

SHARING TRANSBOUNDARY WATERS

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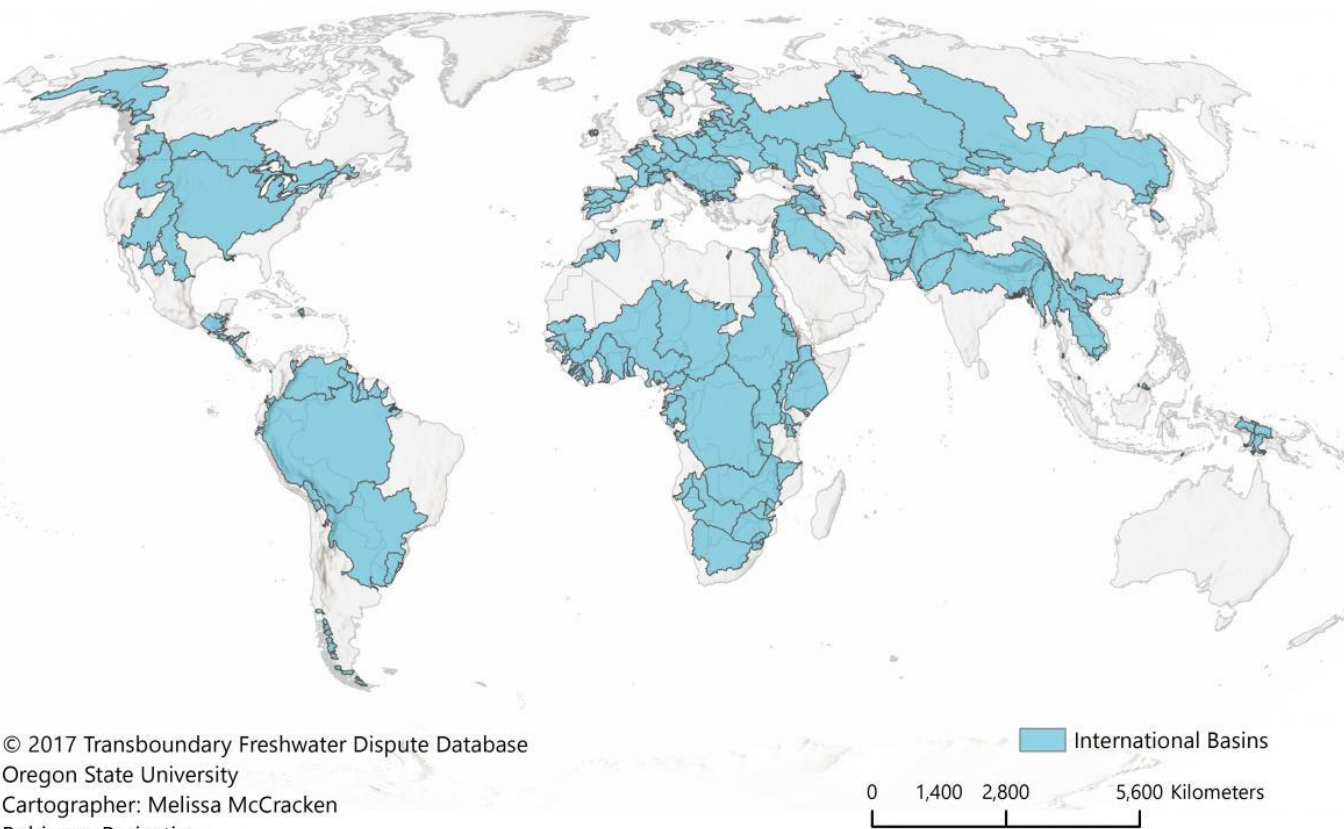
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1. Introduction

Transboundary river basins of the world



- Water is not distributed equally on earth, but is a vital substance
- 310 International river basins in the world

Product of the Transboundary Freshwater Dispute Database, College of Earth, Ocean, and Atmospheric Sciences, Oregon State University

<https://transboundarywaters.science.oregonstate.edu/content/data-and-datasets>



2. Why Should States Allocate Water Of Their Shared Resources?

- To know the approximate amount of water that states will obtain from the shared resource
- Optimum utilization of the water resource
- Better water planning
- Reduction of conflicts



3. Legal Aspects of Allocation of shared water resources

On the International Level:

- Two international Conventions:
 - 1992 UNECE Watercourses Convention
 - 1997 UN Watercourses Convention
- No binding rules or direct means of water allocation but general principles: Equitable and reasonable utilization, obligation not to cause significant harm, obligation to cooperate



- Allocation is mostly made on the regional, basin and bilateral level through bilateral and multilateral agreements
- 68 of the 145* states have concluded water allocation agreements
 - 15 have shared water equally,
 - 39 of them had a complex but clear system
 - 14 of them were made in an unclear way.

