

Legal Implications of the Use of Big Data in the Transboundary Water Context

Imad Antoine Ibrahim

Research Assistant Professor

Center for Law & Development, College of Law, Qatar University

gLAWcal-Global Law Initiative for Sustainable Development

What is Big Data and Where Does it Come From?

- Data characterized by "the 4 Vs":

- | | |
|------------|-------------------------------------|
| - Volume | Satellites/ Ground-based monitoring |
| - Velocity | Networks/ Internet of Things |
| - Variety | Field experiments |
| - Veracity | Social media |

How Can it Improve Shared Water Management?

Capturing, storing, managing and analysing big data can provide valuable and up-to-date information to the parties involved.

What Could Discourage States from Using Big Data?

- Shortage of accurate informations
- Risk of ending up in a less favourable position
- Lack of technical expertise, capacity and know-how
- Costs associated with data collection and exchange

4 Possible Scenarios

- All Nations decide to use Big Data
- Some States choose to use Big Data
- One Country makes use of Big Data
- No parties use Big Data

Which One is the Most Likely?

The Prisoner Dilemma

- 2 criminals arrested and put in 2 different rooms:
 - If nobody confesses, both go to prison for 1 year
 - If both confess, they go to prison for 3 years
 - If one confesses he is free, the other gets 5 years

Which is the Nash Equilibrium in our Case?

- All States will decide to use big data:
 - To avoid the risk of losing advantages
 - To improve their positions
 - To support their arguments with scientific data

What are the Problems with the Current Transboundary Water Treaties?

- They are vague about data and information exchange
- They are complicated to amend
- Few States actually ratified them
- States often misinterpret provisions to protect their interests

Finding a Balance between Regulating Big Data and Ensuring flexibility

What are the Possible Solutions?

- Is there a framework convention?
- Specific follow-up agreements/ protocols and MoU
- Add a specific provision to a new convention

To Ensure Flexibility

- Include a flexibility provision:
 - To keep up with tech development
 - To allow States to withdraw