



# Water Conflicts and Cooperation: Concepts, Tools and Nile Basin Case Study

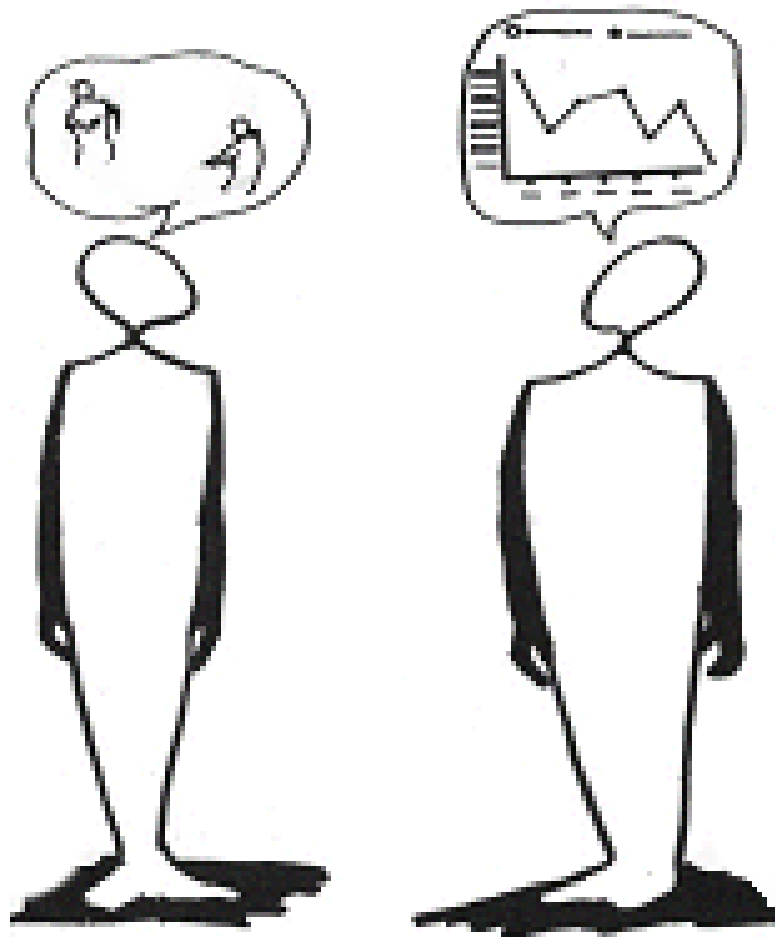
Dr. Simon J. A. Mason, Center for Security Studies (CSS) ETH Zurich 5 Dec 2024

*Thanks to Mediation Support Project (CSS ETH Zürich and swisspeace, funded by Swiss Federal Department of Foreign Affairs (FDFA)), <https://css.ethz.ch/>*

## **Aim:**

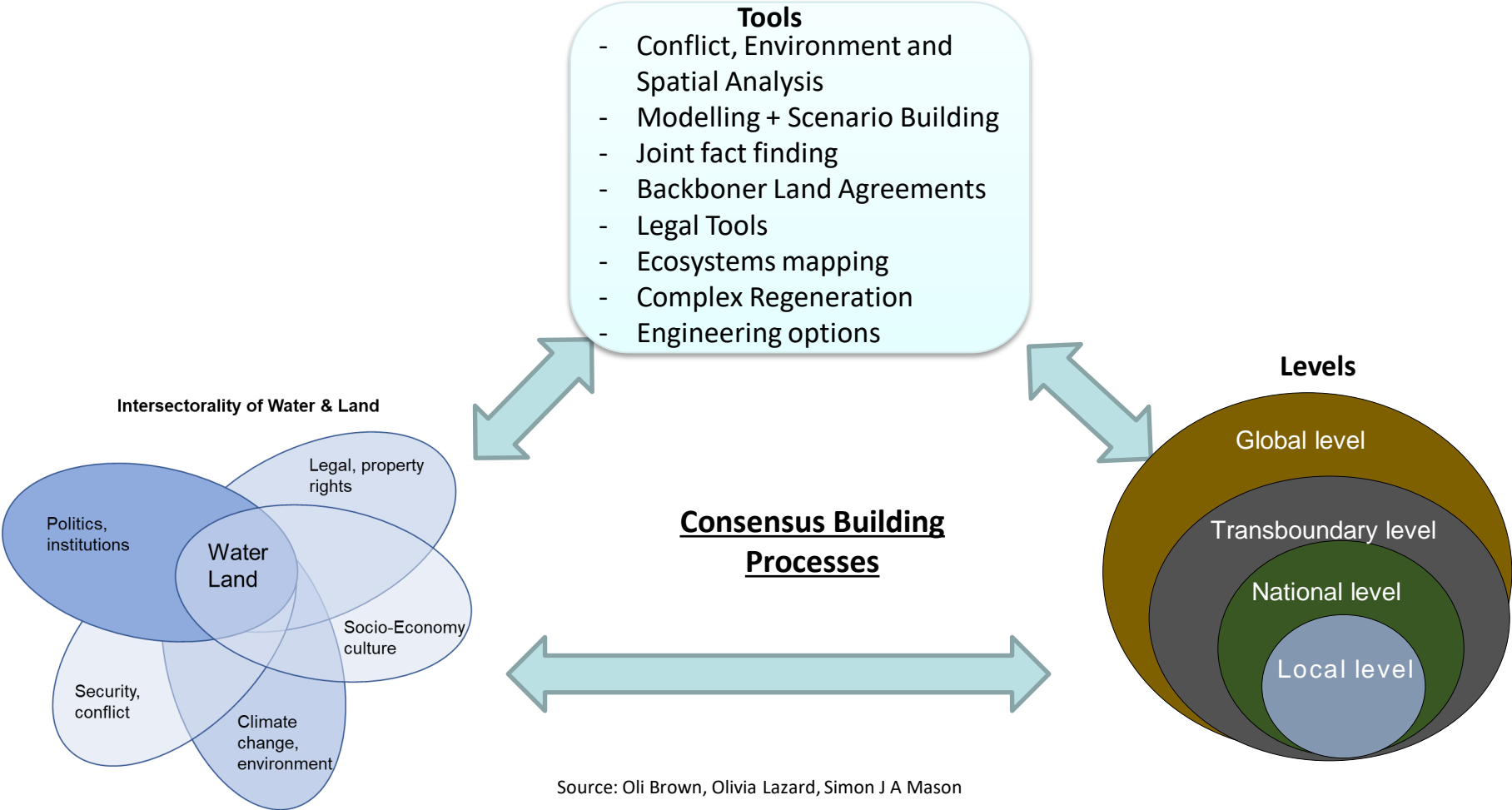
Learn about water conflicts and cooperation: concepts, tools and Nile Basin case study

1. Water use conflicts
2. Water use cooperation:
  1. Generic consensus building tools
  2. Water related consensus building tools
3. Nile Basin case study



