FLOOD & DROUGHT MANAGEMENT TOOLS

Water Supply Issues and Challenges

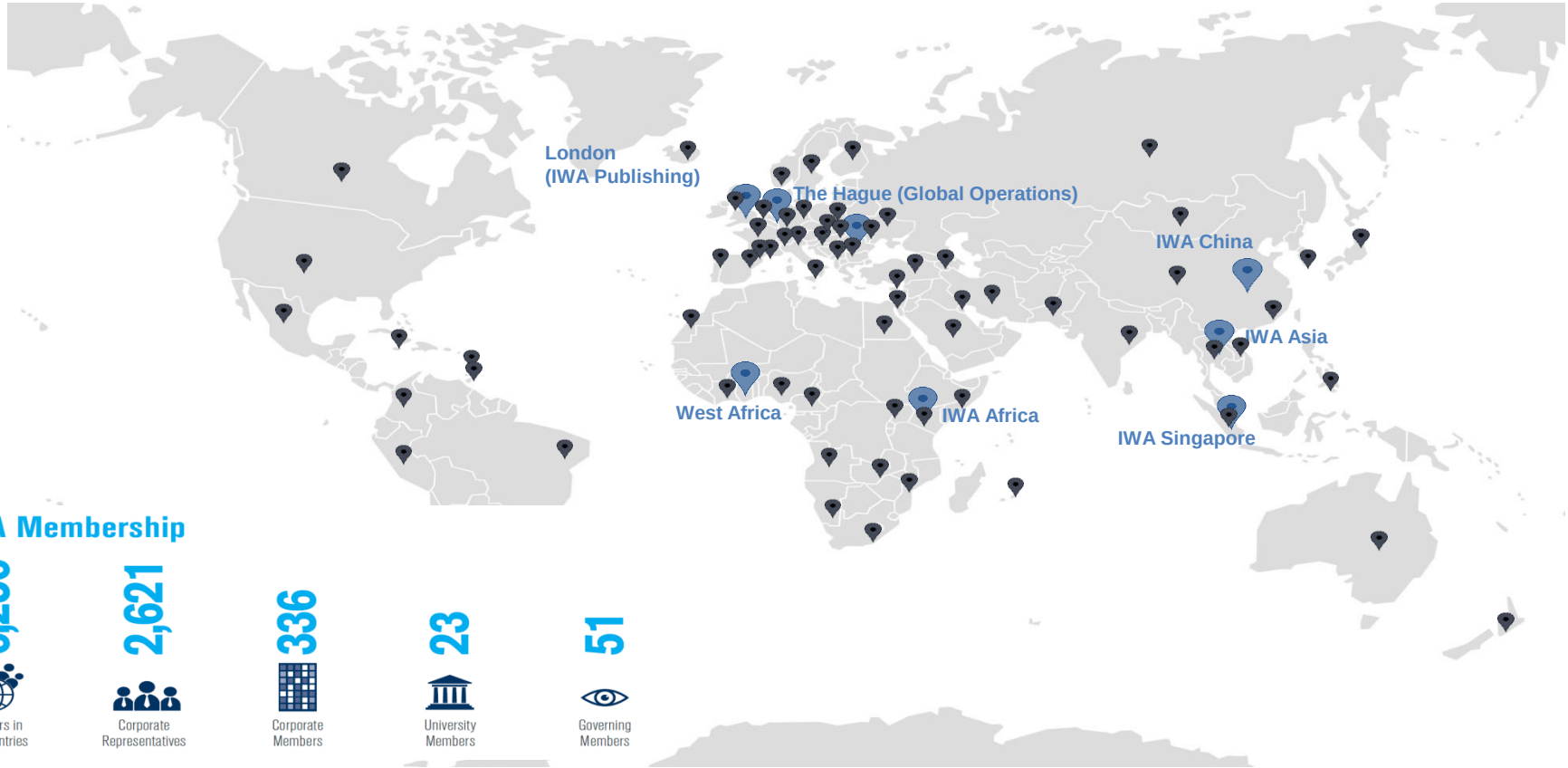
Contacts:
Oluf Zeilund Jessen, DHI
ozj@dhigroup.com

Katharine Cross, International Water Association (IWA)
Katharine.cross@iwahq.org

What is the International Water Association (IWA)?

IWA Global network

the international water association



IWA Membership

6,236	2,621	336	23	51
Members in 130 countries	Corporate Representatives	Corporate Members	University Members	Governing Members

IWA and WATER SAFETY PLANNING

Water Safety Planning *- A comprehensive risk assessment and risk management approach that encompasses all steps in water supply from* ***catchment to consumer*** *[catchment, treatment, distribution] – developed by IWA and WHO*

How does IWA provide support?

