Report on

Expert Group Meeting on Inclusive Disaster Risk Data Governance
20–21 November 2025, New Delhi, India

1. Introduction

The Expert Group Meeting (EGM) on Inclusive Disaster Risk Data Governance was held on 20–21 November 2025 in New Delhi, organized by APDIM in collaboration with the National Disaster Management Authority (NDMA) of India. The meeting convened senior officials from across the Asia–Pacific region, international experts, scientists, and regional partners around a shared vision: disaster risk information that is inclusive, interoperable, ethically governed, and accessible to all.

The Asia–Pacific region remains the global epicenter of disaster risk. Over the past five decades, disasters in the region have caused more than one million fatalities, affected over three billion people, and generated cumulative economic damages of approximately USD 485 billion (United Nations Economic and Social Commission for Asia and the Pacific [ESCAP], 2024). In 2023 alone, the region recorded **12.76 million disaster-induced displacements**, representing nearly half of the global total **(Internal Displacement Monitoring Centre [IDMC], 2025).** Projections further suggest that climate shocks such as floods and droughts could result in annual economic losses equivalent to at least 6 percent of GDP in one-third of Asia–Pacific countries if systemic risk drivers are not addressed (ESCAP, 2025).

These impacts are not evenly distributed. **South, South-West, and South-East Asia** continue to experience recurrent climate-driven extremes—including floods, droughts, and tropical cyclones—that frequently affect **countries such as China, Indonesia, Thailand, and the Philippines**. **North and Central Asia** have reported tens of thousands of fatalities from heatwaves and seismic events, while **Pacific Small Island Developing States (SIDS)** confront existential threats from sea-level rise, cyclones, and storm surges (United Nations Office for Disaster Risk Reduction [UNDRR], 2023a). Beyond the hazards themselves, the **high levels of exposure and underlying social, economic, and environmental vulnerabilities** across these subregions amplify disaster impacts, often resulting in **compounding and cascading risks**—where one event triggers or intensifies others across systems such as health, water, energy, and infrastructure. These interconnected risks require urgent attention to

strengthen disaster risk governance. UNDRR defines disaster risk governance as "the system of institutions, mechanisms, policy and legal frameworks and other arrangements to guide, coordinate and oversee disaster risk reduction… transparent, inclusive, collective and efficient to reduce existing disaster risks and avoid creating new ones" (UNDRR, 2017, p. 13).

According to *The State of the Climate in Asia 2023* report by the World Meteorological Organization (WMO), an accelerated rate of key climate change indicators—such as surface temperature rise, glacier retreat, and sea-level rise—is being observed across the region, which will invariably have major repercussions for societies, economies, and ecosystems. Building on the principle of evidence-based and inclusive decision-making, inclusive disaster risk data governance ensures that risk information is not only accurate and timely but also disaggregated by sex, age, disability, livelihood, and location; ethically managed; and interoperable across institutions. This approach aligns with the *Sendai Framework for Disaster Risk Reduction 2015–2030*, particularly Priority 2 on strengthening disaster risk governance, and reflects the overarching principle of **"leaving no one behind"** embedded in the *2030 Agenda for Sustainable Development*, which the Sendai Framework reinforces (UNDRR, 2015; United Nations, 2015).The **Data Tracking System (DTS)**, introduced in the *Global Assessment Report on Disaster Risk Reduction 2025 (GAR 2025)*, is a methodological framework developed to systematically capture and analyze disaster losses and damages in relation to development and environmental indicators. By linking records of losses and damages with **baseline statistics** (such as population density, GDP, land use, and infrastructure distribution), as well as **vulnerability and exposure data** (for example, housing conditions, poverty levels, access to services, and hazard-prone locations), the DTS contextualizes the meaning of losses and supports analysis of their implications for human development, ecosystem health, and wellbeing. Unlike conventional datasets that only measure vulnerability or exposure in isolation, the DTS integrates these dimensions with **actual loss data**, enabling a deeper understanding—across all scales—of how hazards interact with vulnerabilities and why risk inequalities lead to disproportionate impacts across groups, geographies, livelihoods, and sectors (GAR 2025).The **ESCAP Statistics Division's Disaster-related Statistics Framework (DRSF)** provides a methodological foundation for standardizing disaster-related statistics across countries, integrating hazard, exposure, vulnerability, and loss dimensions into national statistical systems (ESCAP Statistics Division, 2020). Complementing this, the **APDIM Regional Study on Disaster Risk Data Governance** (2023) highlights that while significant progress has been made in establishing national risk data platforms, persistent gaps remain in terms of interoperability, inclusivity, and cross-agency coordination. Without strong governance frameworks, data often remain fragmented, inaccessible, or underutilized, particularly by local authorities who are closest to most at risk populations.