Drawing: Sampark

# Overview: Understanding and Responding to Water Use Conflicts



Source: Oli Brown, Olivia Lazard, Simon J A Mason

# Block I

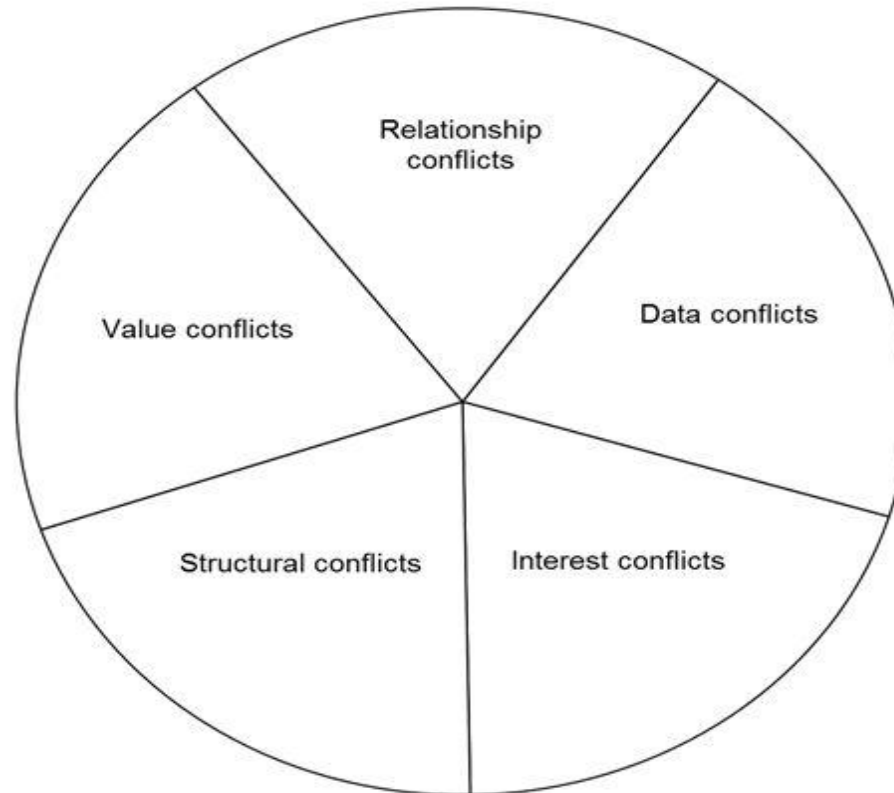
## Water use conflicts



# ”Moore’s Pizza”

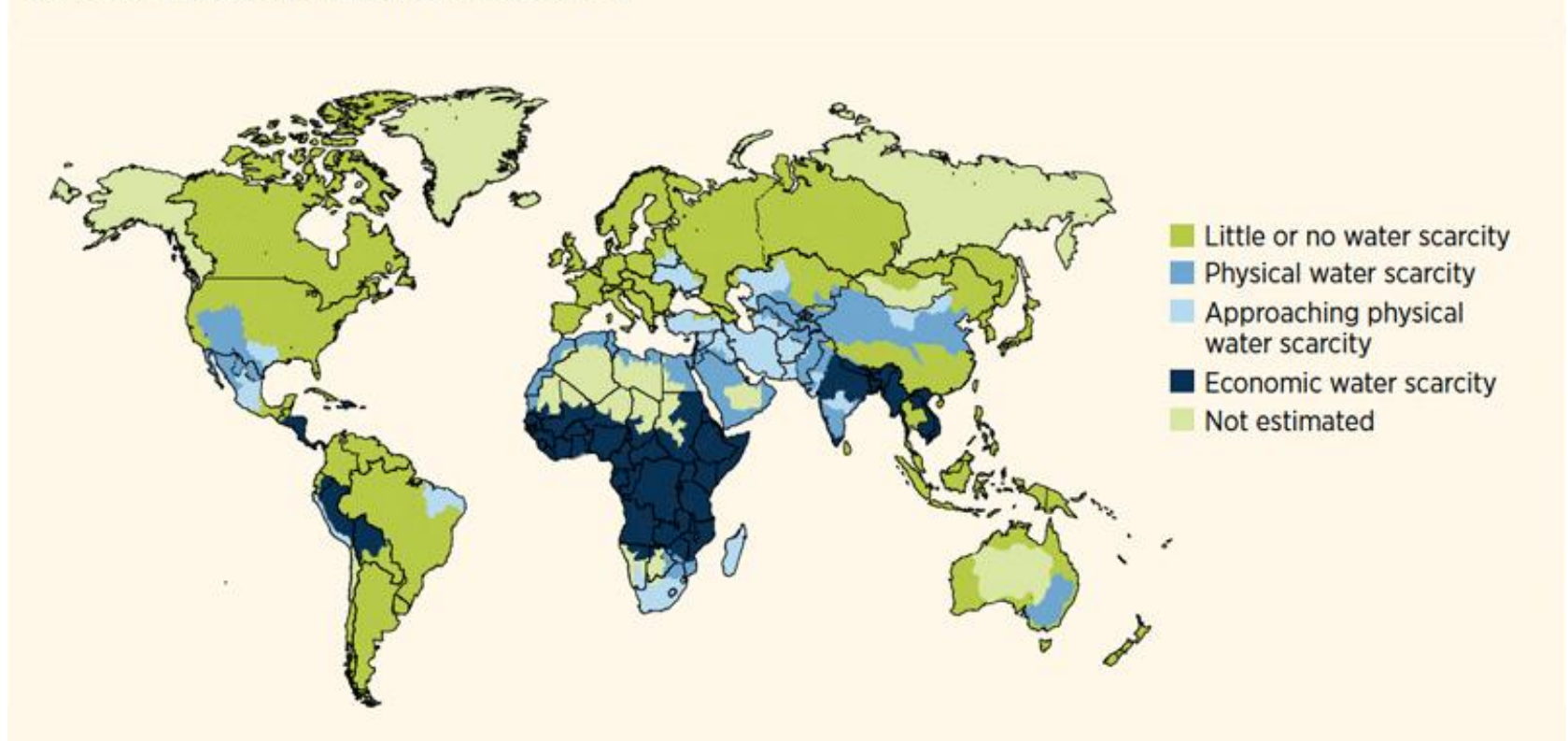
**Conflict =**  
Struggle between  
two or more actors  
over

- Relationship
- Values
- Structures
- Interests
- Data



# Water scarcity

Global physical and economic water scarcity



[Source: Water scarcity | International Decade for Action 'Water for Life' 2005-2015](#)

# Physical and Economic Water Scarcity

---

**Physical water scarcity:** Ca. 1.2 billion people (1/5 world's population), live in areas of physical water scarcity (annual water supplies drop below 1,000 m<sup>3</sup> per person)

**Economic water scarcity:** Ca. 1.6 billion people (1/4 world's population), face economic water shortage (where countries lack the necessary infrastructure to take water from rivers and aquifers).

**Multiple uses of water:** Ca. 70% water for agriculture, 20% for industry, 10% for domestic

[Water scarcity | International Decade for Action 'Water for Life' 2005-2015](#)

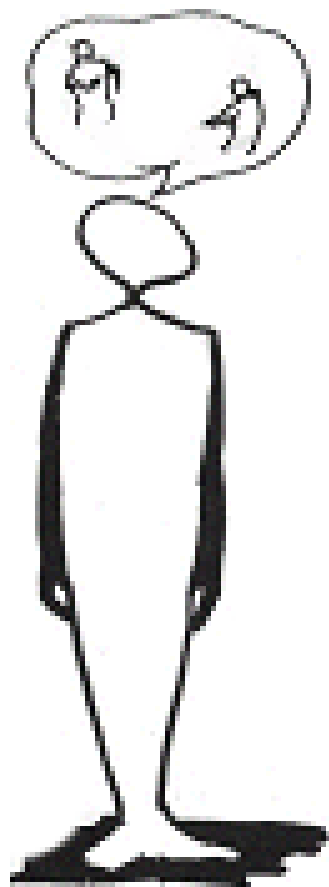


**Water use conflicts** can be understood as a struggle between two or more actors over access, control, management and use of water resources.

