

## Online Training Workshop

# Advancing Government Innovation and Leveraging Frontier Technologies for Disaster Risk Reduction and Building Resilience

**18 August - 22 September 2020 (Tuesdays, six 2-hour sessions)**

**8:00 East Africa | 10:00 Maldives | 12:00 Thailand | 17:00 Fiji**

## Organized by

United Nations Department of Economic and Social Affairs (UN DESA)/ Division for Public Institutions and Digital Government (DPIDG) / United Nations Project Office on Governance (UNPOG)

UN Office for Disaster Risk Reduction (UNDRR) Global Education and Training Institute (GETI)

Ministry of the Interior and Safety (MOIS) of the Republic of Korea

Incheon Metropolitan City, Republic of Korea

## CONCEPT NOTE

The United Nations Department of Economic and Social Affairs (UN DESA), through its Division for Public Institutions and Digital Government (DPIDG) and its Project Office on Governance (UNPOG), and the United Nations Office for Disaster Risk Reduction (UNDRR) Global Education and Training Institute (GETI) with the support of the Ministry of the Interior and Safety (MOIS) of the Republic of Korea are co-organizing this online Training Course on “*Advancing Government Innovation and Leveraging Frontier Technologies for Disaster Risk Reduction and Building Resilience*” to pilot the Training Toolkit on the same topic.

The Training Workshop intends to develop capacities of government officials and their partners responsible for ensuring disaster risk-informed development and responses by introducing approaches, strategies and tools for advancing governance innovation and leveraging frontier technologies to reduce disaster risk and build resilience for sustainable development. During the training, participants will share cases and lessons learned, including on public health emergencies and the COVID-19 pandemic. The Training will include lectures focusing on innovative practices and group discussions which will enable participants to transform in-depth learning into practice.

## Thematic Focus

As evidenced by the current COVID-19 pandemic, the complexity and interconnected nature of risk requires integrated risk governance systems and an inclusive multistakeholder approach to implement disaster risk reduction and achieve resilience. Advancing government innovation and leveraging frontier technologies to strengthen risk-informed governance is key to achieving the Sustainable Development Goals (SDGs). Leveraging digital government and frontier technologies can strengthen Member States’ understanding of interconnected risks,

enhance risk-informed decision-making, strengthen partnerships, and support disaster risk reduction and resilience building efforts that leave no one behind.

The Sendai Framework for Disaster Risk Reduction 2015-2030, which is an integral part of the 2030 Agenda for Sustainable Development, advances the achievement of eleven Goals (1, 2, 3, 4, 5, 6, 9, 11, 13, 14 and 15) to ensure resilience in progress on sustainable development across all UN Member States. The Sendai Framework also outlines four priorities for action to prevent new and reduce existing disaster risks, with one priority on strengthening disaster risk governance to manage disaster risks. The 2030 Agenda recognizes and reaffirms the urgent need to reduce the risk of disasters and build resilience. In particular, the 2030 Agenda underscores the special challenges and vulnerabilities that those vulnerable countries, specifically Least Developed Countries (LDCs), Land-Locked Developing Countries (LLDCs) and Small Island Developing States (SIDS), face in realizing the SDGs. These challenges and vulnerabilities are rooted in low income and poverty, monotonous economic structure, dispersed and isolated communities, limited transportation options, lack of resilience due to backward infrastructure, insufficient knowledge and financial resources, and lack of effective and inclusive public institutions.

It is also well known that disasters in vulnerable countries can rapidly set back progress towards achieving the SDGs. Especially climate-induced disasters have further exacerbated their vulnerabilities. Vulnerable groups, including women, children, youth, persons with disabilities, older persons, the poorest, and migrants and refugees, confront higher danger to the repercussions of disasters. Therefore, it is crucial that governments at all levels address their special vulnerabilities and ensure their inclusion in disaster risk reduction and resilience planning and implementation, including essential service delivery supported by innovative use of technology.

Government innovation generally refers to the process of implementing new policies/approaches to addressing government challenges and improving public services and engagement with citizens. Risk governance denotes applying the principles of good governance to the identification, assessment, management and communication of risks<sup>1</sup>. At a time when the factors attributing to disasters and their impacts are dynamically evolving with multi-faceted socio-economic repercussions, governments are required to take innovative approaches and strategies for effective disaster risk reduction. Innovative measures for i) leadership and effective institutional arrangements for coordination between government ministries/agencies; ii) national-local coordination; iii) collaboration with other stakeholders, especially the private sector, IT industry and civil society organizations; and iv) harnessing technologies, such as big data and data analytics, are particularly essential for building risk-informed governance with high agility.

Digital government and frontier technologies present rapidly evolving prospects for building resilience across developed and developing countries. Digital technologies have the potential for strengthening resilience and reducing vulnerability. Governments are increasingly leveraging frontier technologies to ensure resilience and reduce disaster and climate risks. While the threat of disasters is rapidly impacting societies with a potential setback to progress on achieving the SDGs, digital government and innovations have become more significant in building resilient societies especially for those countries in special situations to help build-back-better in times of disasters.

