



GREEN
CLIMATE
FUND

Impact-Based Multi-Hazard Early Warning System

Joseph Intsiful (PhD)

Senior Climate Information and EWS Specialist
Division of Mitigation and Adaptation



GREEN
CLIMATE
FUND

Content

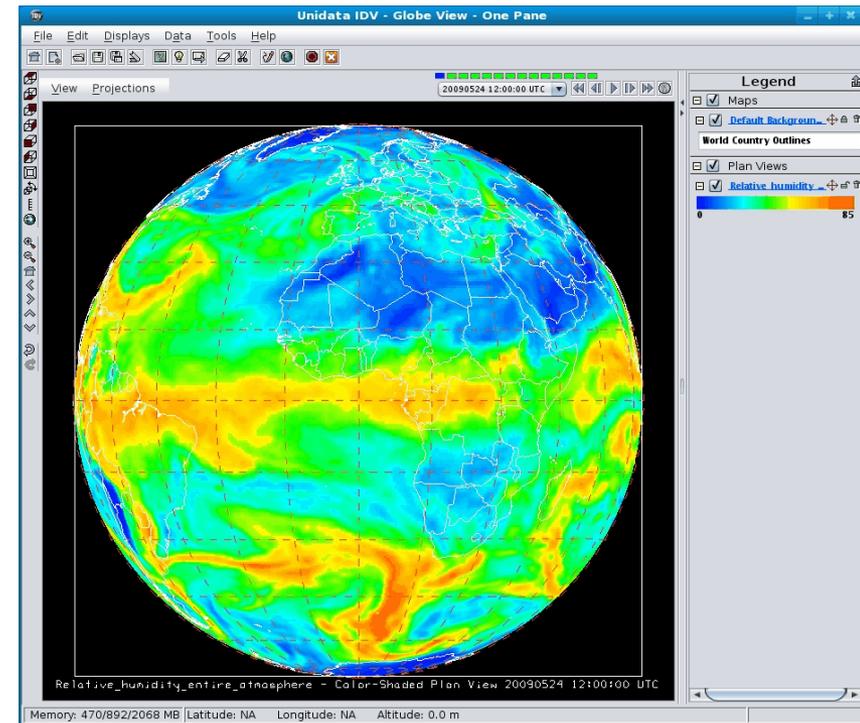
1. Background and Context:

- MHEWS Checklist
- Conceptual framework of IBF

2. Applications:

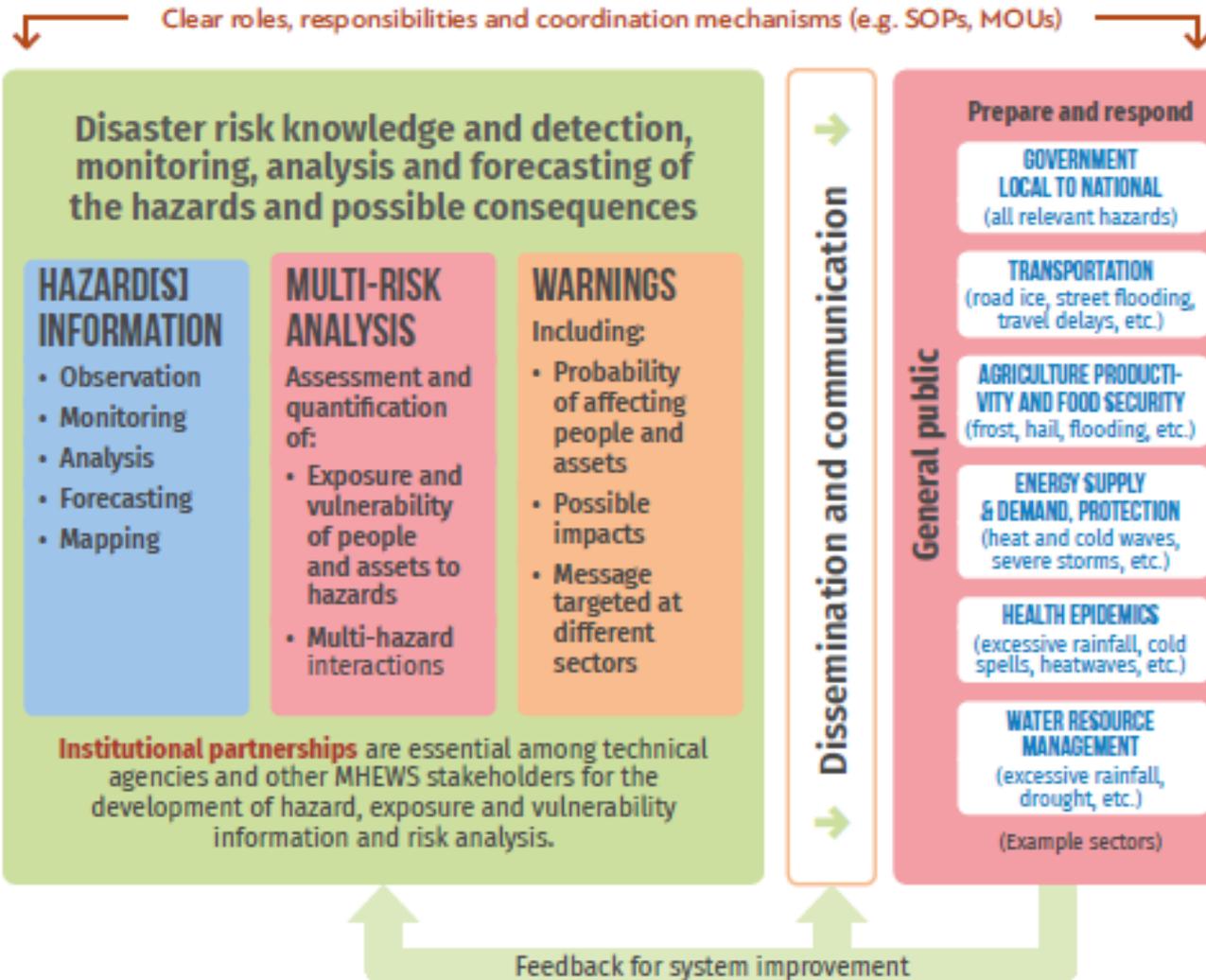
- Tropical Cyclone
- Water resources

3. Conclusion





Multi-Hazard Early Warning System: Conceptual framework





GREEN
CLIMATE
FUND

Core Elements of A Multi-Hazard Early Warning System

Disaster risk knowledge

- Are key hazards and related threats identified?
- Are exposure, vulnerabilities, capacities and risks assessed?
- Are roles and responsibilities of stakeholders identified?
- Is risk information consolidated?

Detection, monitoring, analysis and forecasting of the hazards and possible consequences

- Are there monitoring systems in place?
- Are there forecasting and warning services in place?
- Are there institutional mechanisms in place?

Warning dissemination and communication

- Are organizational and decision-making processes in place and operational?
- Are communication systems and equipment in place and operational?
- Are impact-based early warnings communicated effectively to prompt action by target groups?

