

INTERNATIONAL CONFERENCE ON DISASTER RESILIENT INFRASTRUCTURE: ENVIRONMENT

NEWS: Prime Minister Shri Narendra Modi addresses the International Conference on Disaster Resilient Infrastructure 2025

WHAT'S IN THE NEWS?

The International Conference on Disaster Resilient Infrastructure (ICDRI) 2025, addressed by PM Modi, highlighted global efforts to promote resilient infrastructure through India's Coalition for Disaster Resilient Infrastructure (CDRI), aligning with the Sendai Framework to safeguard vulnerable regions like coastal areas and SIDS.

India is leading initiatives in resilient urban planning, early warning systems, innovative financing, and global knowledge-sharing for disaster risk reduction.

Context

- **Prime Minister Narendra Modi** addressed the **International Conference on Disaster Resilient Infrastructure (ICDRI) 2025** via videoconferencing.

About Disaster Resilient Infrastructure (DRI)

Definition

- DRI refers to **infrastructure systems** (buildings, roads, power grids, etc.) designed to **withstand, adapt to, and recover quickly** from natural and man-made disasters (e.g., cyclones, earthquakes, floods).

Global Initiatives on Disaster Risk Infrastructure

- **Coalition for Disaster Resilient Infrastructure (CDRI):** Launched by **India in 2019**.
- **UN's "Early Warnings for All":** Aims to protect every person by **2027**.
- **OECD's Resilient Infrastructure Policy:** Guides **G20 nations** on adaptive transport networks.
- **Sendai Framework for Disaster Risk Reduction (2015–2030):** A global framework promoting disaster resilience.

International Conference on Disaster Resilient Infrastructure (ICDRI) 2025

Overview

- ICDRI is the **flagship annual international conference** of the CDRI.
- It serves as a **global platform** for policymakers, experts, practitioners, and stakeholders to:
 - Share **knowledge** and **best practices** on disaster-resilient infrastructure.
 - Support countries in building **robust infrastructure** through research, capacity building, and technical assistance.

7th Edition (2025)

- First hosted in **Europe** (Nice, France), in collaboration with the **French government**.
- **Theme:** “*Shaping a Resilient Future for Coastal Regions*”, focusing on **Small Island Developing States (SIDS)** and **coastal communities** vulnerable to **climate change**.

India’s Five Key Priorities

- **Education:** Integrate **disaster resilience** into **higher education** to build a skilled workforce.
- **Global Digital Repository:** Document **best practices** for **post-disaster rebuilding**.
- **Innovative Financing:** Ensure **developing nations** access funds for **resilient infrastructure**.
- **SIDS as "Large Ocean Countries":** Special focus on the **unique vulnerabilities** of SIDS.
- **Early Warning Systems:** Strengthen **coordination** for **timely disaster response**.

About Coalition for Disaster Resilient Infrastructure (CDRI)

Launch

- Launched in **2019** by the **Prime Minister of India** at the **UN Climate Action Summit**, New York.

Nature

- A **multi-stakeholder global partnership** promoting resilience of infrastructure systems to **climate and disaster risks**.

Headquarters

- **New Delhi, India.**

Membership

- **46 member countries** and **8 partner organizations**.

Functions

- Aligns with the **Sendai Framework (2015–2030)**.
- Contributes to achieving:
 - **SDG 9** (Industry, Innovation and Infrastructure).
 - **SDG 13** (Climate Action).
- Addresses the **vulnerability** of **critical infrastructure** in **developing** and **climate-sensitive regions**.

CDRI's Initiatives

- **IRIS Program:** *Infrastructure for Resilient Island States*, launched at **COP26 (Glasgow, 2021)**.
- **Global Infrastructure Resilience Index (GIRI):** Measures resilience in sectors like:
 - **Power and energy.**
 - **Transport.**
 - **Telecommunications.**
 - **Water.**
- **Infrastructure Resilience Accelerator Fund (IRAF):** Launched in **2022** to support:
 - **Technical assistance.**
 - **Capacity building** in member countries.
- **ICDRI:** Annual platform for **knowledge exchange**.
- **Global Infrastructure Resilience Program (GIRP):** Technical program for **knowledge dissemination**.

Significance of Disaster Resilient Infrastructure

Saving Human Lives

- Resilient infrastructure (e.g., **earthquake-resistant buildings, cyclone shelters**) reduces **fatalities** during disasters.

Mitigating Economic Losses

- Disasters cause **\$2.3 trillion annually** in **indirect losses** (e.g., supply chain disruptions, lost productivity).

Climate Change Adaptation

- DRI addresses **intensifying hazards**, e.g.:
 - **Floods** (permeable pavement).
 - **Wildfires** (fire-resistant materials).
 - **Hurricanes** (elevated structures).

Coastal & SIDS Vulnerability

- SIDS, termed "**Large Ocean Countries**" by India, face **existential threats** from **climate change**.

Sustainable Development & Equity

- Resilient infrastructure ensures **continuity of critical services** (healthcare, education), benefiting **marginalized groups**.
- **Developing nations**, which suffer **46% GDP losses** from disasters (vs. **0.23%** in North America), benefit from **DRI financing** (e.g., **Green Climate Fund**).

Indian Government Initiatives in Disaster Resilient Infrastructure

PM Gati Shakti – National Master Plan (2021)

- Integrates **infrastructure planning** of **16 ministries**.
- Promotes **coordinated infrastructure development** with **disaster** and **climate resilience** as a core objective.

National Disaster Management Plan (NDMP), 2016

- First national plan aligned with the **Sendai Framework**.
- Focus on **risk reduction** in critical infrastructure sectors:
 - **Energy**.
 - **Transport**.
 - **Water**.
 - **Telecom**.
- Promotes **Build Back Better** in post-disaster reconstruction.

