Session 9

Chapter VI: Knowledge Base for Transboundary Water Allocation

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UEF and SYKE Drafting Team, UNECE Video Conference, 20–21 October 2020

Chapter VI

- Rationale:
  1. The need and importance of a shared knowledge base
  2. Means to gather that knowledge
     - Water resources, Environmental requirements, Water uses and needs & Impacts
  3. Decision support in transboundary context
- Target length: 10 pages
  - Fairly general: introducing concepts and sources (cross-referencing to previous chapters)
  - Some case examples

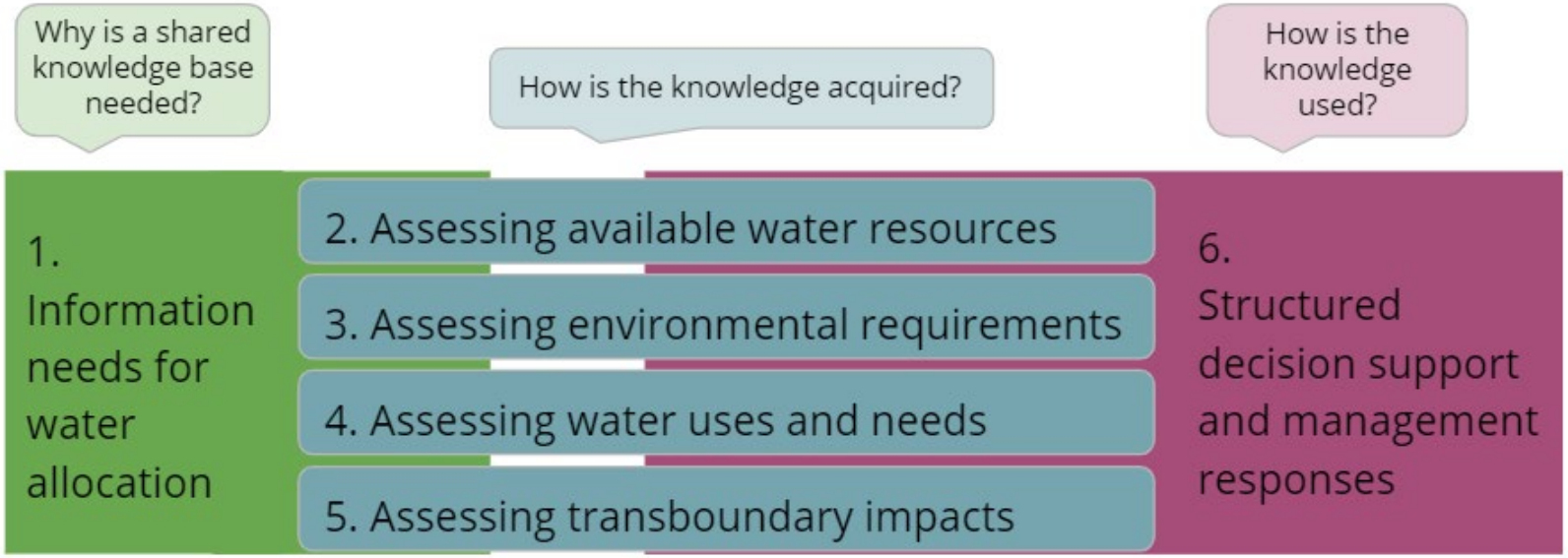
Chapter VI

- Comments and changes to previous version:
  - Current version based on the annotated outline
  - All comments to previous outline have been taken into account
  - More elements and practicality to impact assessment
    - Previously a more legal perspective on EIA
  - More elements about structured decision making and management responses
    - Previously more centered around DSS
  - More background and framing in information needs section
  - Suggested initial case study examples added

Chapter VI

- Headings and changes to previous version:
  1. Information Needs for Water Allocation
  2. Assessing Available Water Resources
  3. Assessing Environmental Requirements (previously E-flows)
  4. Assessing Water Uses and Needs
  5. Assessing Transboundary Impacts (previously EIA)
  6. Structured Decision Support and Management Responses for Water Allocation (previously just DSS)

Chapter VI


Why is a shared knowledge base needed?
How is the knowledge acquired?
How is the knowledge used?
1. Information needs for water allocation
2. Assessing available water resources
3. Assessing environmental requirements
4. Assessing water uses and needs
5. Assessing transboundary impacts
6. Structured decision support and management responses

