

## DISCUSSION NOTE

# Good practices in flood and drought risk management

**Background information to the UNESCO webinar of June, 8, 2021**

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### **Context**

In the context of project “Enhancing climate services for improved water resources management in vulnerable regions to climate change: case studies from Africa and Latin America and the Caribbean” (ClimWaR), we are developing a **UNESCO publication on best practices in flood and drought risk management**.

Despite this project focus on Africa and LAC, lessons on flood and drought management from Asia and Europe will be considered as well. This publication will include a critical analysis of traditional and emerging flood and drought management tools, with a special focus on the added-value of bottom-up approaches such as CRIDA, versus top-down data-intensive approaches. Additionally, it will include a recommendations chapter for policy-makers which will summarize main findings.

This webinar for experts in flood and drought risk management from across the globe is organized to gather ideas, insights and potential good practices to support the aforementioned UNESCO publication on Best Practices in Flood and Drought Management.

### **Role of the experts**

Experts are invited to share their insights on what works and doesn't work for flood and drought risk management. Particular focus is given on the data challenges for various flood and drought risk management tools presented. The webinar will be organized as a structured brainstorm session. The brief description of the challenges and potential good practices on flood and drought risk management tools, given below, may serve as basis for discussion

### **Challenges for operational flood and drought risk management**

In recent years, the approach to drought and flood risk management has changed from crisis management and disaster response to pro-active disaster risk management that aims at territorial resilience. Major challenges to both flood and drought risk management relate to the availability and useability of data and the practical implementation of measures to mitigate flood and drought risk.

Experts to the webinar are invited to discuss how the data challenges across the flood and drought risk management cycle can be overcome, while identifying good practices. The added value of bottom-up approaches such as CRIDA and top-down data-intensive methods and models will be a specific focus of the webinar. Solutions and good practices are sought on the following challenges:

- Insights in the vulnerability, risk and resilience of a region
- Development and use of monitoring and early warning systems for operational management
- Access and use of data for the flood and drought risk planning process

- Knowledge on the effectiveness of measures to mitigate flood and drought risk
- Consideration of uncertainty in decision-making
- Integration of flood and drought management tools with other terrestrial planning instruments

### **Illustrative good practices on flood and drought risk management**

The publication will highlight good practices in flood and drought risk management. Indicatively, the following practices may be considered, potentially serving as inspiration.

- Local collection of disaster loss data for a global information management system (Ethiopia): In 2019, about 100 countries systematically recorded disaster losses and damages in the UNDRR supported data management system DesInventar. Ethiopia's model for disaster loss accounting, started in 2014, has inspired many countries. In 2019, Ethiopia has around 15,000 records in its public database of disaster-related losses, going back to 1899. Systematic loss data accounting is challenging in many countries.
- Climate Risk Informed Decision Analysis (CRIDA): CRIDA is a participatory approach to guide the development of adaptation pathways for robust water resources management. The approach enables water managers and policy makers to assess the impact of climate uncertainty on their water resources. Bottom-up data generation and user relevance are keywords for CRIDA.
- Policy coherence and holistic multi-actor resilience building (Mozambique): In Mozambique, the Disaster Risk Reduction Master Plan (2017–2030) is aligned with the climate change adaptation (CCA) strategy and the Sustainable Development Goals. As a result, DRR and CCA are gender-sensitive and have been mainstreamed into district planning and the budgeting systems in key economic sectors. Bridging various policy domains is needed to increase resilience but not often done.
- #WeResilient: Multi-scale risk-informed sustainable development (Italy): The Province of Potenza (Italy) developed the “#WeResilient strategy”. It integrates environmental sustainability, territorial safety and climate change at provincial and local level. The #WeResilient strategy supports 100 municipalities in enhancing local resilience and sustainable development. Municipalities, often with limited resources, are typically challenged to understand and use risk data.
- Collaborative risk mapping in Dar es Salaam (Tanzania): The community risk mapping project ‘Ramani Huria’ (Swahili for ‘Open Map’) creates accurate maps of the most flood prone zones in Dar es Salaam through a collaborative process that engages both students and community members. The maps are directly used to develop community-level disaster risk reduction plans.
- Understanding trade-offs between built and natural infrastructure (Ghana): The trade-offs of a multi-purpose dam in the Volta basin for upstream and downstream users have been analysed in terms of income and ecosystem services. Planning and management of built infrastructure can minimise the losses and maximise the benefits for both the built and natural infrastructure. Insights on the effectiveness of measures, and potential trade-offs, is often insufficiently known.

### **Provisional outline of the publication**

- 1) Abstract
- 2) Introduction and literature review on the importance of flood and drought management– an overview of flood and drought risk management approaches (Integrated Flood Risk Management (IFRM) and Integrated Drought Risk Management (IDRM)), from the traditional top-down, data-intensive systems, to the emerging bottom-up (including a reference to CRIDA); a final paragraph shall detail the objectives of the publication;
- 3) Comparative/critical analysis– critical analysis on the gaps and challenges of the applicability of the listed methodologies by decision-makers responsible for flood and drought management policies;
- 4) Recommendations– from the identified approaches and respective challenges in chapters 1) and 2), together with the conclusions extracted from the webinar, extract a list of recommendations that can support decision-makers in understanding and translating flood and drought knowledge into local policies and measures; This chapter should also reinforce the relevance of these findings to ongoing international targets such as the SDGs, the Paris Agreement, or the Sendai Framework, as well as to National Adaptation Plans (NAP) at the country level;
- 5) Conclusions– the closing chapter shall include the conclusions from the comparative/critical analysis (Chapter 2), highlighting that, despite the present challenges, bottom-up approaches can have a significant role in IDRM and IFRM, and also reinforce the recommendations found on Chapter 3.