



Executive Summary

An EPIC Response:

Innovative Governance
for Flood and Drought
Risk Management



GREG BROWDER, ANA NUÑEZ SANCHEZ, BRENDEN JONGMAN, NATHAN ENGLE,
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EPIC Response Program

The EPIC Response Framework

- Provides a new perspective on hydro-climatic risks by looking at the combined management of floods and droughts
- Identifies the roles of different government agencies in managing these risks and highlights where and how these agencies need to collaborate
- Represents the most extensive compendium of flood and drought policies and programs that currently exists in the literature
- Creates a mechanism for engaging in policy discussions in a structured manner to identify gaps, constraints, and opportunities for advancing a country's hydro-climatic risk management system can be discussed in a with a broad range of stakeholders

PROGRAM AREAS

ENABLE

- National Frameworks: Laws, Agencies, Strategic Plans
- Facilitating Whole-of-Society Approach
- Hydro-Met Services

PLAN

- Flood and Drought Risk Mitigation and Contingency Planning

INVEST

- Healthy Watershed
- Water Resources Infrastructure

CONTROL

- Water Allocation and Groundwater Management
- Floodplain Management

RESPOND

- Drought Monitoring, Response, and Recovery
- Flood Monitoring, Response, and Recovery
- Disaster Risk Financing



Whole of Government

- Each agency with its own responsibilities
- Many potential synergies between mandates and programs
- Often overlooked and underappreciated
- Results in overlaps, unintended consequences, missed opportunities
- Joined-up government approach can lead to more effective hydro-climatic risk management

National Agency Roles for Hydro-climatic Risk Management

Hydromet

Provides information for water resources and floodplain management. Leads flood and drought forecasting. Supports agriculture with agro-hydro advisory services.



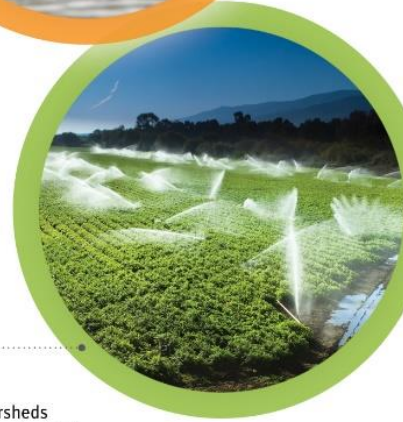
WRM

Oversees planning and operation of water resources infrastructure. Regulates water allocations and strategic use of groundwater to help mitigate droughts. Key role in flood and drought response.



DRM

Lead coordinating agency for flood, and sometimes drought, disaster response. Provides leadership in floodplain management. Works with other agencies to mitigate risks.



Agriculture

Promotes healthy watersheds through sound agricultural policies and climate-smart agriculture. Helps boost farmer incomes and resilience. Key role in drought response. Collaborates with natural resources and WRM on watershed management

Natural resources management

Promotes healthy watersheds by sustainably managing forests, wetlands, and coastal barriers. Collaborates with agriculture and WRM on watershed management.