- Development of tools and resources to facilitate implementation

Global threats impacting drinking water

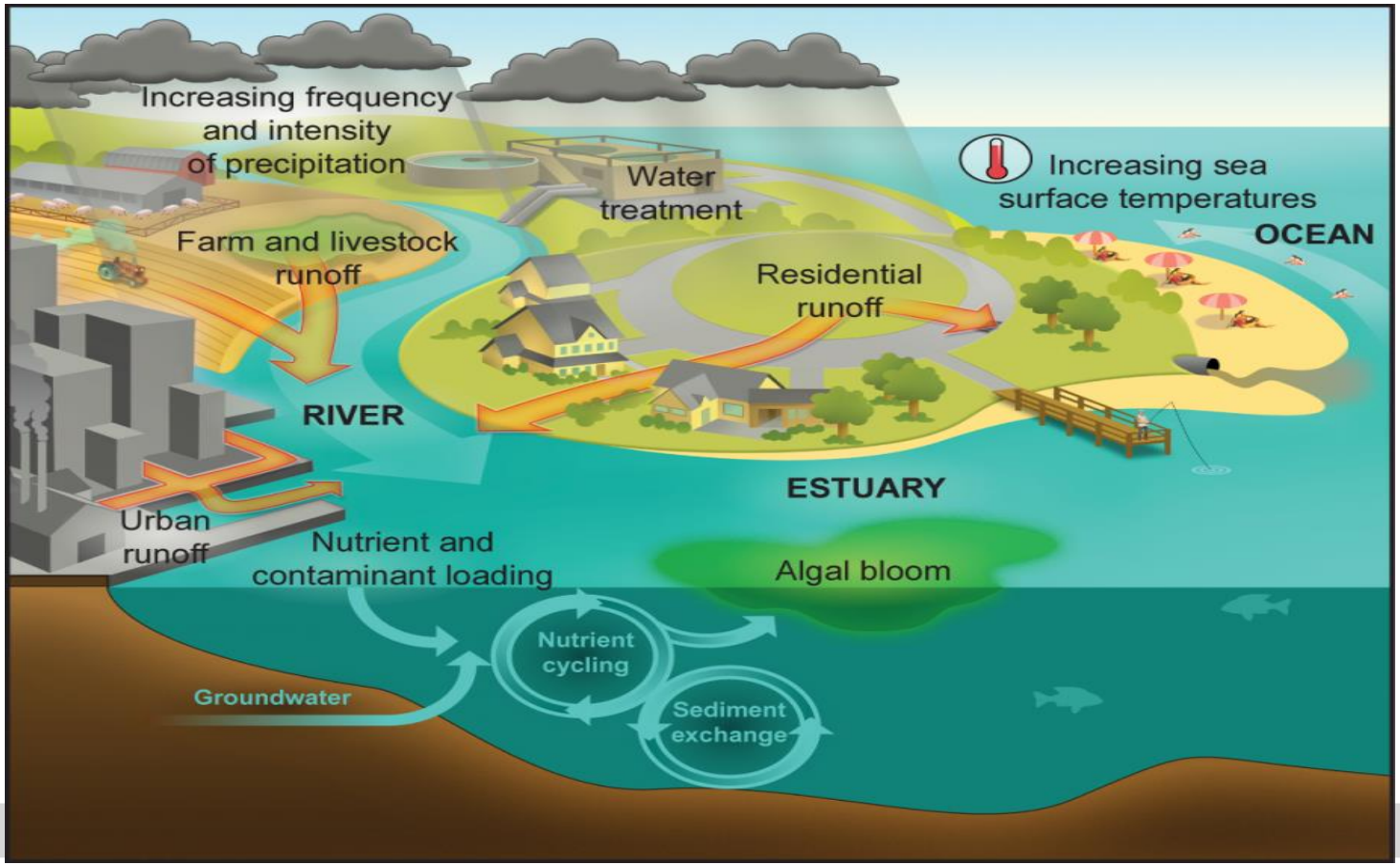
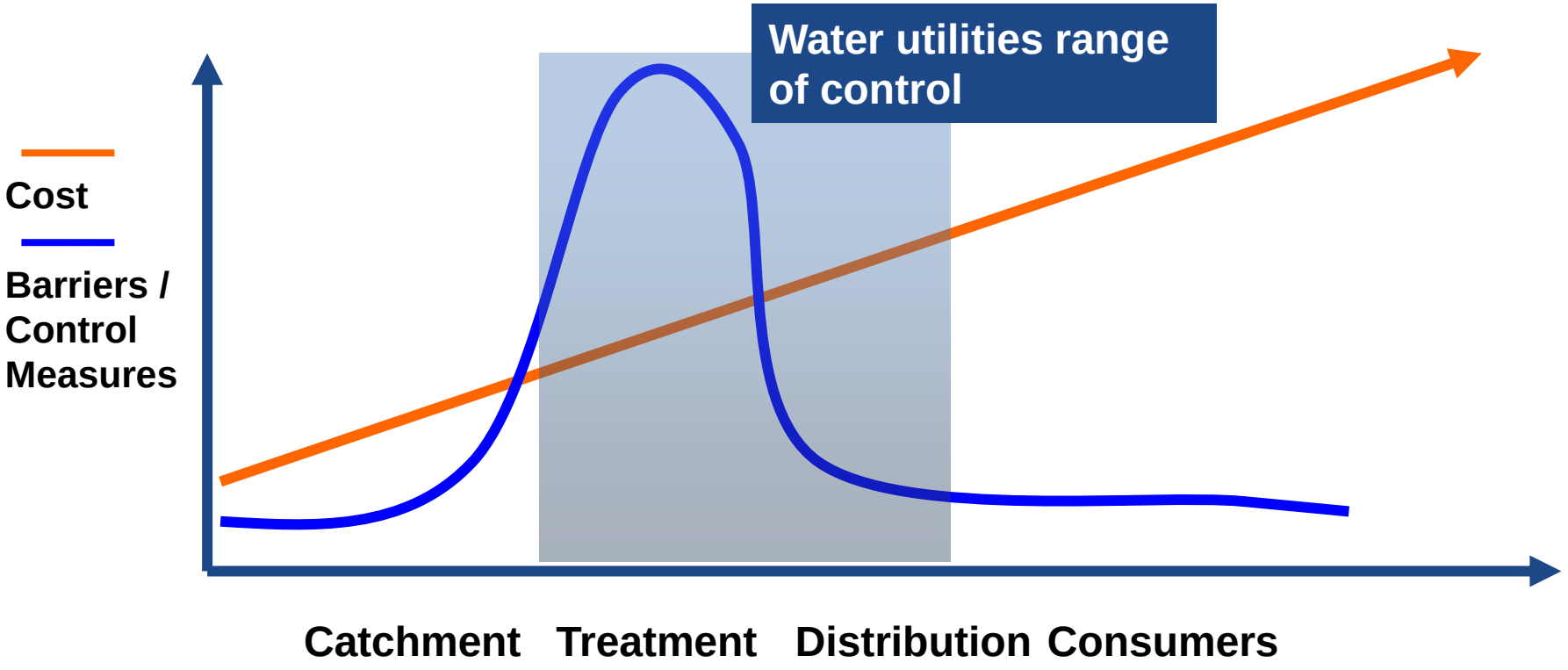
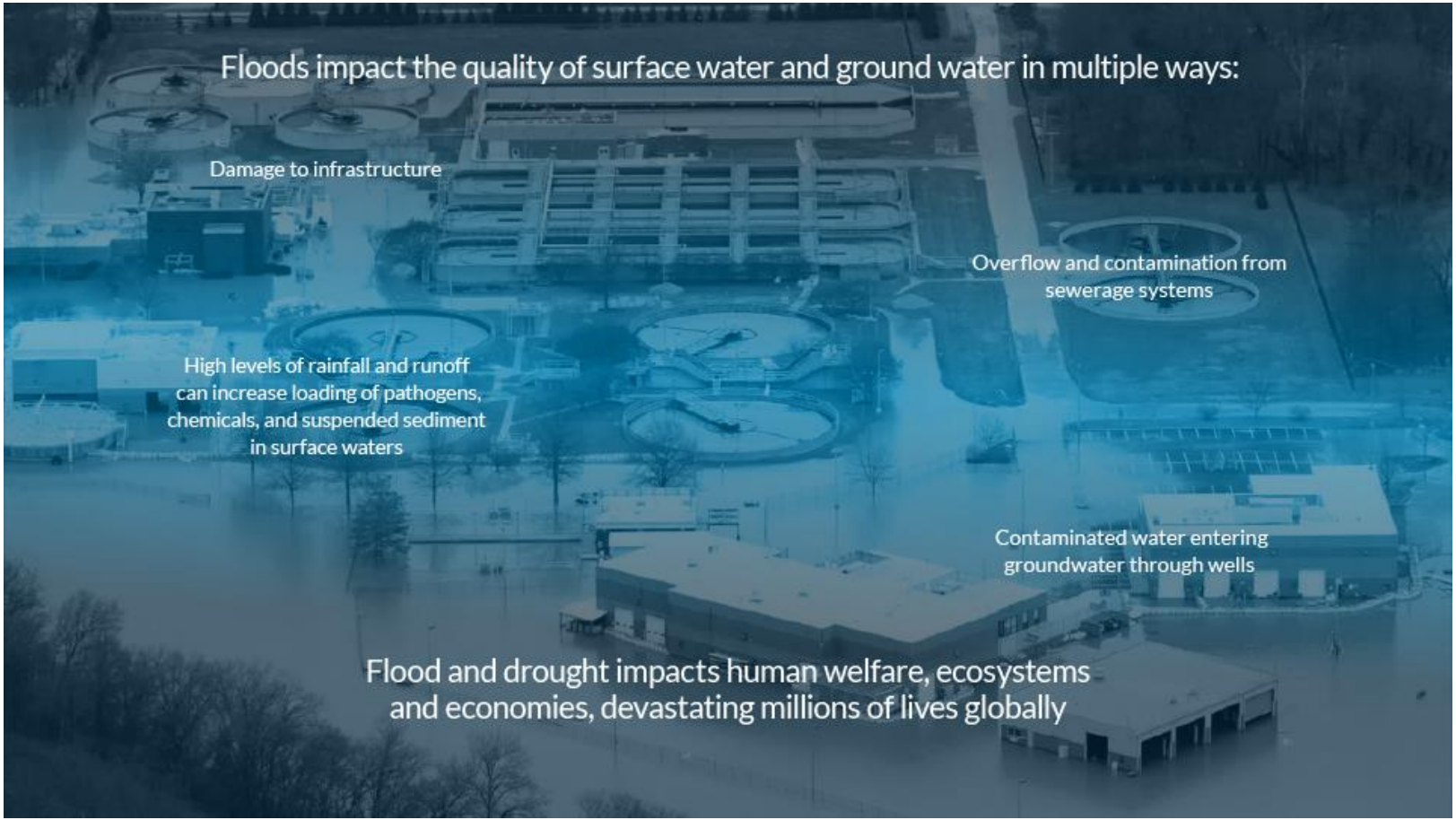