Persistent inequities illustrate the urgency of reform. According to the **2023 UNDRR Global Survey on Persons with Disabilities and Disasters**, 84% of respondents with disabilities reported feeling unprepared for disasters, 56% lacked access to early warning information, and only 11% were aware of national disaster risk reduction plans. With 80% of the global 1.3 billion persons with disabilities living in the Global South, the challenge of ensuring inclusive risk governance is particularly acute (UNDRR, 2023b). Similarly, the **Early Warnings for All (EW4All) initiative**, which aims to achieve universal multi-hazard early warning coverage by 2027, notes progress in over 100 countries but emphasizes persistent barriers in ensuring inclusive data ecosystems and cross-sectoral coordination (UNDRR & World Meteorological Organization [WMO], 2023).

Emerging methodologies offer opportunities to address these gaps. **Impact-based forecasting (IbF)** shifts the focus from hazard monitoring to modeling socio-ecological consequences, by integrating hazard, exposure, and vulnerability data (WMO, 2015; UNDRR & International Science Council

[ISC], 2020). Regional pilots in South and Southeast Asia have shown that IbF can reduce disaster-related displacement by up to 30% (ESCAP, 2021). **Critical infrastructure (CI) resilience frameworks**, as advanced by the *Coalition for Disaster Resilient Infrastructure (CDRI)*, highlight the need to strengthen infrastructure systems against multiple hazards by assessing interdependencies across energy, water, transport, and telecommunication networks. CDRI's regional analyses and country case studies further emphasize the value of **data-driven governance, risk-informed investment, and cross-border collaboration** to maintain the continuity of essential services (CDRI, 2023; OECD, 2019). Meanwhile, **artificial intelligence (AI)** applications—from satellite-based hazard detection to predictive nowcasting and damage assessment—are advancing rapidly but must be deployed responsibly. The *UNESCO Recommendation on the Ethics of Artificial Intelligence* underscores the importance of transparency, accountability, and human oversight to prevent bias and exclusion (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2021; UNDRR, 2021).

Against this backdrop, the Expert Group Meeting (EGM) brought together member States and regional partners to enhance understanding and regional cooperation on inclusive disaster risk data governance, underscoring its central role in achieving resilient, equitable, and risk-informed development.

Session I – Global Standards and Regional Contexts

The discussion highlighted that inclusive disaster risk data governance is essential for equitable and risk-informed development. Presenters emphasized the need for disaggregated, interoperable, and ethically managed data covering all population groups to ensure inclusion. Discussions underscored the importance of clear institutional mandates, coherent standards, and multi-level governance arrangements to support coordinated national approaches.

Session II – Multi-Hazard Analytics and Impact-Based Forecasting

Session II highlighted practical and innovative approaches for operationalizing impact-based forecasting beyond general data-integration principles. Examples included interoperable decision-support systems that combine multi-model ensemble forecasts with high-resolution exposure and vulnerability data, the use of standardized impact matrices and hazard cataloguing, and GIS-based composite risk atlases to ensure consistent multi-hazard warnings. Participants emphasized defining impact thresholds linked to anticipatory action triggers and integrating social vulnerability indicators to better identify who and what is at risk. These approaches demonstrate how multi-hazard analytics can directly support early action, inclusive risk governance, and more effective national early warning systems.