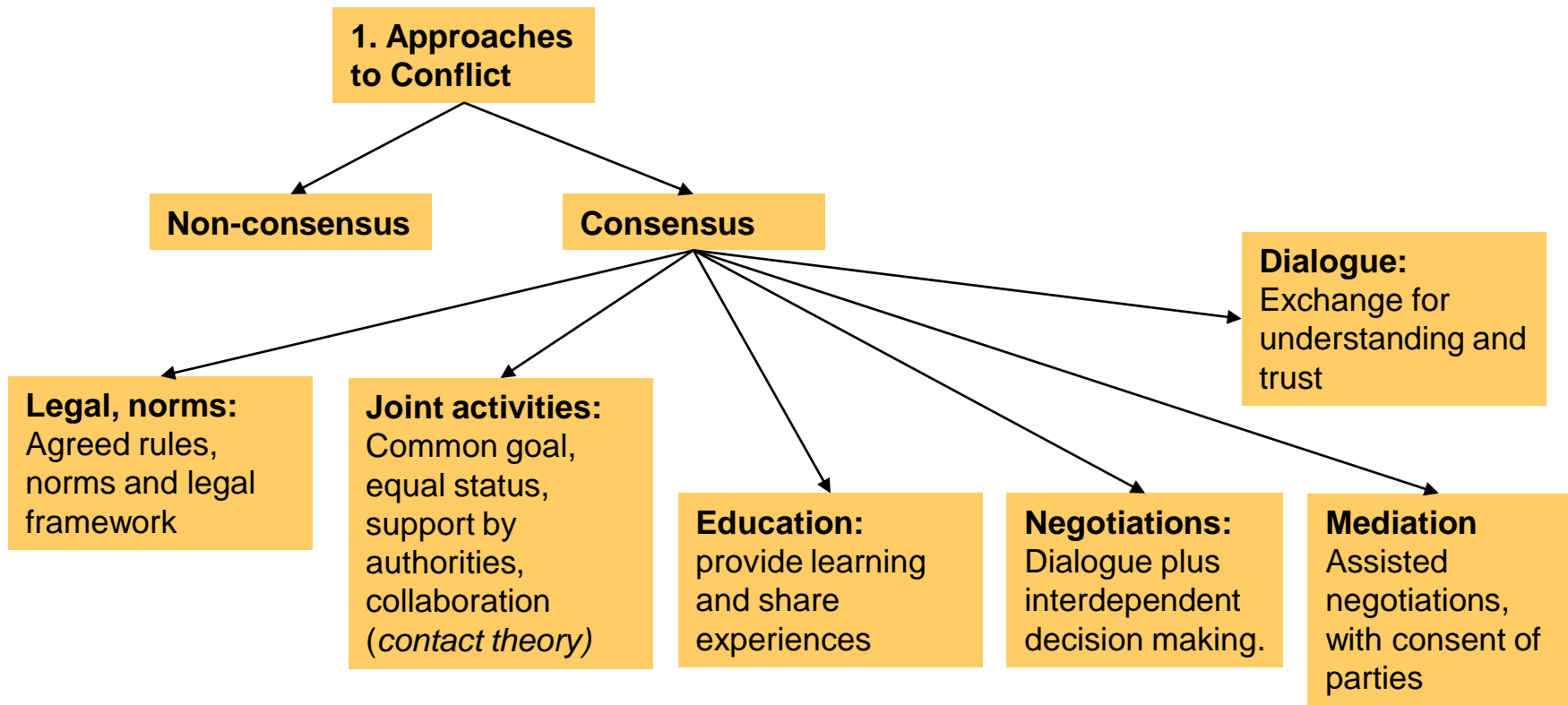
[Mediating Water Use Conflict 2013.pdf](#)

## **Block II**

**Water cooperation:**  
Towards consensus using dialogue,  
negotiation and mediation



**Drawing:  
Sampark**



**Dialogue** = exchange to foster understanding and trust

**Negotiation** = dialogue & joint decision making focusing on results

**Mediation** = assisted negotiations

“Mediation is a **process** whereby a third party assists two or more parties, with their **consent**, to prevent, manage or resolve a conflict by helping them to develop mutually acceptable agreements.” (UN Guidance for Effective Mediation).

# Dialogue

---

“...**dialogue**—the process of people coming together to build mutual understanding and trust across their differences, and to create positive outcomes through conversation”

- Objective
- Listening
- Groundrules
- Communication skills

[Handbook\\_Final\\_AllVersions.pdf](#)

# Negotiations: 3 Types

---

<b>Soft</b>	<b>Hard</b>	<b>Interest based</b>
Relations>Issues	Issues>Relations	Relations & Issues

Ury, Fisher, Patton "Getting to Yes" 2011

# Interest Based

---

- 1) Separate person from problem
- 2) Focus on interests, not positions
- 3) Generate options
- 4) Use criteria independent of will

