A faint, light blue world map is visible in the background, showing the outlines of continents and countries. The map is centered on the Atlantic Ocean, with North and South America on the left and Europe and Africa on the right.

# ***AD HOC* LEGAL MECHANISMS GOVERNING TRANSBOUNDARY AQUIFERS: CURRENT STATUS AND AND FUTURE PROSPECTS**

<http://dx.doi.org/10.1080/02508060.2016.1201964>

**LAURA MOVILLA PATEIRO**

**Lecturer - Public International Law**

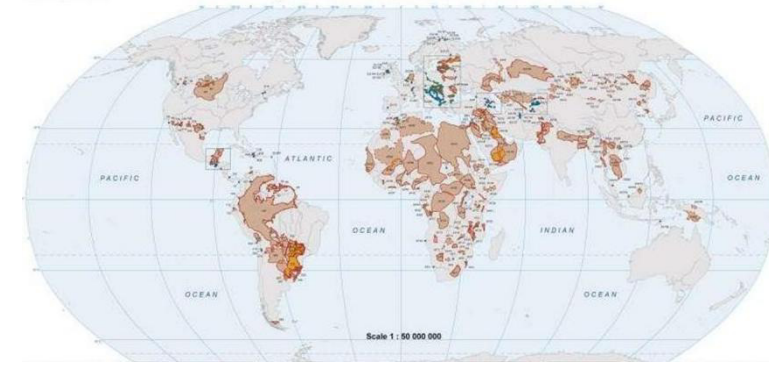
**University of Vigo (Spain)**

IWRA Webinar "Legal Mechanisms for Water Resources in Practice"

August 7<sup>th</sup> 2017

# INTRODUCTION

- 592 transboundary aquifers and groundwater bodies
- Very few existing *ad hoc* legal mechanisms on TBAs
- The goal of this paper was threefold:
  - (1) to analyze existing legal mechanisms on TBAs
  - (2) to identify why there are so few agreements on this resource
  - (3) to reflect on the prospects for future legal mechanisms in this field



Source: IGRAC

# THE INTERNATIONAL CALL FOR STATES TO CONCLUDE AGREEMENTS ON SPECIFIC TBAS

- There have been several calls in the last years from different international fora encouraging states to conclude agreements and arrangements for this resource

- UN System:

- 1997 UN Watercourses Convention (Art. 3.3)
- 1994 UNILC Resolution on Confined Transboundary Groundwater (par. 2)
- 2008 UNILC Draft Articles on the Law of Transboundary Aquifers (Art. 9)
- UNGA Resolutions on the law of transboundary aquifers (2008: A/RES/63/124) (2011: A/RES/66/104) (2013: A/RES/68/118) (2016: A/RES/71/151)
- 1992 UNECE Water Convention (Art. 9.1)
- 2012 UNECE Model Provisions on Transboundary Groundwaters (Provision 6)