Figure: Links between Climate Change, Water Quantity and Quality, and Human Exposure to Water-Related Illness. Source: U.S. Global Change Research Program https://health2016.globalchange.gov/water-related-illness

Water utilities control



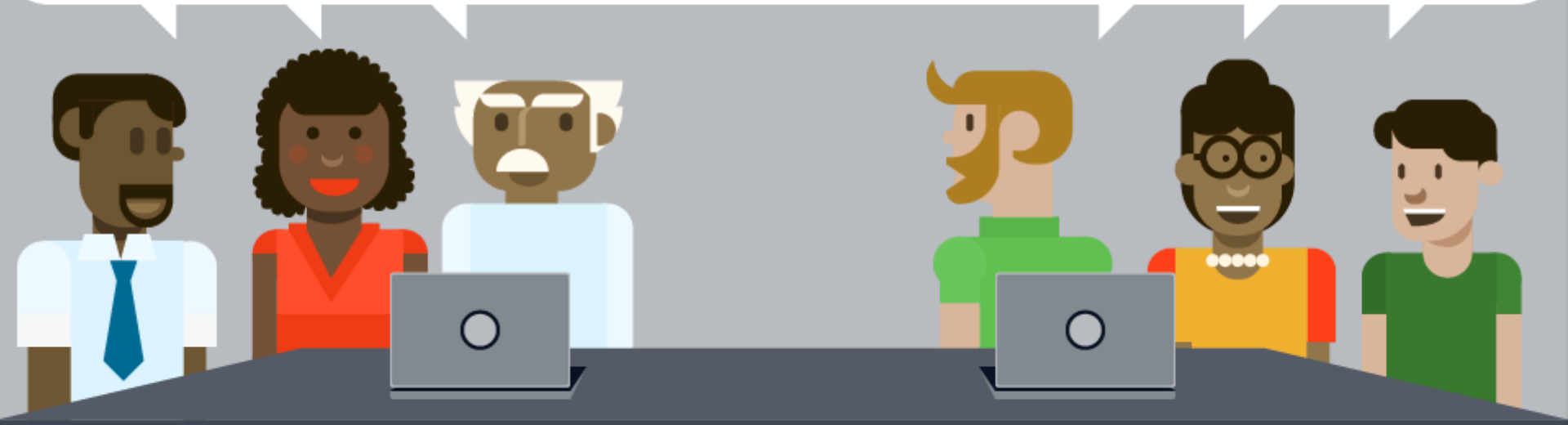
Impacts of Floods and Droughts on water supply system