Ury, Fisher, Patton “Getting to Yes” 2011



# Mediation

## Principles and “ethics” of mediation

1. Consent, voluntary nature
2. Pragmatic inclusivity
3. Impartiality
4. Do no harm
5. Content - Process

# Simple 5-Phases Model of Mediation

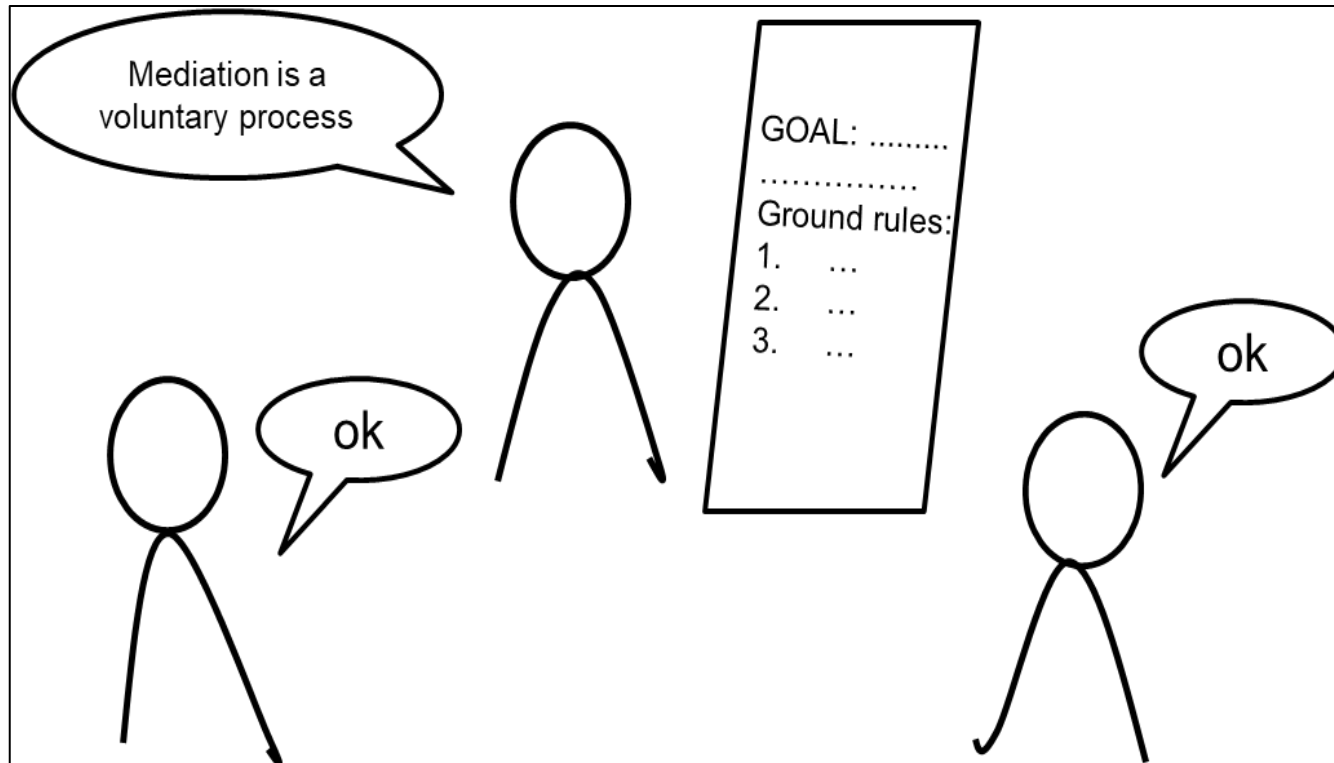
---

1. Setting the framework
2. Issue Identification and agenda setting
3. Working through issues and clarification
4. Brainstorming options and assessing them with criteria
5. Agreeing and clarifying implementation

Source: C. Moore “The Mediation Process”

[See also: The Five Phase Model of Mediation – An Animated Overview](#)

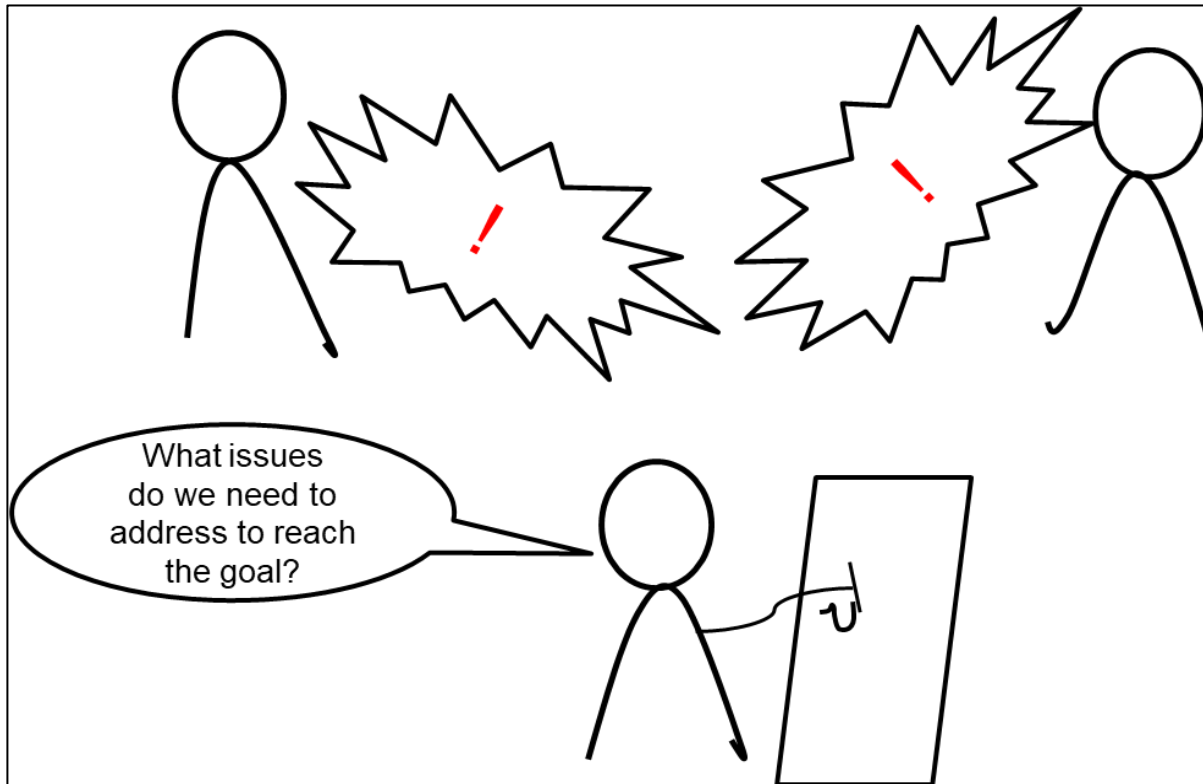
# Phase 1: Introduction



1. What?
  - Aim of meeting (as identified in pre-mediation)
  - Clarify context: other processes, legal framework?
2. Who?
  - Participation: is anyone missing who should be at the table?
  - Clarify mediator's role: mandate, process-content, voluntary nature of process
3. How?
  - Information management?
  - Decision making procedure?
  - Finances: who pays for the mediation?
  - Monitoring of progress
4. When?
  - Frequency and duration of meetings?
5. Where?
  - Neutral, legitimate, safe venue?