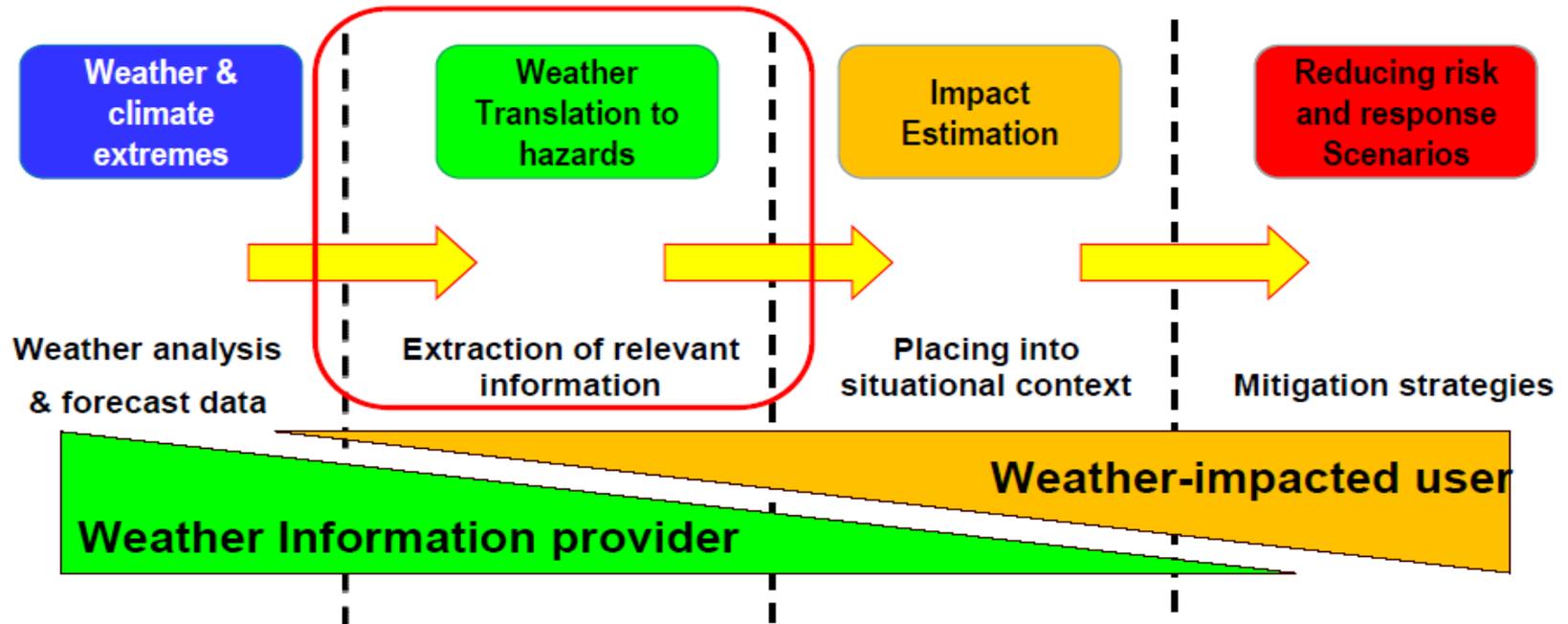
Preparedness and response capabilities

- Are disaster preparedness measures, including response plans, developed and operational?
- Are public awareness and education campaigns conducted?
- Are public awareness and response tested and evaluated?