A changing climate affects the timing, predictability and intensity of precipitation

Climate change will impact our operations and put our populations, especially the most vulnerable, at increased risk

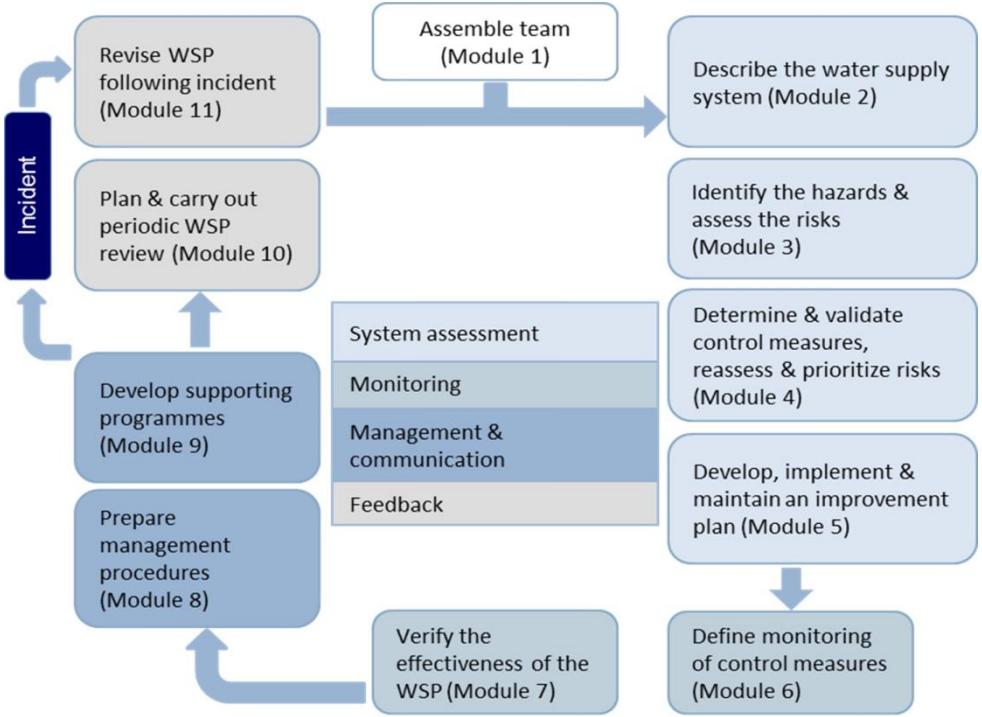
Adjustments must be made to our policies, programmes and infrastructure to prepare for and cope with changing freshwater quantity and quality



Land, water and urban area managers can better prepare for water related risks by integrating information on flood and drought events into planning and analysis processes to ensure drinking water is safe

Water safety planning tool provides an online framework for supporting development, documentation and monitoring of a WSP

- Application supports the 11 modules in the WSP manual each representing a key step in development and implementation of WSP
- Documents WSP and provides platform for sharing and reporting
- Prompts utilities to consider climate change impacts on their supply system



Flood and Drought Portal

WATER SAFETY PLANNING | User: katharinecross | Workgroup: MWAtest | Area: Chao Phraya

