

## **Outline Book on Water and climate**

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### 1. Core Argument

### 2. Target Audience

### 3. Climate Variability and Change

- 3.1 Climate variability and seasonal forecasts
  - o 3.1.1 El Niño Southern Oscillation (ENSO)
  - o 3.1.2 Predicting climate variability
  - o 3.1.3 Regional differences in the predictability of the climate
  - o 3.1.4 Availability and formats of seasonal forecasts
- 3.2 climate change
  - o 3.2.1 Evidence that climate is changing
  - o 3.2.2 Climate change scenarios

### 4. The impacts of climate on water

- 4.1 Impacts of climate change on the hydrological cycle
- 4.2 Recent changes in water availability and extreme events
- 4.3 Impacts of climate change and variability on water storage, delivery and protection
- 4.4 Possible institutional impacts of climate change

### 5. Managing current climate variability

- 5.1 Conceptual frameworks for managing climate current variability in the water sector
- 5.2 Strategic approaches to coping with variability )
  - o 5.2.1 A short history of managing climate variability in the water sector
  - o 5.2.2. Recent developments in managing climate variability
- 5.3 Operational options for managing climate variability
  - o 5.3.1 Storage
  - o 5.3.2 Groundwater
  - o 5.3.3 Infrastructure
  - o 5.3.5 Resource development
  - o 5.3.6 Allocation (water markets, source shifting, rights systems)
  - o 5.3.6 Institutional aspects
- 5.3 options for improving managing climate variability
  - o 5.4.1 Recognizing and knowing historic and current climate variability
  - o 5.4.2 Early warning and improving disaster preparedness
  - o 5.4.3 Using Numerical Weather Predictions
  - o 5.4.4 Using seasonal climate forecasts

### 6. Using and specifying climate scenarios in water resource management

### 7. Adapting to climate change

- 7.1 Conceptual changes need for climate change adaptation
- 7.2 Strategic climate change adaptation options
- 7.3 Examples of operational climate change adaptation measures
- 7.4 Institutional Mechanisms and adaptation to climate change

### 8. Climate Proofing

### 9. Case Studies

### 10. General Conclusion