**Key idea:** Set the framework for the talks, before starting to discuss content

## Phase 2: Sharing Perspectives

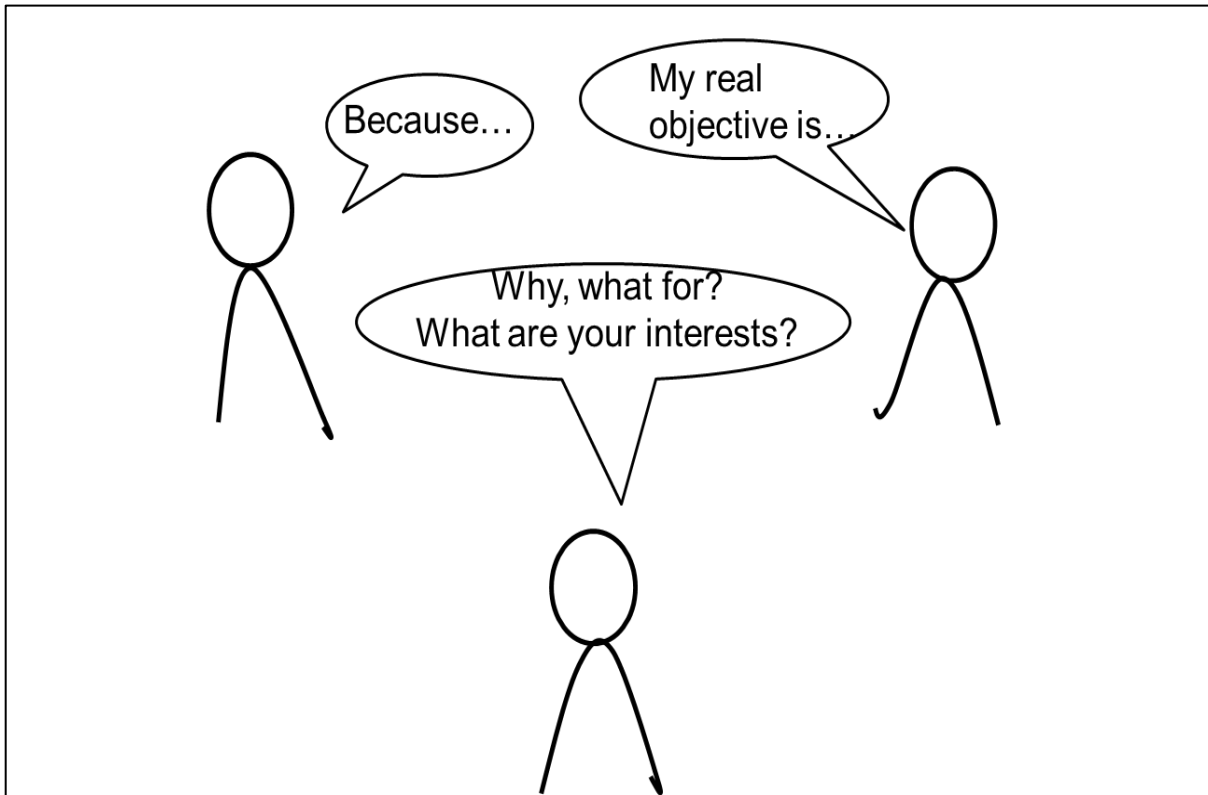


Images: Valerie Sticher, Simon Mason, CSS

1. Let the parties tell their 'story'.
2. Give more or less equal time to each side
3. Make everyone tell their „story“ from the beginning
4. Summarize each side, but never summarize both sides
5. Collect issues to develop agenda

**Key idea:** Collect issues before working through the issues

# Phase 3: Clarification



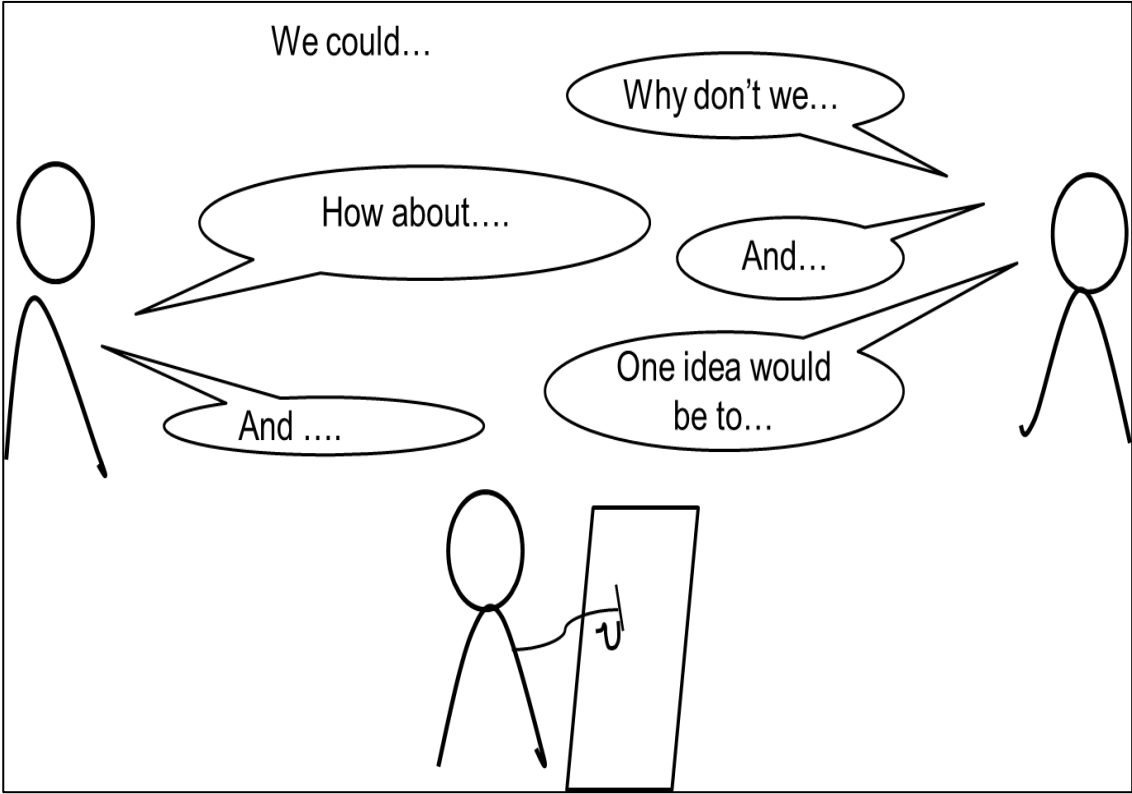
Images: Valerie Sticher, Simon Mason, CSS

1. Check if parties are OK with agenda, or mediate agenda
2. Work through the agenda, issue by issue
3. Ask parties questions, to clarify and understand each other's interests and needs.
4. Use questions, related to concerns, hopes, expectations, assumptions, priorities, beliefs, fears values

**Key idea:** Assist each side to understand the other side, before starting to think about solutions!



# Phase 4: Value Creation



Images: Valerie Sticher, Simon Mason, CSS

**Key idea:** develop more options, before deciding on one option  
“enlarge the pie, before sharing the pie”

Rules of brainstorming:

- Anything goes, no reality check, no self censorship!
- No criticism from anyone!
- Everything is written down (number is more important than quality)
- Work fast, think freely – then take a break.

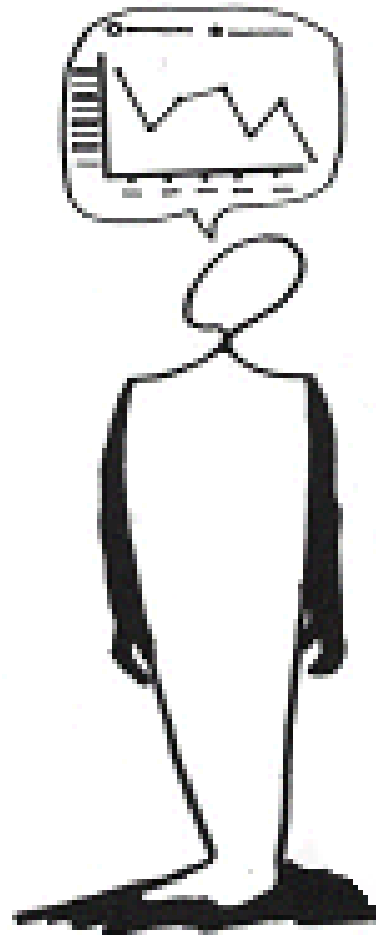
# Phase 5: Concluding

<p>We agree to ...</p> <p>1) .....</p> <p>2) .....</p> <p>3) .....</p> <p>4) .....</p> <p>Disputant 1      Disputant 2</p> <p><i>[Handwritten signatures]</i></p> <p>Mediator</p> <p><i>[Handwritten signature]</i></p>						<h3>Implementation matrix</h3> <table border="1"><thead><tr><th></th><th>What ?</th><th>Who?</th><th>When?</th><th>Funding</th><th>What if?</th></tr></thead><tbody><tr><td>Aug</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Sept</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Oct</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Nov</td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table>						What ?	Who?	When?	Funding	What if?	Aug						Sept						Oct						Nov					
	What ?	Who?	When?	Funding	What if?																																			
Aug																																								
Sept																																								
Oct																																								
Nov																																								

- Jointly assess the options
- Agree on one, or package of options
- If you cannot agree, can you agree to meet again?
- Clarify next steps, who does what, when?

