural *sustainability and resilience*.
- e. All nations prioritize disaster resilience, Pakistan *must adopt innovative strategies* and best practices to safeguard its critical infrastructure and ensure sustainable development.
- f. Pre-emptive infrastructure strengthening necessitates :-
- (1) Retrofitting of precarious existing assets.
 - (2) Integration of reinforcing measures into all new construction.
 - (3) Continuing improved rehabilitation systems – to reduce losses in potential disaster scenarios.
 - (4) By prioritizing these enhancements, Pakistan can establish a robust and resilient infrastructural framework that effectively *mitigates impacts of future disasters* and *advancing sustainable development*.
- g. A cohesive *national synergy* is imperative to facilitate meaningful collaboration among *architects, disaster management scholars, construction professionals, the private sector, the infrastructure industry, humanitarian partners, and national housing policy offices*.

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- h. Joint collaborative effort is essential for drafting *effective, disaster-resilient bylaws* pertaining to *land use and building regulations*, ensuring that their implementation as per *global standards and expectations*.
- i. By fostering this *interdisciplinary interface*, Pakistan can enhance its regulatory framework, thereby promoting resilient infrastructure development that adequately addresses the complexities of climate-induced disasters.
- j. *Integration of global best practices* is essential for effective local reconstruction after disasters. NDMA's think tank – *National Institute of Disaster Management (NIDM)*, and *Infrastructure Advisory and Project Development wing*, have *meticulously compiled comprehensive policy documents* addressing this critical subject.
 - (1) These resources are *readily accessible* on NDMA website.
 - (2) The instructions and templates serve as a *valuable repository of knowledge* for enhancing disaster resilience in infrastructure development.
 - (3) By leveraging these insights, stakeholders can ensure that local *reconstruction initiatives are informed* by proven succeeding methodologies and strategies.
 - (4) *Pakistan must adopt proactive methodologies to effectively alert* communities in disaster-prone areas, ensuring they evacuate upon receiving early warnings generated by *NDMA's National Emergency Operations Center (NEOC)*.
 - (5) Such strategic approach is crucial for minimizing risk and safeguarding vulnerable populations, necessitating a coordinated response to prioritize *timely communication and preparedness* in face of impending disasters.

Thank You

RESTRICTED**Table 1: Stakeholders and Attendees for the Seminar**

NATIONAL SEMINAR ON DISASTER RESILIENT INFRASTRUCTURE		
Bahria University, E-8, Islamabad September 23, 2024		
Category	Name	Organization
Infrastructure Development Expert	Dr. Muhammad Amjad	Military College of Engineering, MCE Risalpur
	Brig Dr. Adeel Zafar	
	Col Dr. Arif	Housing Directorate
	Dr. Irfan Rana	National University of Sciences & Technology (NUST)
	Dr. Azam	
	Asad Mahmood,	Enercon
	Dr. Zain Saeed	NDMA
	Tahir Shamshad	Ex MD NESPAK
Dr. Shafqat Ahmad	Sustainable Development Policy Institute (SDPI)	
Military	Rear Adm Arshad Javed	Pro Rector Bahria Uni
	Brig Muhammad Taimur Ashraf	(Comdt MCE)
	Brig Aqeel,	E in C Br
	Brig Asad,	Engineering Directorate
	Air Cdre Raza Noor,	DW&CE PAF
	Col Adnan,	GHQ
	Col Bilal and Maj Jawad	(E in C Branch)
Government Departments	Abdul Malik,	Additional Secretary, Ministry of Railways
	Masood ur Rehman,	DG SDMA AJK
	Dr. Qaiser Khan,	DG PDMA KP
Academia	Students & Faculty	Bahria University
		Pakistan Institute of Engineering & Applied Sciences (PIEAS)
		University of Engineering and Technology (U.E.T)
		Institute of Space Technology (IST)