Open | New | Clone | Edit | Delete

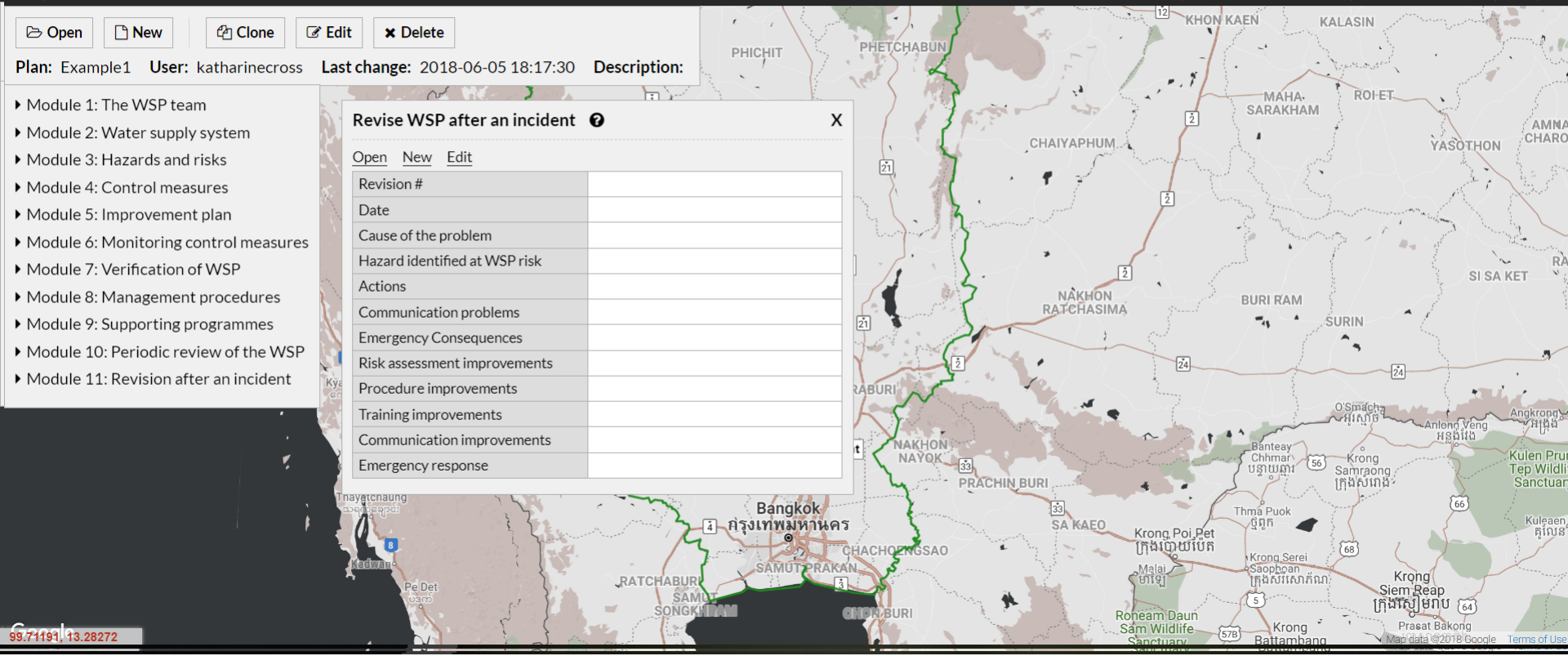
Plan: Example1 **User:** katharinecross **Last change:** 2018-06-05 18:17:30 **Description:**

- Module 1: The WSP team
- Module 2: Water supply system
- Module 3: Hazards and risks
- Module 4: Control measures
- Module 5: Improvement plan
- Module 6: Monitoring control measures
- Module 7: Verification of WSP
- Module 8: Management procedures
- Module 9: Supporting programmes
- Module 10: Periodic review of the WSP
- Module 11: Revision after an incident