## **Block III**

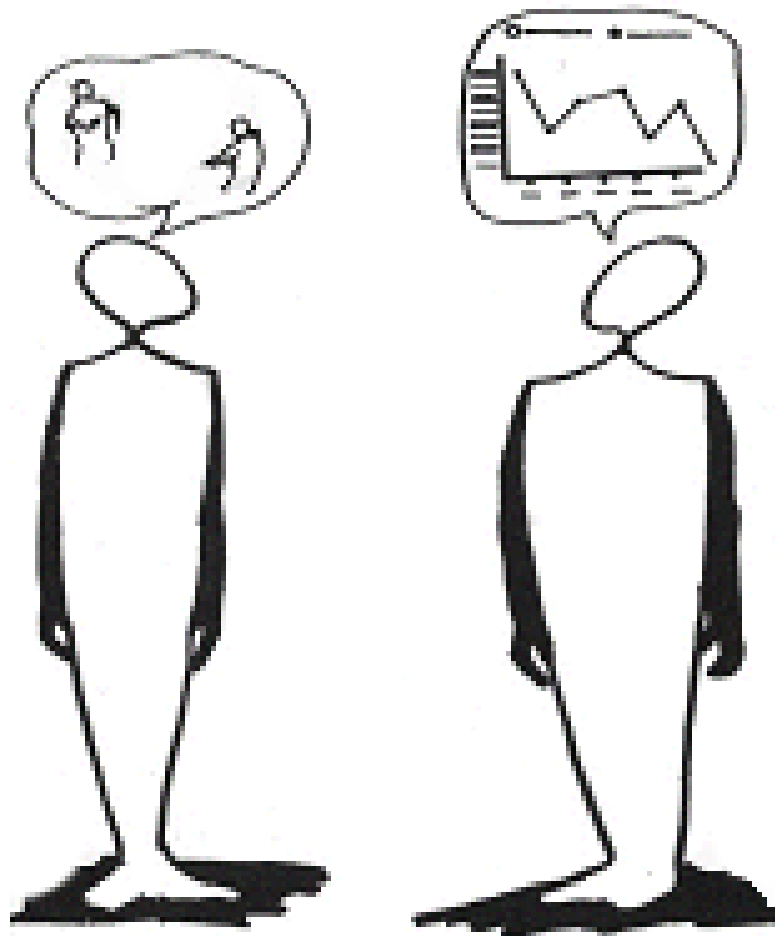
# **Water, environmental consensus building tools**



**Drawing:  
Sampark**

## Some tools and approaches:

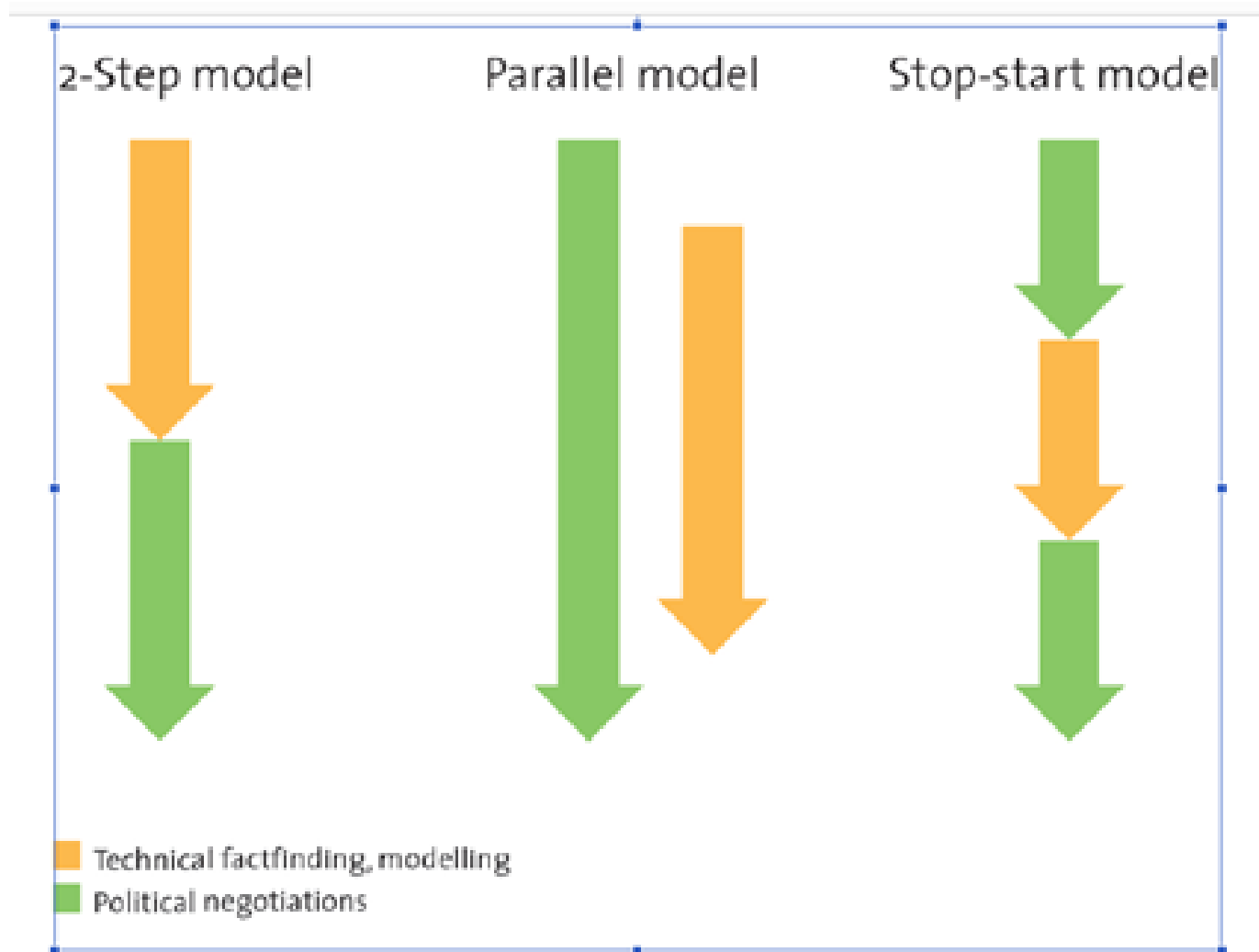
- Conflict, Environment and Spatial Analysis
- Modelling + Scenario Building
- Joint fact finding
- Backbone Agreements
- Legal Tools, legal frameworks
- Global criteria on drinking water and agriculture water quality
- Ecosystems mapping
- Complex Regeneration
- Engineering solutions
- Etc.