Session III – Critical Infrastructure Resilience and Interdependencies

The session highlighted inter-dependencies across energy, water, transport, and telecommunications systems and the importance of inclusive data governance to ensure continuity of essential services to all population segments **thereby strengthening resilience across interconnected systems**. Socio-economic and demographic data were identified as critical for understanding vulnerabilities and prioritizing support for populations most at risk, **ultimately reinforcing efforts to help develop targeted socio-economic safety nets and build resilient communities and services**.

Session IV – Artificial Intelligence for Inclusive Data Governance

Participants discussed the potential of emerging new technologies and artificial intelligence (AI) to strengthen hazard monitoring, forecasting, and post-disaster assessment. Presenters also emphasized the need for

responsible and transparent use of AI tools to avoid bias and improve the accessibility and usability of risk information.

Session V – Panel Discussion

The panel discussion took place in three thematic rounds each featuring government representatives sharing experiences, best practices and challenges followed by reflections and comments by expert discussants.

The first round, on **Institutional capacities and systems**, highlighted challenges related to the standardization of data collection amongst different government agencies, the interoperability of data across national platforms as well as the importance of involving local communities in data collection. The discussion underscored the need to strengthen capacities in layering social and economic vulnerabilities in hazard risk analysis; the importance of improving, or establishing, stronger collaboration across ministries by building platforms at national level (horizontal integration) as well as across multiple levels of government (vertical integration) and with communities including efforts to build trusted community networks that enhance the reliability and acceptance of locally sourced data, as well as the participation of communities in the generation of the data and the elaboration of targeted preventive and responsive disaster risk reduction measures. A suggestion was made to facilitate a community of practice in this field amongst interested countries in the region.

The second round on **Knowledge and Innovation** underscored the importance of combining indigenous and traditional knowledge, including indigenous forecasting indicators, with emerging technologies and AI modelling and applications. Risk transfer and financial protection mechanisms were also highlighted as critical tools to enable broader anticipatory action. A suggestion was made to harness and document the process of integration between innovation and traditional knowledge.

The third round on **Regional Cooperation** underscored the importance of collaboration amongst countries, including by sharing relevant data through standardized data collection through agreed protocols and identification of priority areas for data sharing, **including the use of land observation through satellite technologies to support consistent and comparable regional datasets**. The collaboration with and amongst academic and scientific institutions was also noted as critical. Stronger regional cooperation, and the need to advocate for it, was highlighted also in connection with multi-hazard risk information. The deliberate addition of social vulnerabilities in regional transboundary cooperation was underscored as a critical element for consideration. Participants also discussed the importance of modelling regional risk through shared exercises.

APDIM's Follow-up from Expert Group meeting on Inclusive Disaster Risk Data Governance

In line with the discussions held during the Expert Group Meeting, APDIM's mandate and available resources in 2026, APDIM could focus on the following areas:

1. Strengthening national risk data governance frameworks Supporting countries, upon request, in diagnosing risk data governance gaps and assisting in identifying institutional arrangements and mechanisms to improve data interoperability and sharing.
(Linked with deliverables 1.2.1–1.2.2)

2. Enhancing access to and application of risk information Continuing to develop national knowledge products and facilitating exchanges that support multi-hazard risk assessment, planning, and policymaking.
(Linked with deliverables 1.1.1 and 1.1.3)

3. Capacity-building on inclusive and multi-hazard data systems Providing tailored training, peer-to-peer learning amongst countries, and technical support on disaster risk information, impact-based forecasting, and integration of DRR into budgeting and development planning.
(Linked with deliverables 2.1.1, 2.1.2, and 2.2.1)

4. Facilitating regional learning and knowledge sharing Expanding APDIM's knowledge hub to document lessons learned and good practices on inclusive risk data governance as well as supporting exchanges through a community of practice (online and/or in person).
(Linked with deliverable 1.3.1)

5. Supporting cooperation on transboundary hazards and vulnerabilities Facilitating regional dialogue and technical exchanges amongst countries (regionally, sub-regionally and bilaterally) on hazards with cross-border impacts, including SDS, seismic risk, secondary disaster monitoring and risk reduction and climate-related hazards and emerging technology and application.
(Linked with deliverables 3.2.1, 3.2.3, and 3.2.5)

Acknowledgment:

Participants in the Expert Group Meeting expressed their appreciation to the National Disaster Management Authority of India (NDMA) for the excellent arrangements and warm hospitality.