GREEN
CLIMATE
FUND

Impact-Based Forecasting : Conceptual framework



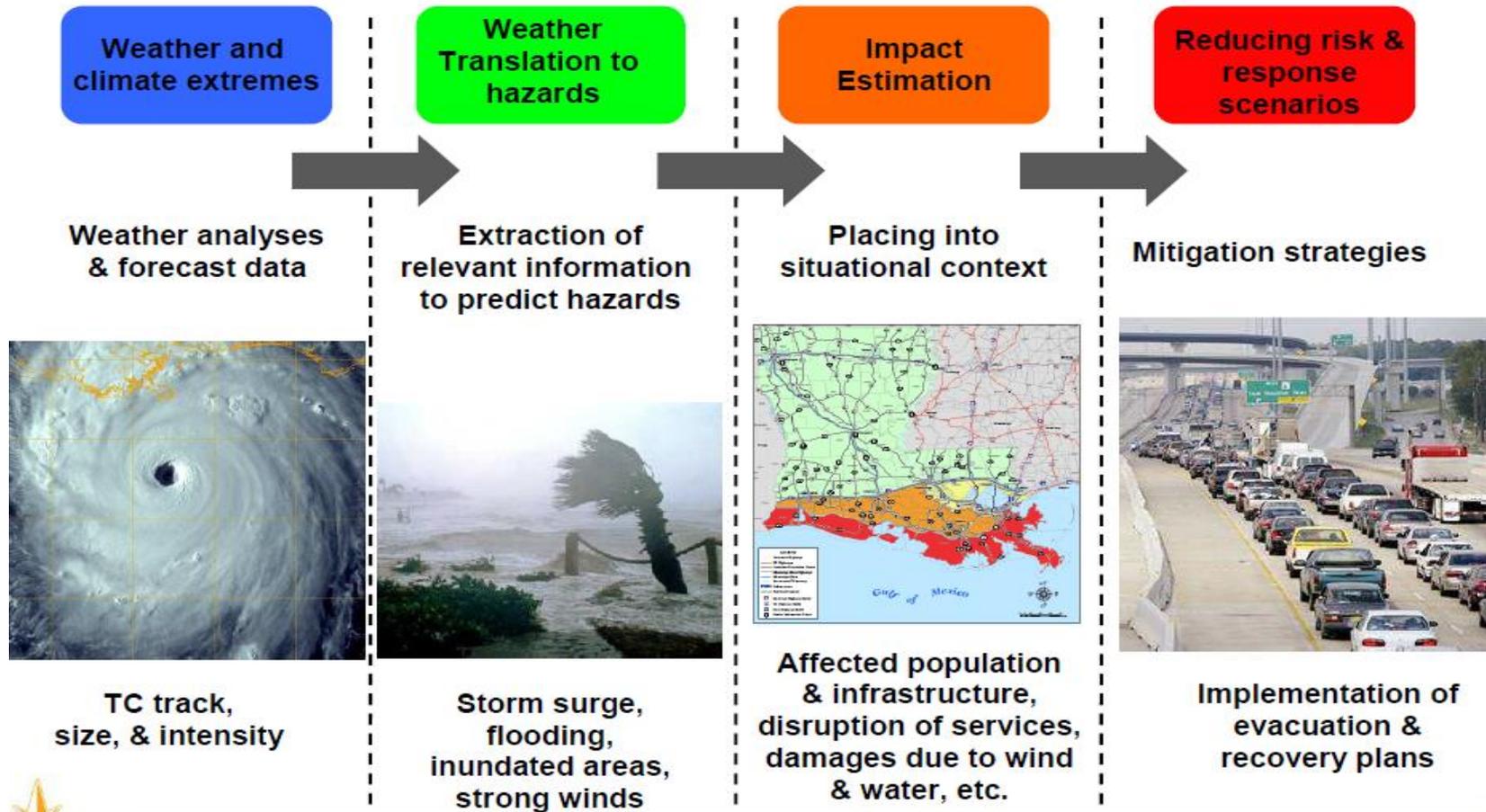
Some examples:

Airport operation	Ceiling & visibility (flight categories)	Reduced capacity (arrival rates)	Ground delay programs
Dam operation	Precipitation & runoff (water level)	Overflow or breaking, minimal discharge	Controlled release of water
Power plant operation	Winds below/above critical thresholds	Reduced power generation	Balancing grid with other power sources