# EXISTING *AD HOC* LEGAL MECHANISMS ON TBAs

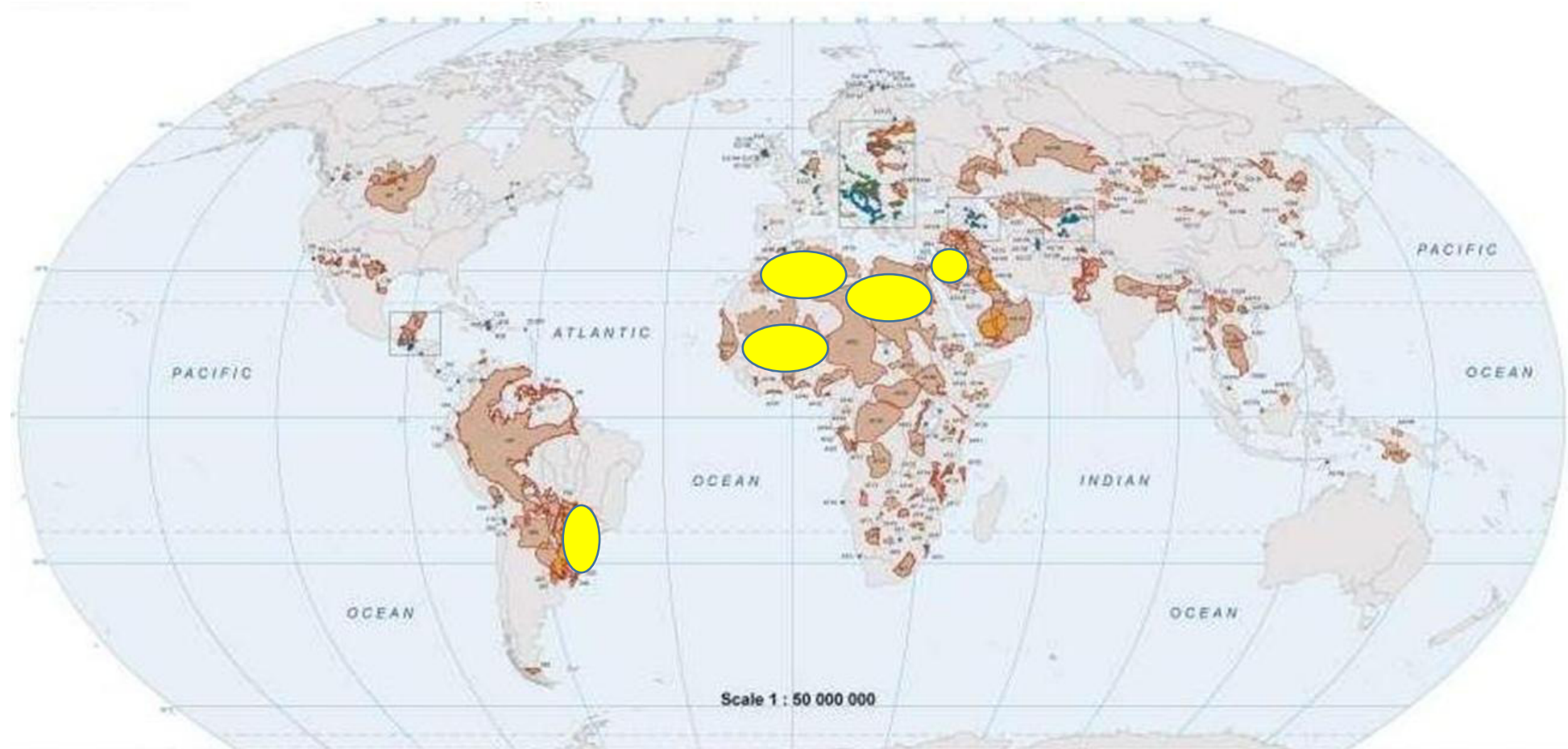
- References to groundwater have increased over time. However, in the majority of cases, surface water is still the main subject of regulation.
- More recently: very few examples of *ad hoc* bilateral and multilateral agreements and arrangements on specific TBAs concluded between:

a) aquifer States

b) or subnational units of States

(less than 1% of the TBAs already identified)

# AD HOC LEGAL MECHANISMS BETWEEN STATES





# AD HOC LEGAL MECHANISMS BETWEEN STATES

*-1992: Agreement creating a joint authority for the study and development of the aquifer*

**-2002:**

*- Agreement No 1 - Terms of Reference for the Monitoring and Exchange of Groundwater Information of the Nubian Sandstone Aquifer System*

*- Agreement No 2 - Terms of Reference for Monitoring and Data Sharing*

Scale 1 : 50 000 000



**NUBIAN SANDSTONE AQUIFER  
SYSTEM**

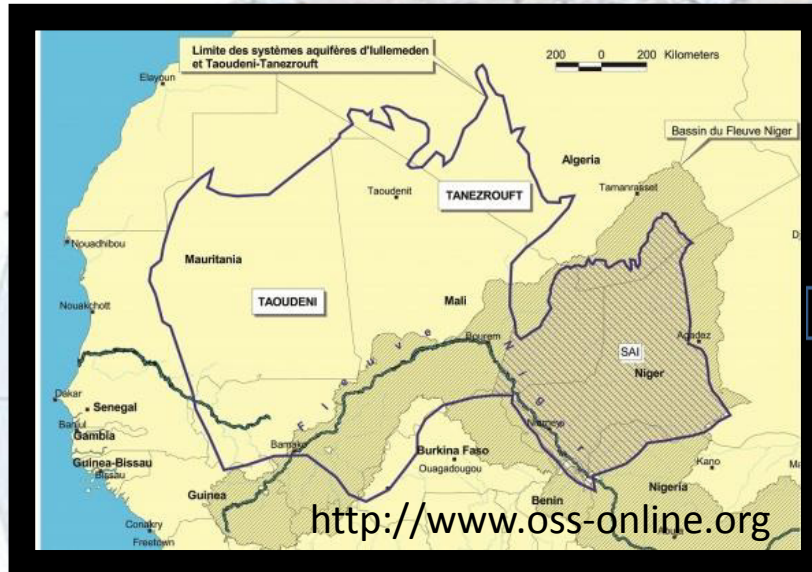
# AD HOC LEGAL MECHANISMS BETWEEN STATES

**2000:** *Establishment of a Consultation Mechanism for the Northwestern Sahara Aquifer System*



**NORTHWESTERN SAHARA AQUIFER  
SYSTEM**

# AD HOC LEGAL MECHANISMS BETWEEN STATES



**IULLEMEDEN-  
TAOUDÉNI/TANEZROUFT  
AQUIFER SYSTEM**

**2009:** *MoU to the setting up of a consultative mechanism for the management of the Iullemeden Aquifer System*

**2014:** *MoU for the Establishment of a Consultation Mechanism for the Integrated Management of the Water Resources of the Iullemeden, Taoudéni/Tanezrouft Aquifer Systems*