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<sup>1</sup> International Risk Governance Council. <https://irgc.org/risk-governance/what-is-risk-governance/>

Other than natural hazard and human-induced disasters, the whole world has been struggling with the challenges of the COVID-19 pandemic since early March 2020. Member States would have to review their existing legislation and regulations to include biological hazards, strengthen governance and leverage frontier technologies for effective preparedness, response and recovery in public health emergencies including in diagnosis, data sharing, communication, engaging stakeholders, contact tracing, rationing PPEs among others.

Over the past several years, Member States have requested through multiple activities, including the 2017-2018 UNPOG Capacity Needs Assessment, for more practical knowledge including tools and cases on leveraging frontier technologies for risk-informed planning and decision-making. In particular, countries have called for peer-to-peer learning by sharing more case studies and detailed information on the technologies applied to DRR and to build resilience. In response to country requests, DPIDG/UNPOG in cooperation with UNDRR have started to develop the Training Toolkit on “Government Innovation for Disaster Risk Reduction and Resilience — Leveraging Frontier Technologies and Strengthening Risk-Informed Governance” since July 2019. The toolkit is part of the UN DESA Curriculum on Governance for the SDGs.

## Learning objectives

By the end of the online training, participants will be able to:

- Understand the global frameworks for disaster risk reduction in the context of the Sustainable Development Goals;
- Build capacities with a focus on governance innovation and risk-informed governance to address disasters and public health emergencies;
- Strengthen capacities and build expertise in leveraging digital government and frontier technologies for DRR and public health emergencies;
- Increase capacities for promoting inclusion of vulnerable groups in DRR and building resilience;
- Share knowledge and exchange good practices of risk-response governance framework and leveraging digital government and frontier technologies;
- Apply the knowledge and tools shared during the training to develop and strengthen strategies and action plans after the workshop.

## Suggested Structure & Session Themes

- **Opening/Orientation**

- **Session 1: Global Frameworks & Risk-informed Governance (UNDRR & UNPOG)**

This session will address the major components of risk-informed governance – including leadership, institutional coordination, stakeholder engagement, and information sharing for integrated risk-informed decision-making and efficient responses, effective communication strategy, and data requirements.

It will also introduce the global policy frameworks for disaster risk reduction and sustainable development from a science, technology and innovation perspective. It will explore the case for integrated risk governance, DRR concepts and trends, and review the eleven ECOSOC Principles for effective governance for sustainable development from this perspective. An overview of global, regional, and national efforts to advance innovative technologies and their use for resilience building will be shared.

- **Session 2: Leveraging Frontier Technologies for DRR and Building Resilience (UNDRR)**

This session will showcase the practical application of emerging technologies and innovation for disaster risk reduction and resilience. By leveraging the technologies such as geographic information systems (GIS), remote sensing, big data and data analytics, artificial intelligence (AI), blockchain, and more, governments can be better equipped to effectively anticipate, prepare, and respond to the multiplying threat of disaster risks.

Experts will present solutions that countries have in integrating innovations and ICT into government programming for DRR. It will cover many areas such as enhancing the role of ICTs for disaster risk management, use of earth observation (EO) technology for post-disaster recovery and reconstruction and the use of technology for coastal risk assessment.

- **Session 3: Inclusion of Vulnerable Groups in DRR Policy Design and Implementation to build Resilience (UNPOG)**

Inclusion of vulnerable groups in the process of DRR and in building resilience is essential for ensuring that they are protected during disaster situations. It is also critical to ensure that their special vulnerabilities and demands are reflected in DRR and resilience-building policies.

This session will examine special vulnerabilities of vulnerable groups in disaster situations and introduce different governance approaches and strategies for ensuring their inclusion in DRR and building resilience. Various innovative practices of engaging the vulnerable groups in DRR policy designing, implementation, and monitoring and review processes and building an enabling ecosystem for inclusive DRR strategies, especially by leveraging ICTs and frontier technologies, will be discussed.

- **Session 4: Data & Digital Government for DRR and Building Resilience (UNPOG)**

Robust and accurate data is essential for risk-informed decision making in DRR and building resilience. Digital government, and particularly open data and big data analytics, can enable governments to effectively anticipate, prepare, and respond to risks and disasters.

This session will examine the data sources and data requirements for hazard monitoring and warning, and responses and recovery and the guiding principles for data sharing in DRR. The session will also focus on how digital government system/tools can enhance government capacity for DRR and build resilience, including e-resilience.

- **Session 5: Strengthening Governance and Leveraging Technologies for Public Health Emergencies (UNDRR, WHO & UNPOG)**

The COVID-19 pandemic has shown that existing strategies for pandemic risk management in many countries were not adequate in dealing with the impact of the current public health emergency. A systemic approach to DRR and emergency preparedness is needed by engaging all relevant sectors, in particular, by breaking down existing silos between disaster management and health workers.