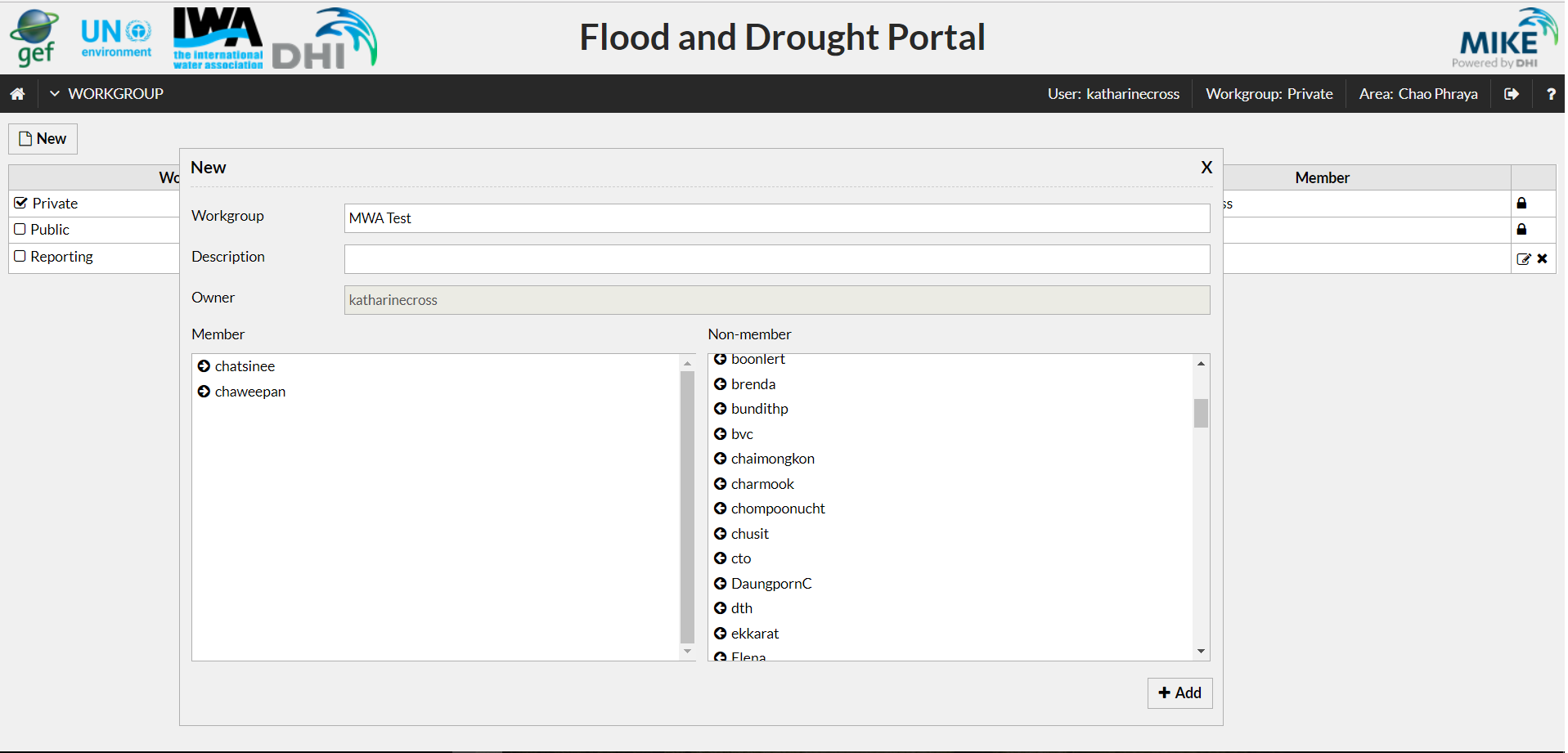
Revise WSP after an incident

Open | New | Edit

Revision #	
Date	
Cause of the problem	
Hazard identified at WSP risk	
Actions	
Communication problems	
Emergency Consequences	
Risk assessment improvements	
Procedure improvements	
Training improvements	
Communication improvements	
Emergency response	



