

# IWDRI 2019

Second International Workshop on **Disaster Resilient Infrastructure**

19-20 March, 2019 | New Delhi, India

## Outcome Document

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*Organised by:*  
National Disaster Management Authority  
Government of India



*In collaboration with:*  
The United Nations Office for Disaster Risk Reduction

1. The Second International Workshop on Disaster Resilient Infrastructure (IWDRI) was held in New Delhi on 19-20 March 2019. The workshop was organized by the National Disaster Management Authority (NDMA), Government of India, in collaboration with the United Nations Office for Disaster Risk Reduction (UNISDR), and in partnership with the United Nations Development Programme (UNDP), the World Bank Group and the Global Commission on Adaptation (GCA). The event brought together more than 270 participants from 33 national governments, multilateral development banks, United Nations agencies, the private sector, policy think tanks and academia. The workshop was held in the context of the Government of India's proposal to establish a global ***Coalition for Disaster Resilient Infrastructure (CDRI)***.

2. Over two days, the participants deliberated on the importance of facilitating disaster and climate resilient infrastructure including through risk assessments, standards and regulation, recovery and reconstruction and appropriate financial, governance and institutional arrangements. The workshop addressed policy challenges related to disaster and climate resilient infrastructure in countries that need to make large investments in infrastructure; others where existing infrastructure stock is completing its life cycle and needs to be replaced or refurbished; and other contexts, including small island developing countries and landlocked countries.

The workshop discussed the supportive role of the financial sector, multilateral development banks, UN agencies, technical organizations and the private sector in strengthening the capacities of local and national governments to deliver resilient infrastructure. Opportunities and challenges in achieving disaster and climate resilience were presented across key infrastructure sectors, including water, energy, rail, ports, freight corridors, and aviation. The workshop also discussed the role of emerging technologies and innovation in the development of resilient infrastructure networks.

3. The workshop participants took note of the fact that infrastructure losses from disasters and climate events are escalating worldwide. At the same time, unprecedented growth of investment in infrastructure sectors is expected in the coming years. Climate change will add another level of complexity and uncertainty in the design of infrastructure systems for the long-term. It will also pose multiple challenges in the adaptation of existing systems. The infrastructure systems of the 21st century are unprecedented not only in terms of scale but also in terms of their local to global interconnectedness. Infrastructure system disruptions in one location can now disrupt global supply chains, creating impacts that are difficult to predict.

4. This presents both a challenge as well as an opportunity. The opportunity is that if these massive investments in new and refurbished infrastructure are made resilient, then this will make an important contribution to the reduction of disaster and climate risk, and the achievement of the Global Targets of the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals and the Paris Climate Agreement. ***The challenge is that a transformation is now required in how infrastructure is designed, constructed, operated and maintained, and in the financial incentives, standards, governance arrangements and capacities that are required to facilitate resilient infrastructure, and the commitment to leave no one behind.***

5. No country can address this challenge alone. It requires a framework of collaboration that engages countries from all regions and with different infrastructure challenges as well as other organisations that can facilitate the required transformation. ***The Coalition for Disaster Resilient Infrastructure (CDRI) is proposed to provide that framework.***

6. The Coalition will serve as *a platform where knowledge is generated and exchanged on different aspects of disaster and climate resilience of infrastructure*. It will bring together technical expertise from a multitude of stakeholders and in doing so, it will create a mechanism to assist countries to upgrade their capacities and practices with regard to infrastructure development in accordance with their risk context and economic needs. The Coalition will be co-created by countries at all stages of development to access and disseminate knowledge and resources to/from other members to make their infrastructure resilient and thus, contribute to each other's economic growth and sustainable development.

7. The CDRI must be inclusive of the range of stakeholders involved in the design, development, maintenance, operations and regulation of infrastructure systems. While governments have a leading role in setting policies and establishing the regulatory environment for infrastructure, private investments are playing an increasingly larger role in infrastructure design, development and operation. Financing institutions, multilateral banks and the insurance sector have a critical role in providing both finance as well as technical assistance and capacity building. Specialised technical and research organisations are developing risk and resilience metrics, standards, knowledge products, technologies, and innovative approaches to develop disaster and climate resilient infrastructure that should be harnessed. Community-led processes and networks are taking the lead in community-based climate adaptation and disaster risk reduction.

CDRI must play the role of *a knowledge, innovation and institutional development platform* that connects these resources with regional and sectoral demands for resilience, including provision of resilient economic infrastructure (transport, telecom, energy, water), social infrastructure (health, education) and ecological infrastructure (that provide critical ecosystem services like clean water, air, food, biomass and waste management) which are critical for securing humanitarian and development services for all, in particular the most vulnerable.

8. The CDRI will complement the 'Quality Infrastructure' initiative. This will promote a deeper understanding of issues of mutual interest such as addressing the infrastructure financing gap, enhancing connectivity, greater interoperability and will also enable meeting the SDG 9 (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation) and SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable).

9. The vision, mission, goal and objectives of the CDRI should be explicitly linked to the post-2015 development agenda including the achievement of the Sustainable Development Goals, the Paris Climate Agreement and the Sendai Framework.

10. In the development of the CDRI, the form must follow function, and a fit for purpose institutional design must be co-created. The functions of a global Coalition for Disaster Resilient Infrastructure (CDRI) could be developed around the following thematic areas: *(a) Risk governance and policy development; (b) Risk identification and estimation; (c) Resilience standards and regulation; (d) Institutional mechanisms for capacity development, and knowledge exchange; (e) Technology and innovation for disaster and climate resilience; (f) Support for infrastructure recovery and reconstruction; (g) Finance for resilience building and climate adaptation; and (h) Building social and community capacities to enhance disaster and climate resilience.*

11. Following the IWDRI 2019, a Secretariat of the CDRI will be established in New Delhi, with support from the Government of India, UNISDR and other interested Governments and partner organisations to facilitate the development of the CDRI in the short term.
  12. The Secretariat will undertake wide-ranging consultations with interested countries and other partners on the final form and functions of the CDRI.
  13. The Secretariat will define the scope of the CDRI and propose appropriate governance arrangements that could facilitate the participation of governments, multilateral development banks, organisations of the United Nations, and specialised technical and research organisations with the CDRI. This would include financing mechanisms for the CDRI and a resource mobilization plan.
  14. In parallel, it would facilitate a number of collaborative start-up activities for the CDRI in order to generate momentum and produce short-term results. These could include, *inter alia*, the development of knowledge products and platforms, national and sector-specific case studies, best practices and a global review of disaster and climate risk and resilience for infrastructure. These could provide a baseline for the CDRI and the discussion around the development of standards, financial and compliance mechanisms and appropriate governance arrangements.
  15. The Government of India and the CDRI Secretariat will continue to consult with interested countries and other relevant partners on the structure and financing of the Coalition with a view to a formal launch of the CDRI later in 2019. At the same time, the CDRI has the unique opportunity to align with the infrastructure resilience related elements of ongoing regional and global initiatives such as the High Level Political Forum (HLPF), the Climate Summit 2019, Global Platform on Disaster Risk Reduction, G20 Summit and Infrastructure Working Group meetings, the Asia-Pacific Ministerial Conference on Disaster Risk Reduction and the GCA.
  16. There is value in conducting a focused workshop on disaster and climate resilient infrastructure as a platform for tracking progress, knowledge exchange, innovation and to foster collaborative initiatives. In the future, IWDRI could be hosted by India and other partner countries by rotation.
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