BIS Standards for Disaster Resilience

- **Bureau of Indian Standards** has developed structural codes:
 - **IS 1893** for **earthquake-resistant design**.
 - Codes for **cyclone, landslide, and flood-prone regions**.

AMRUT 2.0 and Smart Cities Mission

- Upgrades **urban infrastructure** with **resilience** to climate risks:
 - **Stormwater drainage**.
 - **Early warning systems**.
- **Smart Cities** integrate **disaster management systems** (e.g., **Command and Control Centres**).

Jal Jeevan Mission & Namami Gange

- Focus on **resilient water infrastructure**, especially in **drought/flood-prone areas**.
- River rejuvenation includes **disaster mitigation components**.

Disaster Resilient Power Systems

- **Revamped Distribution Sector Scheme (RDSS)** includes:
 - **Underground cabling**.
 - **Smart meters** for disaster resilience.

Climate Resilient Infrastructure under NAPCC

- Missions under **National Action Plan on Climate Change (NAPCC)** (e.g., **National Mission on Sustainable Habitat**) promote:
 - **Resilient urban planning**.

Capacity Building and Risk Assessment Tools

- **National Institute of Disaster Management (NIDM)** conducts:
 - **Training**.
 - **Policy advisory**.
- Tools like **CRISP (Climate Resilient Infrastructure Services Program)** promote **municipal-level resilience planning**.

Challenges in Adopting DRI

High Costs of Construction

- Retrofitting existing infrastructure or building new resilient systems is **costly** (e.g., **flood-resistant construction** can cost **30–50%** more).

Funding Gaps

- **Developing nations** and **SIDS** struggle to secure funds.
- Only **5% of global disaster funding** is allocated for **pre-disaster resilience**.

Weak Regulatory Frameworks & Enforcement

- Many regions lack **enforceable building codes** for resilience.
- In India, **unauthorized constructions** and **outdated regulations** worsen risks.

Policy Fragmentation

- Disjointed policies across sectors (**urban planning, energy, transport**) hinder cohesive DRI implementation.

Technological & Material Limitations

- Some DRI technologies (e.g., **Direct Reduced Iron (DRI) steel**) are **costly** and resource-intensive.

Social & Institutional Resistance

- Policymakers and communities often prioritize **short-term gains** over **long-term resilience**.
- **Urban sprawl** and **slums** in hazard-prone areas persist due to political and economic pressures.

Climate Uncertainty & Risk Assessment

- Rising **compound disasters** (e.g., **floods + landslides**) complicate resilience planning.

Way Forward

Strengthen Policy & Governance Frameworks

- Integrate **DRI compliance** into **national building codes** (e.g., India's **Disaster Management Amendment Act 2025**).
- Empower **District Disaster Management Authorities (DDMAs)**.
- Establish **Urban Disaster Management Authorities** in high-risk cities.

Leverage Technology & Innovation

- Expand India's **tsunami alert system** to cover **floods, cyclones, and landslides**.
- Use **AI-driven risk modeling** (e.g., Hyderabad's **flood prediction tools**).

Enhance Financing & Investment

- Combine **public funds** with **private capital** (e.g., CDRI's **\$50M fund** for SIDS).
- Subsidize **low-carbon DRI technologies**.

Focus on High-Risk Regions

- Treat SIDS as "**Large Ocean Countries**" with tailored solutions (e.g., CDRI's **IRIS program**).
- Invest in **nature-based solutions** (e.g., **mangroves, coral reefs**).

Build Capacity & Global Collaboration

- Integrate **DRI courses** into **universities**.
- Train **community first responders** (e.g., India's **Aapda Mitra** volunteers).
- Expand **CDRI membership** to include more **African and island nations**.

Conclusion

- The path to **DRI adoption** requires:
 - **Policy coherence.**
 - **Cutting-edge technology.**
 - **Sustainable financing.**
 - **Inclusive governance.**
- India's **CDRI leadership** and **global partnerships** are shaping a **resilient future**, especially for **vulnerable coastal and island nations**.

Sendai Framework for Disaster Risk Reduction (2015–2030)

Overview

- A **15-year global agreement**, adopted by the UN in **2015**, to:
 - Reduce **disaster risks**.
 - Enhance **resilience**.

Linkages

- Succeeds the **Hyogo Framework for Action (2005–2015)**.
- Aligns with:
 - **Paris Agreement.**
 - **Sustainable Development Goals (SDGs).**

Key Components

Four Priorities for Action

1. **Understanding Disaster Risk:**
 - Risk assessment, including **vulnerability, exposure, and hazard analysis**.
2. **Strengthening Disaster Risk Governance:**
 - Promotes **policies, laws, and multi-stakeholder collaboration**.
3. **Investing in DRR for Resilience:**
 - Encourages public/private **investment** in:
 - **Structural measures** (e.g., flood barriers).

- **Non-structural measures** (e.g., early warning systems).

4. **Enhancing Preparedness & "Build Back Better":**

- Improve **response systems**.
- Integrate DRR into **post-disaster recovery**.

Role of UNDRR

- The **UN Office for Disaster Risk Reduction (UNDRR)** coordinates:
 - **Global progress tracking** via the **Sendai Framework Monitor**.

Link to SDGs

- Explicitly linked to:
 - **SDG 13** (Climate Action).
 - **SDG 11** (Sustainable Cities).

Source: <https://www.mea.gov.in/press-releases.htm?dtl/39649/Prime+Minister+Shri+Narendra+Modi+addresses+the+International+Conference+on+Disaster+Resilient+Infrastructure+2025>