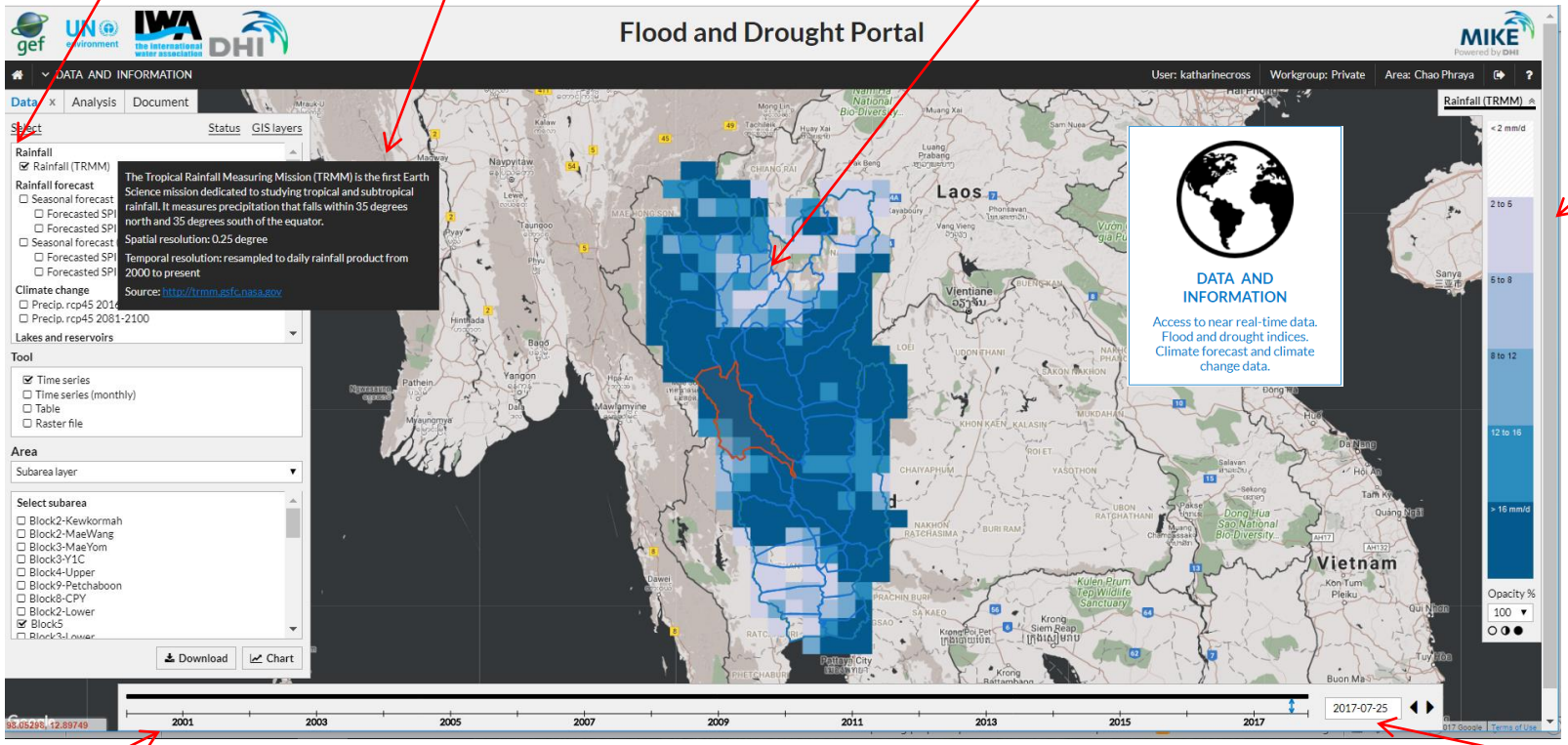
Security of Information



Select data type to be displayed

Tool information

Spatial data



Legend

Data tools

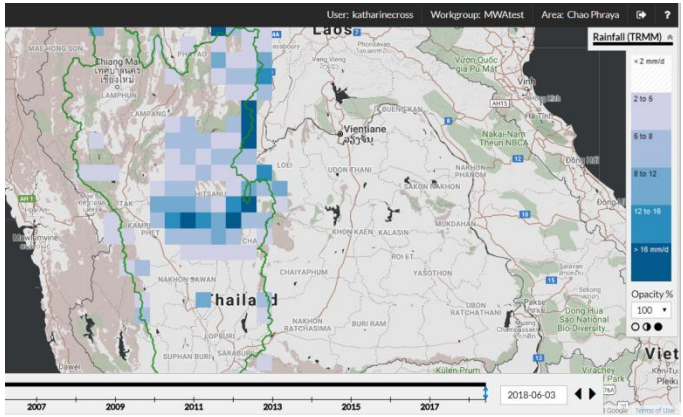
Data area

Data timeline

Current time step

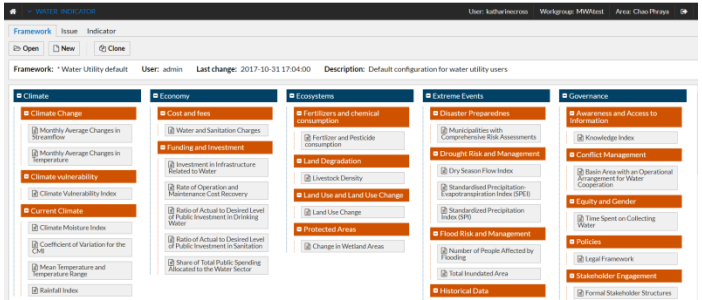
Can provide information to identify current and future climatic hazards (e.g water scarcity, increased temperatures) that will affect water resource

Data and Information tool global historical and satellite data including current and forecasted climate information such as rainfall, temperature and evapotranspiration



Issue analysis tool helps identify the causes behind an environmental issue affecting the water supply

Indicator tool a library of indicators with information on the data needed and how to apply, e.g. measure the issues (run-off from agriculture) causing a hazard (pollution of the water source)



Next steps

- Work with utilities in pilot basins to incorporate applications into planning process as needed
- Further develop approach to climate resilient water safety planning (with WHO)
- Developing guidance for water utilities to interpret climate information
- Webinars and training
  - Climate Resilient Water Safety Planning (Webinar - September 6th)
  - Interpreting climate information (Webinar - October 9th)
  - Climate smart utilities (Training @ World Water Congress, Sept 18th, 2018)
- Explore stand alone application for water utilities

Water utilities that are better prepared for climate hazards, and a safe and secure water supply: Implementing a robust Water Safety Plan will deliver more impactful interventions, leading to achievement of the targets set in the UN Sustainable Development Goals 6 and 13)

FLOOD & DROUGHT MANAGEMENT TOOLS

Contacts:
Oluf Zeilund Jessen, DHI
ozj@dhigroup.com

Katharine Cross, International Water Association (IWA)
Katharine.cross@iwahq.org