*A. Wolf, Allocations in Practice: What happens in the room, in Global Workshop on Water Allocation, 16-17 October 2017, Geneva, Switzerland (2017)



4. Environmental Flow

- 2007 Brisbane Declaration:

Environmental flow “describes the quantity, quality and timing of water flows required to sustain freshwater ecosystems and the human livelihoods and wellbeing that depend on these ecosystems”



- Environmental flow has been accepted by the international community.
- 1995 Sustainable Development of the Mekong River Basin Agreement Article 6 (A) states should foresee “the acceptable minimum monthly natural flow during each month of the dry season” to be kept in the watercourse.
- Kishenganga arbitration, the arbitral tribunal emphasized the importance of the water need of the environment and both parties and the tribunal have made calculations by considering it.
- Environment should be considered when water of the shared resource is allocated.



5. The Proposed Water Allocation Method

- The upstream state to be entitled to $2/3$ of the annual water flow.
- 10% of the flow from the upstream state's share is reserved for the environment.
- The rest $1/3$ of the river flow will be left to the downstream states' use



- So, if the river water flow of the source country, country A, is shown as Q_A , as the first country A will get

$$2/3Q_A - 0,1Q_A \tag{1}$$

of the water. This would be equal to

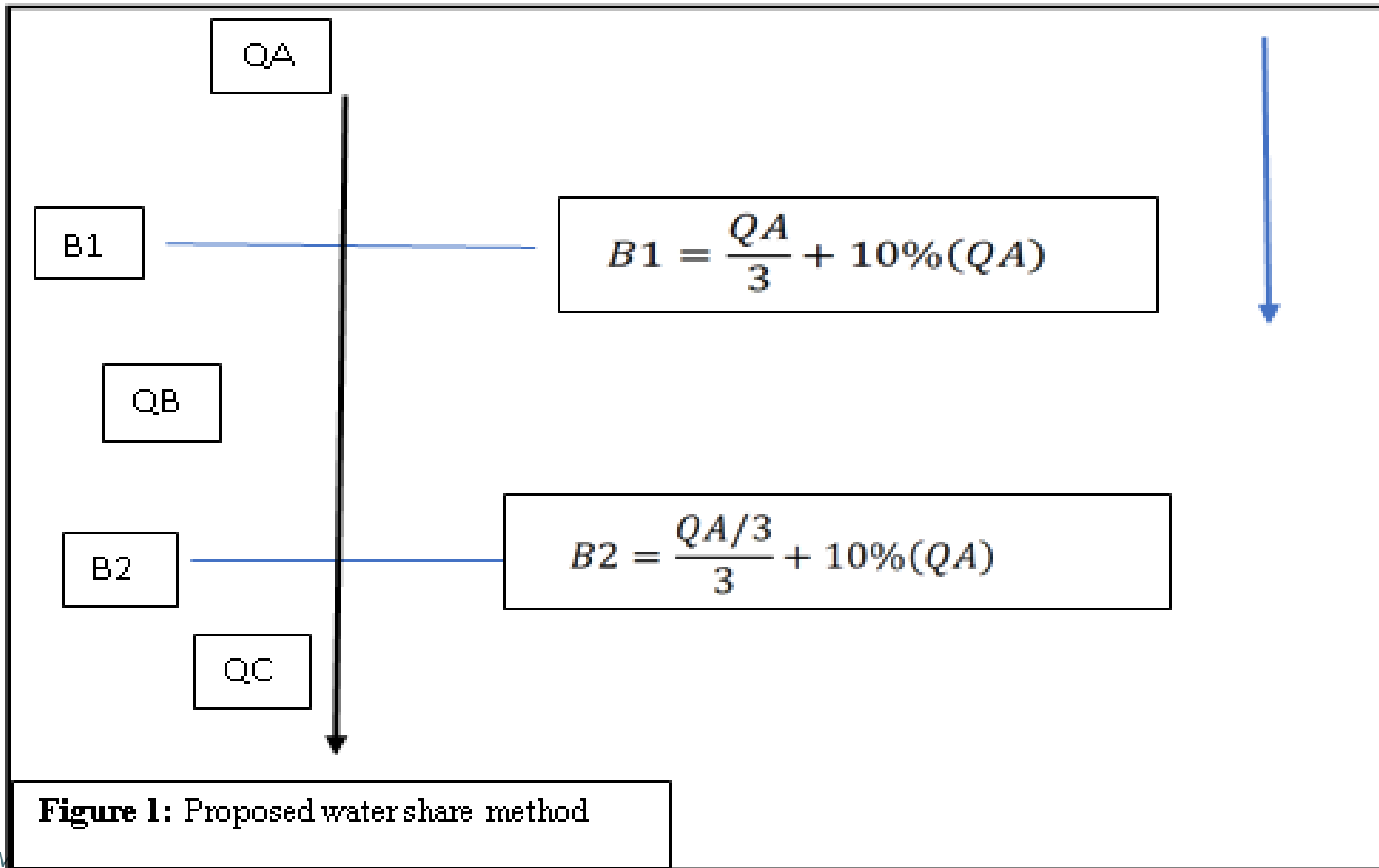
$$0,66Q_A - 0,1Q_A = 0,56Q_A. \tag{2}$$

- The rest which is equal to

$$1/3Q_A + 0,1Q_A = 0,33Q_A + 0,1Q_A = 0,43Q_A \tag{3}$$

is released from the Border A-B (B1) to the downstream state, state B.





If the transboundary water resource forms the border between states :

- 1/3 is released to the downstream after preserving % 10 for the environment.
- The rest is equally shared among states

$$\frac{\frac{2}{3}(Qx - 10\%(Qx))}{2}$$

(11)

which will be equal to 0,3Qx for each state.



