

# Stress-testing Scotland's Multifunctional Water Resources Against Systemic Risks



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Sajid Karim

UNESCO Centre for Water Law, Policy & Science, University of Dundee

Email: 2553034@dundee.ac.uk

Hydro Nation Scholars Programme

## Developing a participatory future-proofing framework for resilient water governance in Scotland

### 1. Background

#### Water Governance: A Wicked Problem



Complexity



Diversity

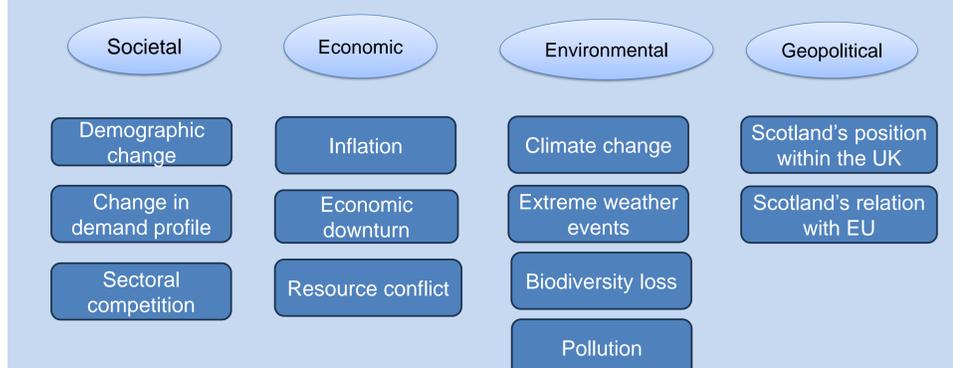


Uncertainty

### 2. Water Governance Stakeholders



### 3. Uncertainties & Risk Factors



### 4. Objectives

- Define and analyse the water governance components for Scotland
- Map key stakeholders and interrelationships
- Co-develop plausible future scenarios informed by socio-economic, environmental & geopolitical trajectories—with potential risks
- Assess the resilience and robustness of the system
- Devise strategies to make the system adaptive to shocks & uncertainties.

### 5. Project Plan

#### Framework Development

Defining the system  
Identifying the elements and their interconnectedness

Literature review  
Expert interviews

#### Stakeholder Analysis

Interest-influence matrix  
Actor-linkage matrix

Semi-structured interviews  
Content analysis & WCM  
Stakeholder workshop

#### Scenario Building

Exploratory Scenario Planning

- Business as usual
- Changes with low disturbance
- Changes with high disturbance
- Massive and abrupt changes

DELPHI  
Historical data analysis  
Scenario workshop

#### Stress-testing

Assessing the resilience and robustness of the system

Data analysis  
Strategy workshop

### 6. Contribution



Decision-making



Academia



Society

### 7. References

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I hereby acknowledge my supervisors Prof John Rowan and Dr Iain Brown, and the Scottish Government's funding through the Hydro Nation Scholars Programme.



University of Dundee