Report on the Implementation of Earth Observation Risk Toolkit

This document is submitted by the Disaster Risk Reduction Working Group to the Programme Board for information.

1   PURPOSE

This document reports on the launch of a new website, Earth Observations (EO) Risk Toolkit, which took place at the 7th Session of the Global Platform for Disaster Risk Reduction (GP2022). This report also touches on its relevance to the 2023-2025 GEO Work Programme (GWP) and the post-2025 strategic mission.

2   EARTH OBSERVATIONS (EO) RISK TOOLKIT

The EO Risk Toolkit is a deliverable of the GEO Disaster Risk Reductions (DRR) Working Group under Subgroup 1 (GEO Work Programme Coordination) and its Task 1.2 (Development of EO Risk Toolkit). As described in its Concept Note (on pp. 12-18 (Annex D) in the DRR-WG Report to the GEO's 17th Plenary Session), the EO Risk Toolkit has been developed by GEO in collaboration with the United Nations Office for Disaster Risk Reduction (UNDRR) (GEO Participating Organization) with technical support from Esri (GEO Associate). This new online resource is intended to provide DRR users with direct access to open source EO tools, services, and methodologies, accompanied by technical guidance coming out of GWP activities. The core content of the EO Risk Toolkit is a collection of use cases, which highlight EO solutions that government decision makers have used already. The content is produced in non-technical, plain language to convey value and usefulness of EO for DRR to readers who may not be familiar with EO. Ultimately, the EO Risk Toolkit is designed to promote uptake of EO solutions by governments, as well as humanitarian and development support agencies for strengthening resilience. The Toolkit is an integral part of the Risk Information Exchange (RiX) under the UNDRR's flagship initiative called the Global Risk Assessment Framework (GRAF), which aim to improve accessibility of risk data and analysis for developing countries, particularly Small Island Developing States and/or Least Developed Countries, as well as low and middle-income countries that are vulnerable to repeated loss and damage.

On 22 March 2022, the EO Risk Toolkit User Co-Design Team was established. The team currently consists of twelve members, representing Sendai national focal-point agencies, as well as development and humanitarian agencies in the United Nations and multilateral development banks. The first team meeting was held on 19 April for members to provide comments and suggestions for how to improve the website in terms of structure, design, and readability of contents.

The EO Risk Toolkit was launched at GP2022 on 22 May, during the first day of the three-day international conference.

3   INITIAL CONTENTS

The four use cases currently included in the Toolkit demonstrate how:

- In Honduras, a precipitation and flood forecasting tool helped the state-owned power company manage a reservoir before a major hurricane, reducing damage and economic losses (featuring a tool: GEOGloWS ECMWF Streamflow);
- In Haiti, an EO-based service supported post-disaster needs assessment and recovery planning following the 2021 earthquake and a tropical storm (featuring a service under development by EO4DRM: Recovery Observatory);
- In Uganda, a crop monitoring and early warning system enabled proactive drought response (featuring a tool: GEOGLAM's Global Agriculture Monitoring System) and;
- In Ecuador, EO methodology and tools enabled Sendai Framework reporting for indicator B-5a on the impact of flooding (methodology developed by a team associated with EO4Sendai-Monitoring).

The content of the Ecuador use case in the Toolkit is hyperlinked with a corresponding [Knowledge Package](#) in the [GEO Knowledge Hub (GKH)](#) with all relevant data, publications, and software.

4   THE LAUNCH OF EO RISK TOOLKIT AT GP2022

The EO Risk Toolkit made its debut on the [Ignite Stage](#) of GP2022 on 25 May. The launch was further communicated via a [GEO blog](#), a copy of which was also disseminated through UNDRR's [Prevention Web](#). The GEO booth was set up at GP2022 to provide additional resource to introduce the Toolkit to participants of the conference. The Toolkit was also presented at two identical sessions of [Learning Labs: "Opportunities for shared risk analysis,](#)" capacity building workshops organized by UNDRR on 26 and 27 May.

Additionally, the Toolkit was highlighted in the following scheduled interventions made by the GEO Secretariat:

- Special Session on [Centre of Excellence on Climate and Disaster Resilience: Roadmap to Resilience](#) (on 26 May)
- [Mid-term Review Plenary II: Beyond natural hazards – Operationalising the expanded scope of the Sendai Framework](#) (on 26 May, as [briefly reported by iisd](#))

Overall feedback received at the GP2022 was positive. Numerous governments and humanitarian/development agencies including UN Childrens Fund (UNICEF), Office for the Coordination of Humanitarian Affairs (OCHA) and International Committee of the Red Cross indicated their interests in collaborating with GEO on uptake of the solutions featured in the EO Risk Toolkit.

5   PLAN AHEAD

Expected follow-up actions include:

- Regular updates with new content identified by the existing GWP activities
- Further integration with GKH as well as UNDRR GRAF/RiX; and
- Contributing to a solution package developed by the Centre of Excellence

Meanwhile, the GEO DRR-WG intends to coordinate with the development of the 2023-2025 GWP as well as post-2025 strategic mission because the website is designed to act as a matchmaking function between potential users and GWP activities with proven solutions.