Second Expert Forum for Producers and Users of Disaster-related Statistics

Data for climate-related Loss and Damage

Session III: Integrating climate and disaster risk data to build resilience

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Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (Loss and Damage Mechanism),

The COP/UNFCCC established the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts, to address loss and damage associated with impacts of climate change, including: **extreme events** and **slow onset events**, in developing countries that are particularly vulnerable to the adverse effects of climate change at COP19 (November 2013) in Warsaw, Poland.

**The Executive Committee** of the Warsaw International Mechanism for Loss and Damage guides the implementation of the functions of the Mechanism.
The work of the Technical Expert Group on Comprehensive Risk Management (TEG-CRM) supports strategic workstream on CRM of the five-year rolling workplan of the ExCom, which focuses on comprehensive risk management approaches to address and build long-term resilience of countries, vulnerable populations and communities to loss and damage, including in relation to extreme and slow onset events.

This strategic workstream aims to enhance knowledge and understanding of comprehensive risk management approaches, including issues related to finance, data, technology, regulatory environments and capacity-building.
• Timely access to reliable data, information and knowledge base is paramount and essential to take Timely and right decision to ensure minimum impacts of NATURAL Disasters and or climate change.

• Integrating efforts of all relevant stakeholders will maximize efficiency of resources used including: technical, technological, financial, human and expertise.

• **Creating central national platform** that brings all relevant core stakeholders: SDGs, DRR, CC Adaptation, Climate Change L&D, Meteorological Offices and Statistics Offices is a high priority in this unprecedented climate emergency and need for urgent climate actions.

• Satellite data and information are invaluable to feed decision making processes.

• Maximizing the outcome of Joint efforts is crucial and important.

• No more work on the basis of BAU to confront upnormal, unprecedented challenges, this need creative unprecedented approaches.
Climate Information Services
Through Meteorological Offices

DRR Community

Climate Change Adaptation

Climate Change Loss and Damage

National Statistical Offices
Transformational Change is Crucial
TECHNICAL GUIDANCE ON COMPREHENSIVE RISK ASSESSMENT AND PLANNING IN THE CONTEXT OF CLIMATE CHANGE

- A joint UNDRR-GIZ publication
- Contribution to the Technical Expert Group on Comprehensive Risk Management (TEG-CRM) under the Warsaw International Mechanism for Loss and Damage
- Flexible and intended for use with existing guidelines and resources
- Examples, case studies and CRA framework which can be customized
- Useful resources, especially:
  - Annex 1: Case Studies
  - Annex 2: Technical Resources and Guidelines
  
Integrating climate and disaster risk data to build resilience

- Lessons learned from TEG-CRM
- Data Management and data use
- Data collection
- Open source and open data
- Challenges for climate risk data
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- **Accurate & reliable data** on disaster risks
- **Access, Storage and Processing** of climate data
- High level of **complexity** => not necessarily “user-friendly”
- Data **quality and quantity** (e.g. about impacts and damage data i.e. costs of damages, losses, business interruptions, ecosystems, etc.) / data gaps is a major problem when one wants to use machine learning or deep learning, especially the latter because not enough data means bad quality in predictions
- **Legal issues** on data sharing /
- **Conflict of interests** in sharing data (private sector)
- Lack of **data standards**/ certification / “Data Ecosystems”
- Equity and **political economy consideration** in data: poor data in low-income countries, in addition to sovereignty challenges
Data collection

Down-scalable and localized data is still a major challenge despite technological progress: There has been significant progress in data collection and estimation in recent decades due to technological advancements like satellite imagery, AI and big data. But downscaled data of both physical and socio-economic factors are still a major challenge for risk management, as they require local infrastructure that is particularly lacking in the developing world.

Inclusivity in risk management is contingent on the availability of disaggregated data that reflects the diversity of vulnerabilities: Risk-related data must reflect the diverse situations and needs of the general public, especially those marginalized and often most vulnerable. Intersectionality between factors like gender, disability, and age, as well as economic factors like land tenure, access to finance and other public services, and types of livelihoods, are relevant to assessing the adaptive capacity of communities. Some of these factors are better captured by qualitative datasets.

Data that allows monitoring the effectiveness of investments in risk reduction is a major gap globally: Monitoring adaptation, response, and reconstruction measures is key to evaluating the benefits of these investments and to informing further decision-making for both, governments and the international community / financial institutions.
Data standardization is essential for high-quality, comparable, and comprehensive risk assessment: Disasters are interconnected and co-occur compounding into more complex situations. However, climate disasters often share the same or similar root causes and must be addressed systematically. Unified and standardized climate risk data on a national, regional, or global level can enable more comprehensive analyses and adaptation efforts, including cross-boundary initiatives.

Risk is interdisciplinary and transcends administrative and political borders. So should our approaches for data and risk management: Partnerships between stakeholders are necessary to develop unified standards, monitor efforts, and share the available climate risk-related data, including data on historical losses and damages. These partnerships should bring together different levels and branches of government, civil society, academia, and local, regional, and international organizations to create holistic data assessments, open access platforms, and capacity-building efforts.
Data use

**The data is only as good as its usability:** Data should not be an objective but the means to create policy, value-added products, and forward-looking adaptation, planning, and development. Therefore, climate risk data needs to be transparent, verifiable, understandable, and usable for targeted action.

**Investments in data infrastructure translate into benefits for risk assessment and management:** Investments in climate and disaster risk data should be considered investments in the public good. Financial instruments like parametric insurance, which would enable early action and rapid emergency response and reconstruction, depend on accurate local meteorological data that is often not collected and is not always replaceable by satellite data. Moreover, climate risk and exposure data enable decision-making support tools, such as the Economics of Climate Adaptation (ECA), to inform adaptation strategy and investment decisions.
Data use

Data enables effective communication of risk and risk reduction measures: Speaking with the right language to policy-makers, funding agencies, and civil society is a critical aspect of risk management. It is one thing to have a good data set, but when people can’t understand and use it for decision-making is lost. Quantification is often useful for communication, but the right channels should be considered to reach all groups.

Communities are key partners and should directly benefit from the available data: Data should lead to inclusive solutions that leave no one behind by informing on differences in access to resilience services and responses to extreme events of different groups. Community ownership can support these efforts, and for this, we need to train communities on the use of outputs and climate indicators so they can incorporate them into their day-by-day activities.
Open Data and Open Source (1/2)

Arguments for Open source data

- **"Data belong to the human race"**. Typical examples are genomes, data on organisms, science, and environmental data following the Aarhus Convention.
- **Data is a public good**: It was created using public money or by a government or international organization and should be made universally available.
- **Facts cannot legally be copyrighted**.
- Restrictions on data re-use **generate inequality**.
- **Data are required** for the smooth process of running communal human activities and are an important enabler of socio-economic development (health care, education, economic productivity, etc.)
- In scientific research, the **discovery rate is accelerated** by better access to data.
- Making data open helps **combat "data rot"** and ensures that scientific research data are preserved over time.
Challenges

- **Government funding** may not be used to duplicate or challenge the activities of the private sector.

- The **revenue earned by publishing data** can be used to cover the costs of generating and/or disseminating the data so that the dissemination can continue indefinitely.

- **Privacy and sovereign concerns** may require that access to data are limited to specific users or subsets of the data.

- Collecting, 'cleaning', managing and disseminating data are typically labour- and/or cost-intensive processes – whoever provides these services should receive **fair remuneration** for providing those services.

- Often, targeted end-users **cannot use the data without additional processing** (analysis, apps etc.) – if anyone has access to the data, none may be incentivized to invest in the processing required to make data useful.
Thank you for your participation!