This session will look into the Bangkok Principles for the implementation of the health aspects of the Sendai Framework for Disaster Risk Reduction 2015-2030 and its measures to prevent and/or reduce the risk of health emergencies such as pandemics. It will draw governance lessons from managing SARS, MERS and Ebola and share experiences on the use of ICT to tackle COVID-19 and important tools that can assist countries to better prepare for future pandemics, such as the Health Emergency and Disaster Risk Management Framework and Disaster Resilience Scorecard for Cities Public Health System Resilience Addendum.

- **Session 6: Innovative Experiences & Partnership Building (UNDRR)**

The complexity and interconnected nature of risk requires integrated risk governance systems and an inclusive multistakeholder approach to implement disaster risk reduction and achieve resilience for sustainable development. Advancing government innovation and leveraging frontier technologies to strengthen risk-informed governance also requires strengthened, diverse and innovative partnerships. The engagement of the business sector and civil society -- from entrepreneurs to start-ups, scientists and researchers -- from data scientist to social scientists, and innovators -- from technologists to designers, including youth, are key.

This session will explore innovative experiences and partnership building through integrated risk governance mechanisms, scientific and technological networks, and innovative collaboratives from government, academia, and the private sector. The session will also provide an opportunity for participants to share their experiences, vision for partnership building and plans to foster innovation and use of frontier technologies.

- **Closing & Way forward**

## Programme (1 day per week & 2 hours per day)

	Tue	Tue	
	18 August <b>Day 1</b> <b>Opening/Orientation</b>  <b>Session 1</b> <b>Global Frameworks &amp; Risk-informed Governance</b> (UNDRR & UNPOG)	25 August <b>Day 2</b>  <b>Session 2</b> <b>Leveraging Frontier Technologies for DRR and Building Resilience</b> (UNDRR)	
	1 September <b>Day 3</b> <b>Session 3</b> <b>Inclusion of Vulnerable Groups in DRR and Building Resilience</b> (UNPOG)	8 September <b>Day 4</b> <b>Session 4</b> <b>Data &amp; Digital Government for DRR and Building Resilience</b> (UNPOG)	
	15 September <b>Day 5</b>  <b>Session 5</b> <b>Strengthening Governance and Leveraging Technology for Public Health Emergencies</b> (UNDRR, WHO & UNPOG)	22 September <b>Day 6</b>  <b>Session 6</b> <b>Innovative Experiences &amp; Partnership Building</b> (UNDRR)  <b>Closing &amp; Way forward</b>	

## Methodology

The Training will be comprised of:

- Presentations by experts;
- Group exercises and interactive discussions in online discussion forums and in small break-out sessions;
- Self-assessment exercise with reference to lists of reading materials and cases.

## Target audience

The primary target audience for this Training will include mid- to senior-level government officials including focal points for SDG and Sendai Framework for Disaster Risk Reduction focal points, those in-charge of ICT and digital government, environment, climate change, disaster/emergency management, and social protection in the Pacific and Indian Oceans SIDS, East African countries, LLDCs in Central Asia, and LDCs, LLDCs and mid- and low-income countries from the Asia-Pacific.

In addition, the Training will be open to representatives from development agencies, the private sector, civil society, academia and research entities actively engaged in coordinating and implementing innovations for disaster risk reduction and building resilience.



## Organizers

- United Nations Department of Economic and Social Affairs (UNDESA)/ Division for Public Institutions and Digital Government (DPIDG)/ United Nations Project Office on Governance (UNPOG)
- United Nations Office for Disaster Risk Reduction (UNDRR) Global Education and Training Institute (GETI)
- Ministry of the Interior and Safety of the Republic of Korea (MOIS)
- Incheon Metropolitan City, Republic of Korea

## Session partners may include:

- National Disaster Reduction Center of China, Ministry of Emergency Management of P.R.China
- Beijing Normal University, P.R.China
- Korean Center for Disease Control (KCDC)
- NASA Earth Science Disasters Program
- Asia Disaster Reduction Center
- United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)
- The Asian and Pacific Training Centre for Information and Communication Technology for Development (APCICT)
- UN Global Pulse Lab

## Language

The Workshop will be conducted in English.

## Certificate

UNDESA/DPIDG/UNPOG and UNDRR GETI will jointly issue a certificate of participation upon completion of the training. Participants must demonstrate active participation in the forum and attend at least 4 sessions to be eligible.

## Registration and deadline

Apply online by **17 August 2020** at <https://bit.ly/30czusr>

Upon application, you will be asked to provide:

1. Your reason/learning objective for taking this course
2. Your expectations from the course, and how do you plan to apply your learning
3. Your current role relative to advancing government innovation and leveraging frontier technologies for disaster risk reduction and building resilience
4. If you have been officially nominated to participate on behalf of your ministry/organization

## Contact Information

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