Whole of Society



Local government



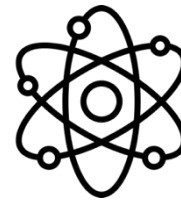
Public participation



Social inclusion



**Education and risk
communication**

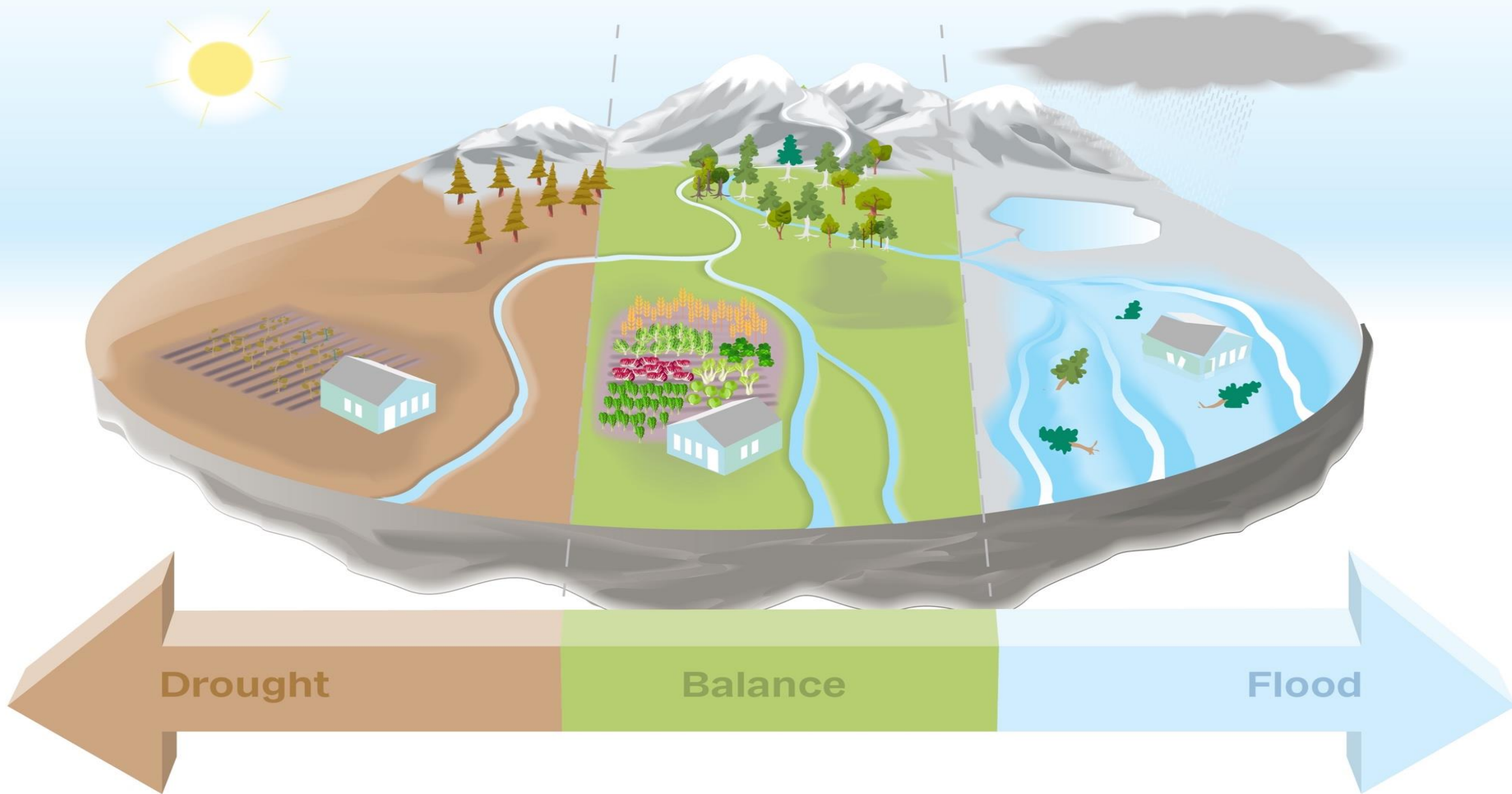


**Scientific
collaboration**



Open information

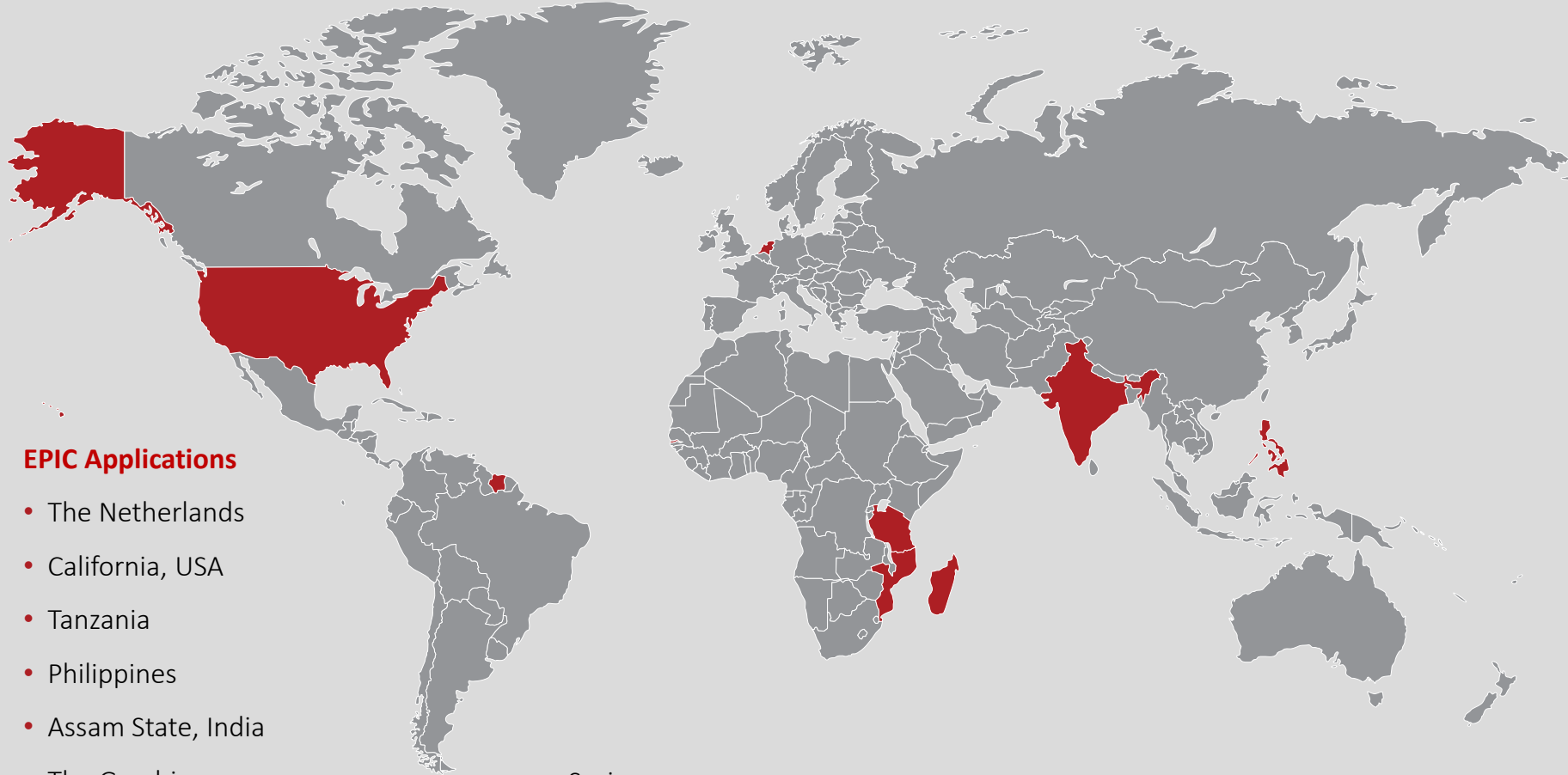
Hydro-Climatic Spectrum



EPIC Response Assessment Methodology (ERAM)

- The ERAM aims to support clients to assess the status of their hydro-climatic risk management systems and where program collaboration could be strengthened
- Self-guided decision support system to inform the continuous evolution of flood and drought management systems
- The ERAM main elements include:
 - Assessing the level of development of flood and drought risk management systems, including program components and the collaboration between them.
 - Creating visuals for benchmarking exercises and highlighting areas that are most needed and/or primed for improved collaboration and coordination.

EPIC Response Use Cases



EPIC Applications

- The Netherlands
- California, USA
- Tanzania
- Philippines
- Assam State, India
- The Gambia
- Mozambique
- Comoros
- Madagascar
- Suriname
- Beira, Mozambique
- Egypt



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THANK YOU

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