Chapter VI

1. Information Needs for Water Allocation

1. Introduction
2. Joint assessment and monitoring of shared basins
   - DPSIR
   - Monitoring cycle
   - Information needs
   - Role of river commissions in monitoring
   - ***Case study suggestion: Sava Basin Commission***
3. Scenarios
   - Use of joint scenarios in transboundary water allocation
   - ***Case study suggestion: Mekong***

Chapter VI

2. Assessing Available Water Resources

1. Assessing the quality, quantity and regime of available water resources (including groundwaters)
2. Understanding long-term trends
3. Flow regime, interannual and seasonal variability and exceptional situations, i.e. flood and drought
4. Modeling of water resources
5. Augmentation of water resources?

Chapter VI

3. Assessing Environmental Requirements

1. Understanding water-related ecosystems, assessment of the contribution of biodiversity and ecosystem goods and services to livelihoods and development
2. Different approaches to assessing e-flows
3. SDG indicator 6.6.1, assessing and incorporating environmental flows (EFs) into SDG indicator 6.4.2, including groundwater
4. E-flows in transboundary context
   - comparison table of methods

– ***Case study suggestion***
   - ***Transboundary aquifers in Southern Africa, others?***

Chapter VI

4. Assessing Uses and Needs

1. Determining sectoral water uses and needs
   - Existing, potential and future uses, including in-stream uses and functions; consumptive and non-consumptive uses
   - Prioritization of uses
   - Quantity, quality and timing requirements of different water uses and needs
   - Different approaches to assessing water use: monitored observed use, registered authorized use, estimation; importance of including return flows
2. Sharing information on sectoral water uses
   - Common approaches between the riparian

Chapter VI

5. Assessing Transboundary Impacts

1. How to assess transboundary impacts of water allocation
   - Environmental impacts assessment (EIA), Strategic environmental assessment (SEA), Cultural impact assessment (CIA)
     - ***SEA Case study suggestions: Mekong***
   - Methods and scale of assessment
   - Benefit assessment
2. Legal perspective of transboundary impact assessments
   - Knowledge base requirements of the Global Water Conventions, case law (e.g. Pulp Mills case), Espoo Convention and other instruments
   - EIA in transboundary water agreements

Chapter VI

6. Structured Decision Support and Management Responses for Water Allocation

1. Knowledge base, structured decision support and decision support systems (DSS)
   - Methods dealing with a variety of views, values and information and trade-offs
   - Different approaches and methods to support planning and decision-making
2. Structured decision support
   - Multi-criteria decision analysis (MCDA) + others
3. Decision support systems (DSS)
   - Applicability, limitations and benefits of DSS in transboundary water allocation
   - ***Case study suggestion: Cubango-Okavango***
4. Management responses for water allocation

Chapter VI

Questions for the Expert Group for discussion and commenting

- Is the structure logical? (and the related figure)
- Is something missing?
- All inputs, ideas and resources are welcome!

Session 10

Explanation of Flow Chart on “Operationalising Transboundary Water Allocation” and Feedback