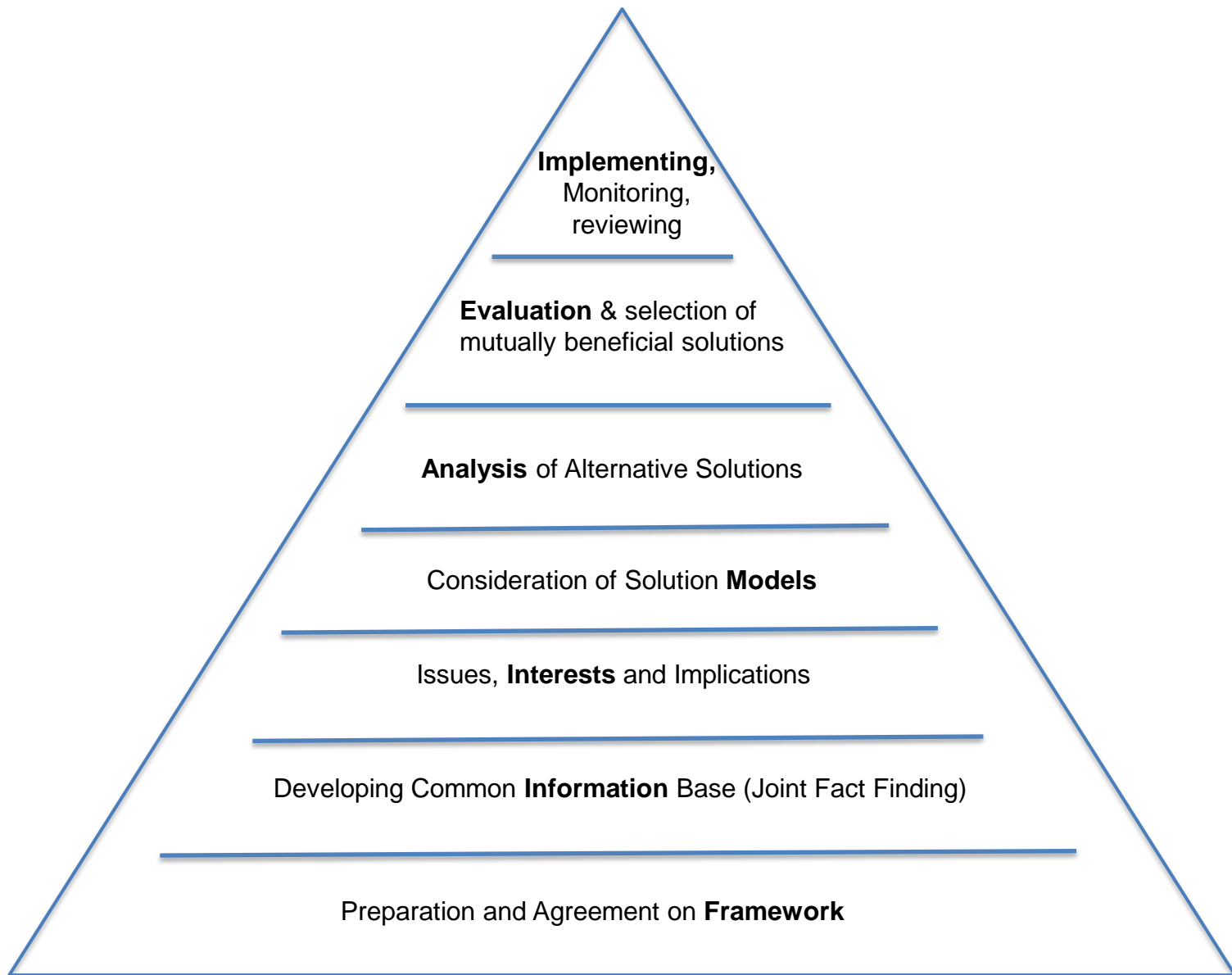
**Drawing:  
Sampark**



# Example of Process Design



Source, Mason, Blank



Grzybowski A (2012) "Suggestions for a Framework for Constructive Dialogue on Natural Resources Issues" Working paper. Grzybowski, A. J. L. Kaye, (2013) "Mediating Natural Resource Conflicts" Working paper, for UNEP and UNDP

# Example of Process Design

Political	Technical
1. Prepare a <b>common framework</b> with input from technical and political actors. The technical committee can only start work once it has a mandate from the political actors.	
	2. Develop <b>common information basis</b> regarding biophysical and socio-economic-political data. Technical committee reports to political format.
3. <b>Identify interests</b> related to environment that should be satisfied in the final agreement. Political format feeds identified interests into technical committee.	
	4. <b>Develop options:</b> Consider solutions and models from other cases and develop case-specific options that fit interests. Technical committee reports to political format
5. <b>Narrow down possible options:</b> For various non-technical reasons not all options from technical committee may work. Political actors narrow down possible options, and task technical committee to elaborate a select few.	

Source: Grzybowski and Kaye 2013, Mason, Blank 2013

# Example of Process Design

Political	Technical
	<p>6. Work out <b>details of selected options</b>: More detailed elaborations of implications of selected options are worked out in the technical committee. Modelling and scenario-building. Technical committee reports the more elaborated options, including their potential biophysical impact, to political actors.</p>
<p>7. <b>Final selection of options</b> for agreement: Using advice from technical committee, political actors decide on the most favorable option, also taking into consideration the other issues and trade-offs that the political negotiations are dealing with.</p>	
	<p>8. <b>Monitoring and review mechanisms</b>: Before the final agreement is signed, the implementation modalities (who does what, when, how, funding, and “what if clause”) related to resources should be agreed upon.</p>
<p>9. <b>Final agreement signed</b></p>	