6. Application Of The 2/3 And 1/3 Ratio In Practice

6. 1. Rio Grande Basin

- Some of the tributaries of the Rio Grande that take source from Mexico are allocated among Mexico and USA a of 2/3 and 1/3 ratio respectively.
- Others are totally left to the Mexico or to the USA
- The main river is divided equally



6.2. Euphrates –Tigris Basin

	Turkey ^[1]	Syria (Jarabolus Station) ^[2]	Iraq (Mosul Station) ^[3]
Euphrates River	31.61BCM/year (983m ³ /sec)	25.1BCM/year (796m ³ /sec) ^[4]	-
Tigris River	20.84BCM/year (660.8m ³ /sec)	-	19.5BCM/year (618.34m ³ /sec)

- The minimum downstream flow of 500m³/sec is agreed upon in the 1987 Turkish-Syrian Protocol.
- Turkey accepts the E-T as one basin
- Turkey has 1643,8 m³/sec from which it has agreed to release 500m³/sec which is approximately 1/3 of the basin water.

^[1] Devlet Su İşleri (DSİ), Turkey Water Report. DSİ, Ankara (2009).

^[2] United Nations Economic and Social Commission for Western Asia, and Bundesanstalt für Geowissenschaften und Rohstoffe, *Inventory of shared water resources in Western Asia*. United Nations Economic and Social Commission for Western Asia, XX, measured at Jarabolus (2013)

^[3] Ibid, XX, measured at Mosul (2013)

^[4] This amount is provided by Turkey as 15.6 BCM/year which is equal to 500 m³ /sec



7. Challenges Against The Application Of This Method

- Lack of reliable long-term data
- The advantageous riparian state to not to accept this water allocation
- Water sale is not well received among some states and scholars



8. Conclusion

This method of 2/3 for upstream and 1/3 for downstream state

- Is easy to calculate and apply to the basin.
- Might be helpful to prevent future water disputes (especially with climate change).
- Considers the environment and its water needs.
- Might be helpful to prevent wasteful uses and lead to optimum utilization of the shared waters.



Thank you for listening