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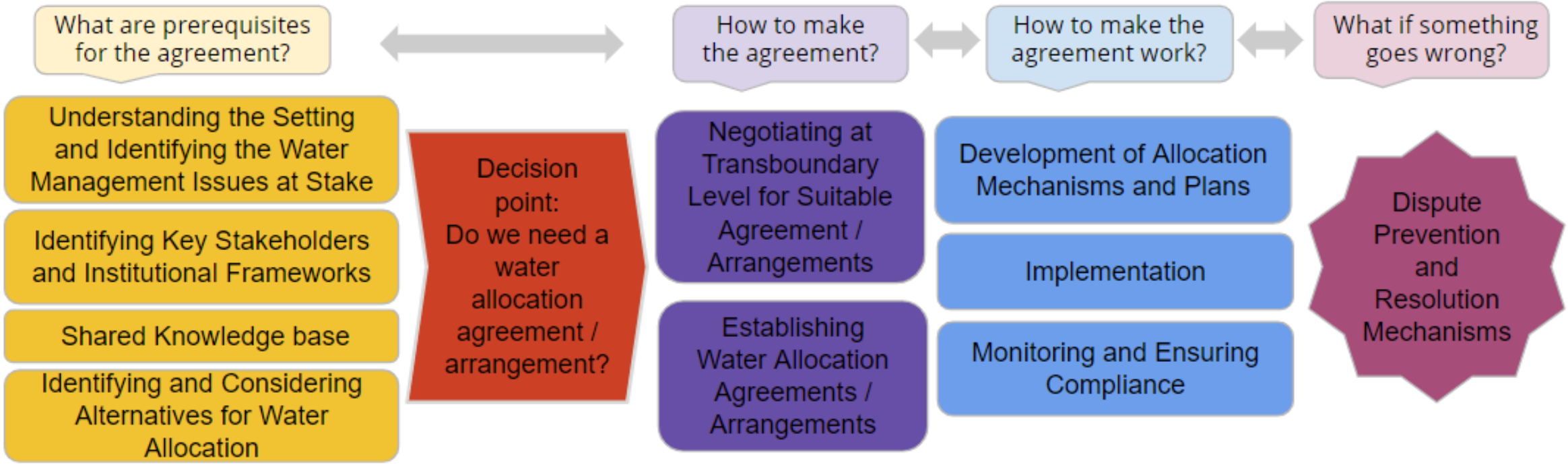
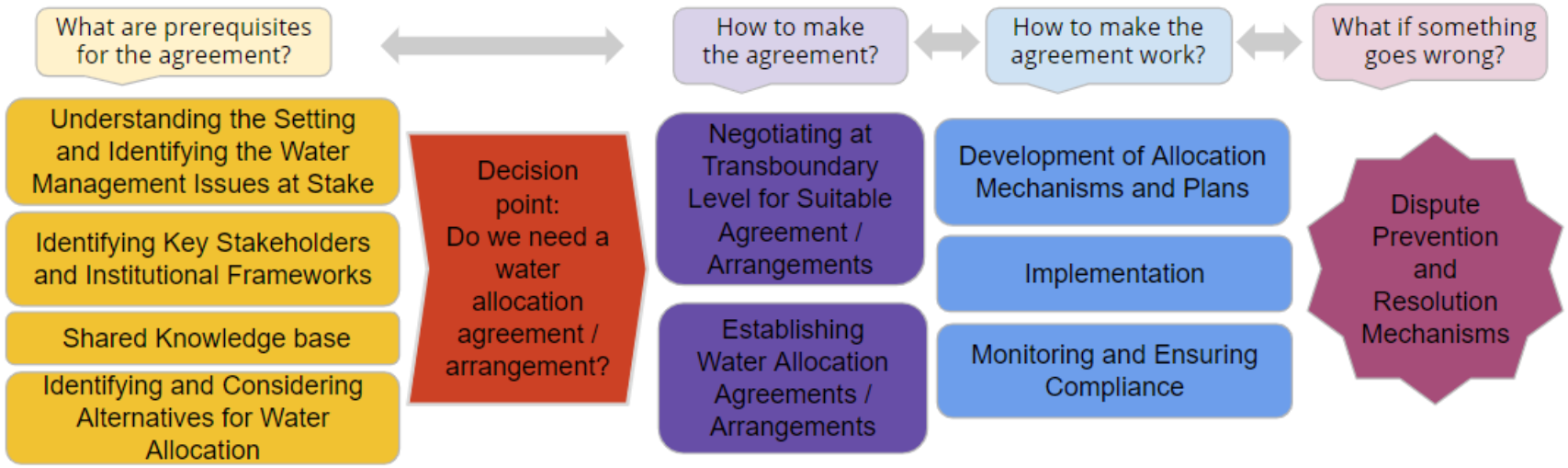
Chapter VII


What are prerequisites for the agreement?
How to make the agreement?
How to make the agreement work?
What if something goes wrong?
Understanding the Setting and Identifying the Water Management Issues at Stake
Identifying Key Stakeholders and Institutional Frameworks
Shared Knowledge base
Identifying and Considering Alternatives for Water Allocation
Decision point: Do we need a water allocation agreement / arrangement?
Negotiating at Transboundary Level for Suitable Agreement / Arrangements
Establishing Water Allocation Agreements / Arrangements
Development of Allocation Mechanisms and Plans
Implementation
Monitoring and Ensuring Compliance
Dispute Prevention and Resolution Mechanisms

Chapter VII



- Does the flowchart cover all the key steps of the transboundary water allocation process?
- Is the sequencing of the flowchart logical?
- What other flowcharts could be included in the chapter or other sections of the handbook?