Annex I
Agenda – Expert Group Meeting on Inclusive Disaster Risk Data Governance

20 November 2025; Day 1– Science, Policy, and Practice

Time	Session & Details
9:00–09:30	**Registration** – Participant registration *The meeting will be held at **Vigyan Bhawan** **Address: Maulana Azad Road, New Delhi – 110001, India**. Shuttle transportation between the Novotel New Delhi City Centre hotel and the venue will be provided by NDMA of India on 20 and 21 November. **<u>Buses will depart from the hotel at 8:15.</u>**
09:30-10:00	**Welcome Remarks:** **Mr. Rajendra Singh**, Member and Head of Department, National Disaster Management Authority (NDMA), Government of India **Introduction of Objectives and Agenda:** Ms. Letizia Rossano, Director, Asian and Pacific Centre for the Development of Disaster Information Management (APDIM) **Group Photo**
10:00- 10:40	**Session I: Global Standards and Regional Contexts for Inclusive Disaster Risk Data Governance** **Moderator:** *Mr. Mostafa Mohaghegh*, Senior Coordinator, APDIM This session will discuss how global frameworks can be applied to strengthen inclusive disaster risk data governance at regional and national levels. It will highlight approaches for ensuring that risk data systems are coherent, accessible, and responsive to the needs of all population groups. **Speakers:** • **Ms. Madhavi Ariyabandu**, Independent Expert in Disaster Risk Reduction • **Mr. Talal Waheed**, Programme Management Officer and Global Disability Advisor, UNDRR (online) • **Mr. Curt Garrigan**, Chief, Sustainable Urban Development Section, ESCAP **Q and A**

10:40-11:30	**Session II: Multi-Hazard Analytics and Impact-Based Forecasting for Inclusive Risk Data Governance** **Moderator:** *Mr. Husnu Tekin*, Director of Human Resources and Sustainable Development, ECO This session will examine approaches for integrating hazard, exposure, and vulnerability data to support impact-based forecasting. It will emphasize inclusive and people-centered early warning systems that are accessible and responsive to diverse risk conditions**.** **Speakers:** • **Mr. Mrutyunjay Mohapatra,** Director General of Meteorology, India Meteorological Department, Government of India • **Mr. Sudheer Joseph**, Scientist G, Indian National Center for Ocean Information Services, Government of India • **Mr. Madhab Uprety,** Senior Technical Adviser, Red Cross Red Crescent Climate Centre (Asia-Pacific) • **Mr. Jochen Luther**, Technical Coordinator, WMO Regional Office for Asia and the South-West Pacific (Online) • **Ms. Yifang Ban,** Professor, KTH Royal Institute of Technology / Director, Division of Geoinformatics (Online) **Q and A**
11:30-12:00	**Coffee and Tea Break** – Networking and informal exchange
12:00-12:45	**Session III: Critical Infrastructure Resilience and Interdependencies through Inclusive Data Governance** **Moderator:** *Ms. Letizia Rossano*, Director, APDIM This session will discuss how interdependent infrastructure systems rely on coordinated and inclusive data governance to maintain essential services during crises. It will also highlight the role of social and demographic data in prioritizing support for most at-risk groups. **Speakers:** • **Ms. Katinka Weinberger**, Chief, Sustainable Socioeconomic Transformation Section, ESCAP • **Mr. Amit Kumar**, Professor, Dept of Civil Engineering, Manipal Institute of Technology, MAHE, Manipal. • **Ms. Berna Burçak Başbuğ Erkan**, Middle East Technical University (Online) • **Mr. Maxime Gersch-Souvignet,** Team Lead, Climate Risk Analytics, United Nations University Institute for Environment and Human Security (UNU-EHS), Vice-Rectorate in Europe (UNU-VIE) (Online) **Q and A**