GREEN
CLIMATE
FUND

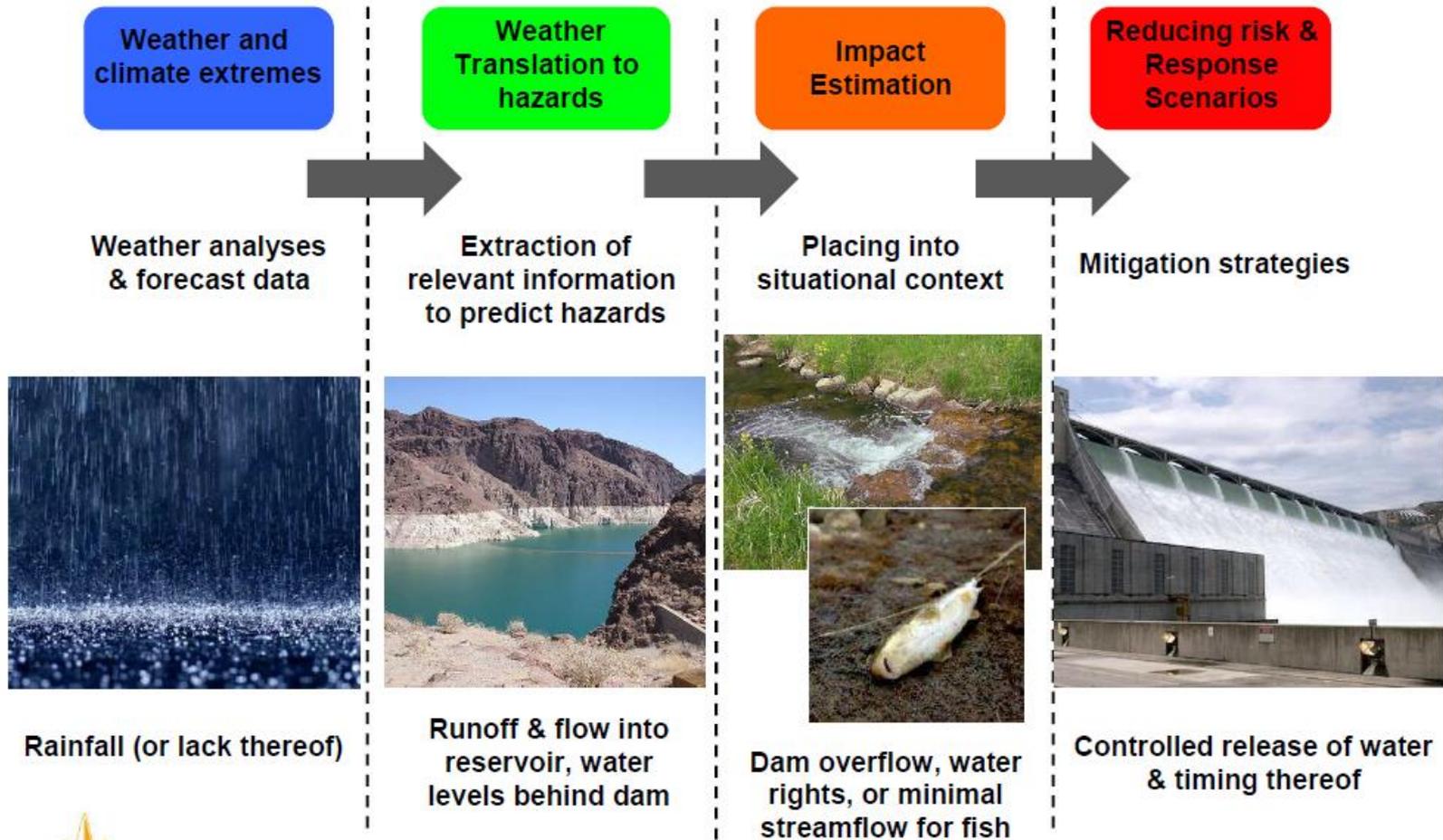
Impact-Based Forecasting: Application to Tropical Cyclone





GREEN
CLIMATE
FUND

Impact-Based Forecasting: Application to Water Resources





GREEN
CLIMATE
FUND

Contacts



Joseph Intsiful (PhD)

*Climate Information and
Early Warning Systems
Senior Specialist*

*Division of Mitigation and
Adaptation*

Green Climate Fund

Songdo International Business District
175, Art Center-daero
Yeonsu-gu, Incheon 22004
Republic of Korea

Email: jjintsiful@gcfund.org



GREEN
CLIMATE
FUND