Source: Grzybowski and Kaye 2013, Mason, Blank

# **Block IV**

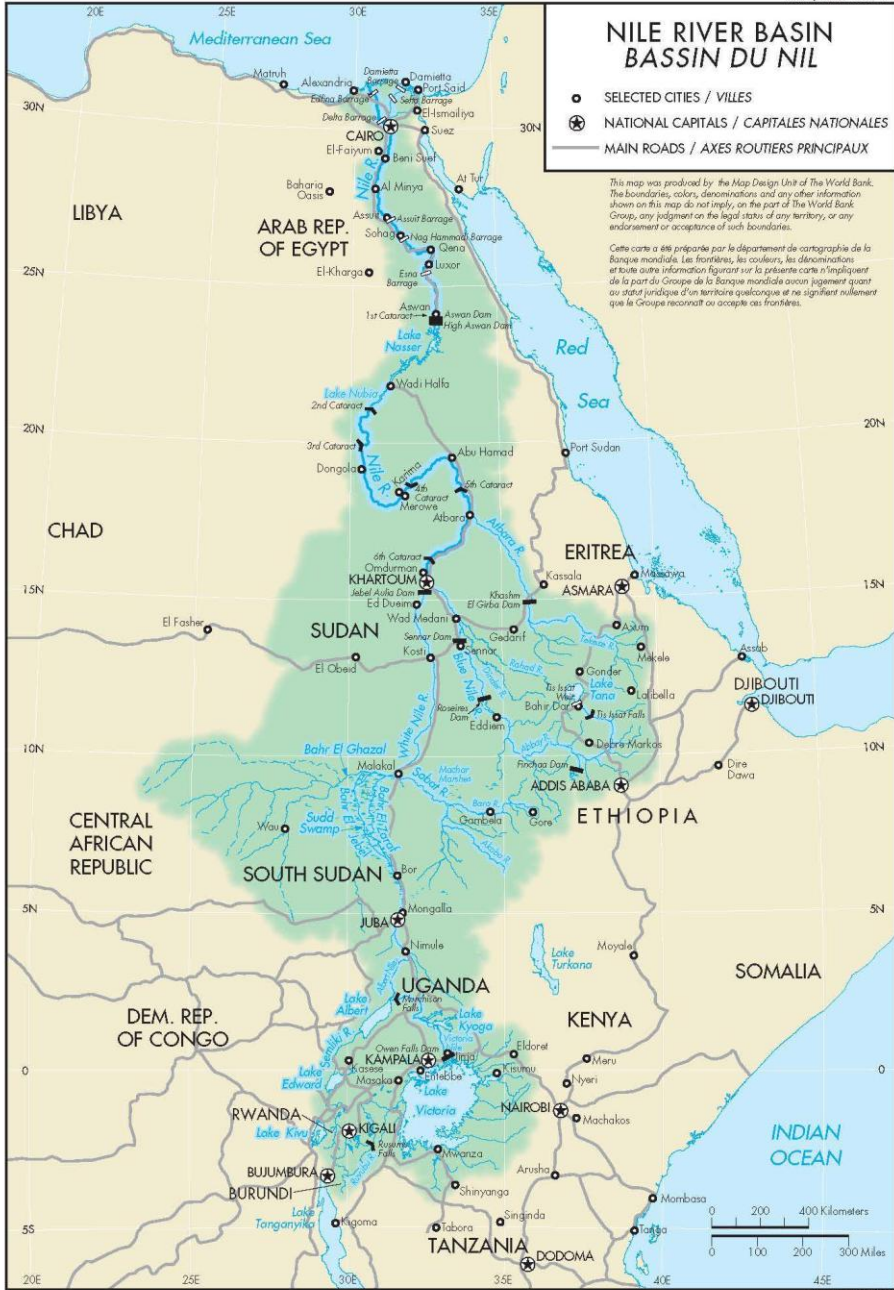
## **Nile Basin Case Study**

# NILE RIVER BASIN BASSIN DU NIL

- SELECTED CITIES / VILLES
- ⊗ NATIONAL CAPITALS / CAPITALES NATIONALES
- MAIN ROADS / AXES ROUTIERS PRINCIPAUX

This map was produced by the Map Design Unit of The World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.

Cette carte a été préparée par le département de cartographie de la Banque mondiale. Les frontières, les couleurs, les dénominations et toute autre information figurant sur la présente carte n'impliquent de la part du Groupe de la Banque mondiale aucun jugement quant au statut juridique d'un territoire quelconque et ne signifient nullement que le Groupe reconnaît ou accepte ses frontières.



Source: Nile River Basin

# Positions and strategies

<b>Egypt</b>		<b>Ethiopia</b>
Acquired use rights, no significant harm		Equitable use
Against unilateral development upstream		Unilateral development of Grand Renaissance Dam
Hold on to historic rights rooted in 1959 agreement		Re-negotiate or ignore 1959 agreement
Demand side management in Egypt & support supply side management upstream		Supply & demand side management in Ethiopia
Cooperation is blocked by internal troubles in upstream countries		Cooperation is blocked by downstream holding on to “status quo”
Dam in Ethiopia for Hydropower or small-scale		Large-scale dam for irrigation and hydropower

# Interests

## Egypt: (security)

- Irrigation, living space
- Information exchange
- Pollution control
- Hydropower

## Sudan: (development)

- Irrigated agriculture
- Hydropower
- Flood control
- Watershed management
- Information exchange

## Ethiopia: (development)

- Irrigation
- Hydropower
- Watershed management





GERD constructed between 2011 and 2023, primary purpose is electricity production

Efforts at cooperation on data: [homepage | Nile Basin Initiative](#)

Source of photo: [https://en.wikipedia.org/wiki/Grand\\_Ethiopian\\_Renaissance\\_Dam#/media/File:GERD\\_2.jpg](https://en.wikipedia.org/wiki/Grand_Ethiopian_Renaissance_Dam#/media/File:GERD_2.jpg)

# Take Home Messages

Understand 1) levels, 2) sectors, and 3) tools

- Multiple levels: how is local, regional, national, global interconnected? -> e.g. virtual water (water in form of food)
- Multiple sectors: -> Complexity provides space for cooperation
- Multiple tools: how to combine technical and political, social, economic? -> design process!

Climate change: Impact on water availability over time?\* -> adaptive agreements

# References and Further Reading

---

- Abdi, Dekha Ibrahim Simon Mason (2019), Mediation in Fragile Contexts: Small Steps to Peace, Lynne Rienner [www.mediation-governance.ethz.ch](http://www.mediation-governance.ethz.ch)
- Grzybowski A (2012) "Suggestions for a Framework for Constructive Dialogue on Natural Resources Issues" Working paper.
- Grzybowski, A. J. L. Kaye, (2013) "Mediating Natural Resource Conflicts" Working paper, for UNEP and Mason, S and D Blank, "Mediating Water use Conflict in Peace Processes" CSS Mediation Resources 2013, [www.css.ethz.ch](http://www.css.ethz.ch)
- UNEP, UNDP, 2015, Natural Resources and Conflict: A Guide for Mediation Practitioners, <https://www.unenvironment.org/resources/report/natural-resources-and-conflict-guide-mediation-practitioners>
- Moore, Chris "The Mediation Process: Practical Strategies for Resolving Conflict" Jossey Bass 2013
- Mason, Simon J A Damiano A Sguaitamatti, und Maria del Pilar RamirezGröbli, „Stepping Stones to Peace? Natural Resource Provisions in Peace Agreements“, in *Governance, Natural Resources and Post-Conflict Peacebuilding*, hg. von Carl Bruch, Carroll Leckie, Scott, 2008, Housing, Land and Property Rights and the Quest for Peace: Guidance for Peace Mediators, Displacement Solutions, on the behalf of the US Institute of Peace, Washington D.C.
- Mason, S, D. Blank "Mediating water use conflicts in peace processes" CSS Mediation Resources [https://css.ethz.ch/en/publications/mediation-reports/mediation-resources/details.html?id=/m/e/d/i/mediating\\_water\\_use\\_conflicts\\_in\\_peace\\_p](https://css.ethz.ch/en/publications/mediation-reports/mediation-resources/details.html?id=/m/e/d/i/mediating_water_use_conflicts_in_peace_p)
- UN Guidance for Effective Mediation 2012, [https://peacemaker.un.org/sites/peacemaker.un.org/files/GuidanceEffectiveMediation\\_UNDPA2012%28english%29\\_0.pdf](https://peacemaker.un.org/sites/peacemaker.un.org/files/GuidanceEffectiveMediation_UNDPA2012%28english%29_0.pdf)
- Ury, Fisher, Patton, "Getting to Yes: Negotiating an Agreement without Giving In"; Penguin 2011
- Zartman, I. Willian "Ripeness", 2013, <https://beyondintractability.org/essay/ripeness>
- Glossaries:
  - [Berghof Glossary on Conflict Transformation](#)
  - United States Institute of Peace, [Glossary of Terms for Conflict Management and Peacebuilding](#)
  - Conflict Research Consortium, University of Colorado, USA, [Glossary](#)
  - United Nations, [Peacemaker](#)