12:45-13:30	**Session IV: Leveraging Artificial Intelligence for Inclusive Disaster Risk Data Governance** **Moderator:** *Ms. Preeti Soni*, Director, APCTT This session will explore how artificial intelligence can enhance hazard monitoring, predictive modelling, and post-disaster assessment, while ensuring equitable and inclusive use of risk data. **Speakers:** • **Mr. Lorenzo Nava,** Chair of Working Group on Educational Materials, UN Global Initiative on Resilience to Natural Hazards through AI Solutions (Online) • **Mr. Sanjay K. Agrawal**, Vice Chair of UN Global Initiative on Resilience to Natural Hazards through AI Solutions, and Director of Coordination Police Wireless • **Ms. Carlotta Rodriquez,** Managing Director at Adenium Risk and Coaching **Q and A**
13:30-14:30	**Lunch Break**
14:30-16:00	**Session V: Panel Discussion on Advancing Inclusive Disaster Risk Data Governance** **Moderator:** *Ms. Letizia Rossano*, Director, APDIM The panel will proceed in **three thematic rounds**, each supported by experts. **Round 1 – Institutional Capacities and Systems for Inclusive Risk Governance** **Guiding Question:** *Please describe one key institutional or coordination challenge your country faces in ensuring that disaster risk data reflects and serves different population groups (e.g., gender, age, disability, remote communities), and one action taken or planned to address this.* **High Level Panel:** • Bangladesh • India • Kazakhstan **Expert Discussants:** • Ms. Katinka Weinberger, Chief, Sustainable Socioeconomic Transformation Section, ESCAP • Mr. Curt Garrigan, Chief, Sustainable Urban Development Section,

	Round 2 – Knowledge and Innovation **Guiding Question:** *What is your country experience in applying innovation or combining scientific, technical, local, or traditional knowledge to improve inclusive disaster risk data? Please share concrete examples.* **High Level Panel:** • India • Mongolia • Kazakhstan • Maldives **Expert Discussants:** • Mr. Husnu Tekin, Director of Human Resources and Sustainable Development, ECO • Mr. Madhab Uprety, Senior Technical Adviser, RCRC Climate Centre (Asia-Pacific) • Mr. Sanjay K. Agrawal, Vice Chair, UN Global Initiative on Resilience to Natural Hazards through AI; Director, Coordination Police Wireless
16:00- 16:15	**Coffee and Tea Break** – Networking and informal exchange
16:15–17:00	**Round 3 – Regional Cooperation** **Guiding Question:** *Please share one example of regional cooperation (existing or needed) that supports disaster risk data, forecasting, or early warning — including partners involved and the added value.* **High Level Panel:** • Islamic Republic of Iran • Tajikistan • Türkiye **Expert Discussants:** • Ms. Madhavi Ariyabandu, Independent Expert in Disaster Risk Reduction • Mr. Amit Kumar, Professor, Dept of Civil Engineering, Manipal Institute of Technology, MAHE, Manipal. • Ms. Carlotta Rodriquez, Managing Director at Adenium Risk and Coaching **Wrap-up and Panel Outcomes: Inclusive Disaster Risk Data Governance** **Ms. Letizia Rossano,** Director, APDIM

21 November 2025; Day 2 – Way Forward

Time	Session & Details
09:00–10:30	**Closing Plenary: Regional Priorities and Next Steps for Inclusive Disaster Risk Data Governance Moderator:** APDIM • Identification of priorities at national, regional, and global level for inclusive risk data systems based on highlights from panel discussions and thematic sessions • Consolidated recommendations to inform the deliberations of the Tenth APDIM Governing Council

Annex II
References

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