Scale 1 : 50 000 000



# AD HOC LEGAL MECHANISMS BETWEEN STATES

**2010: Treaty on the Guarani Aquifer**  
(Not in force)



<https://commons.wikimedia.org>

**GUARANI  
AQUIFER SYSTEM**

# AD HOC LEGAL MECHANISMS BETWEEN STATES

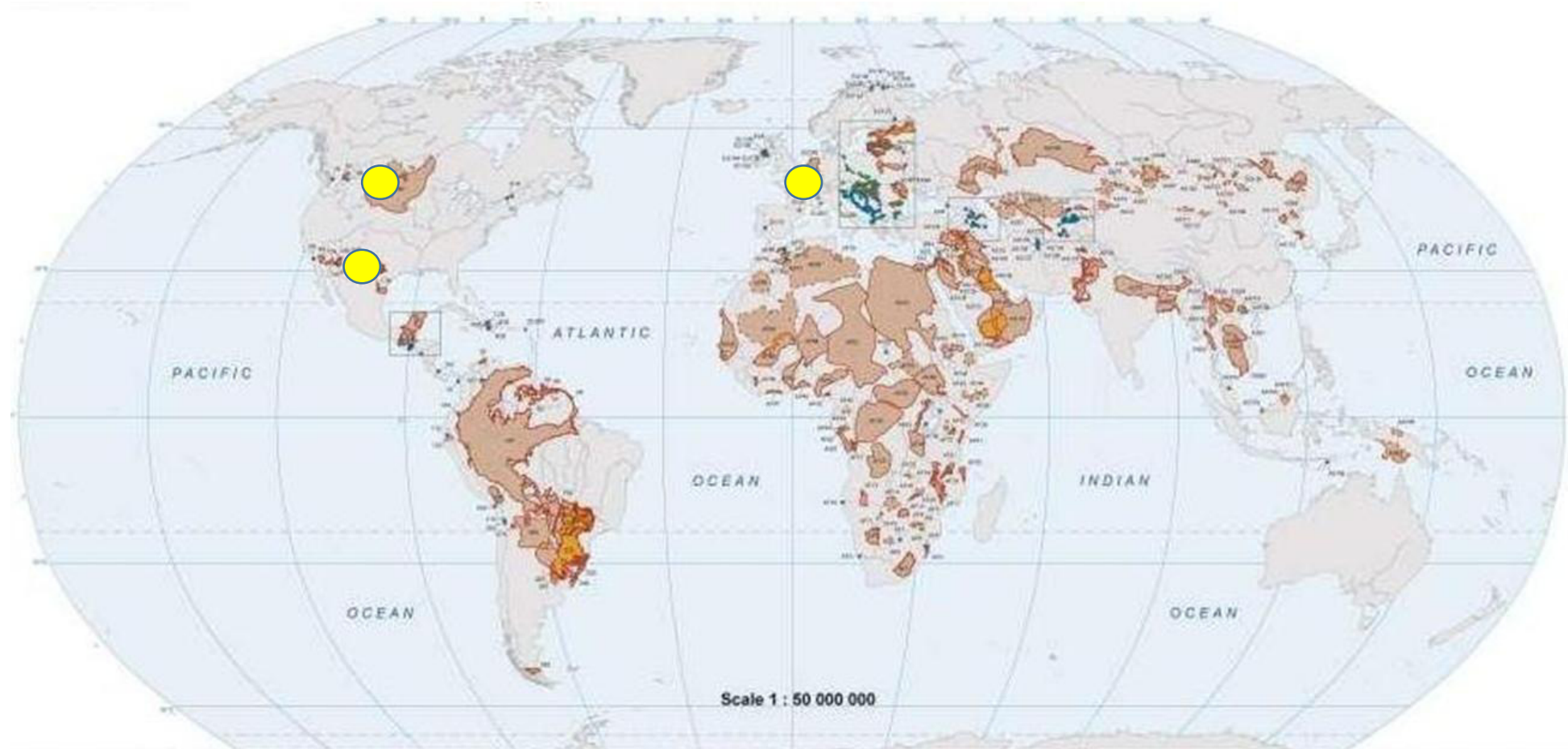
**2015:** *Agreement between the Government of the Hashemite Kingdom of Jordan and the Government of the Kingdom of Saudi Arabia for the Management and Utilization of the Ground Waters in the Al-Sag/Al-Disi Layer*



**AL-SAG/AL-DISI AQUIFER**

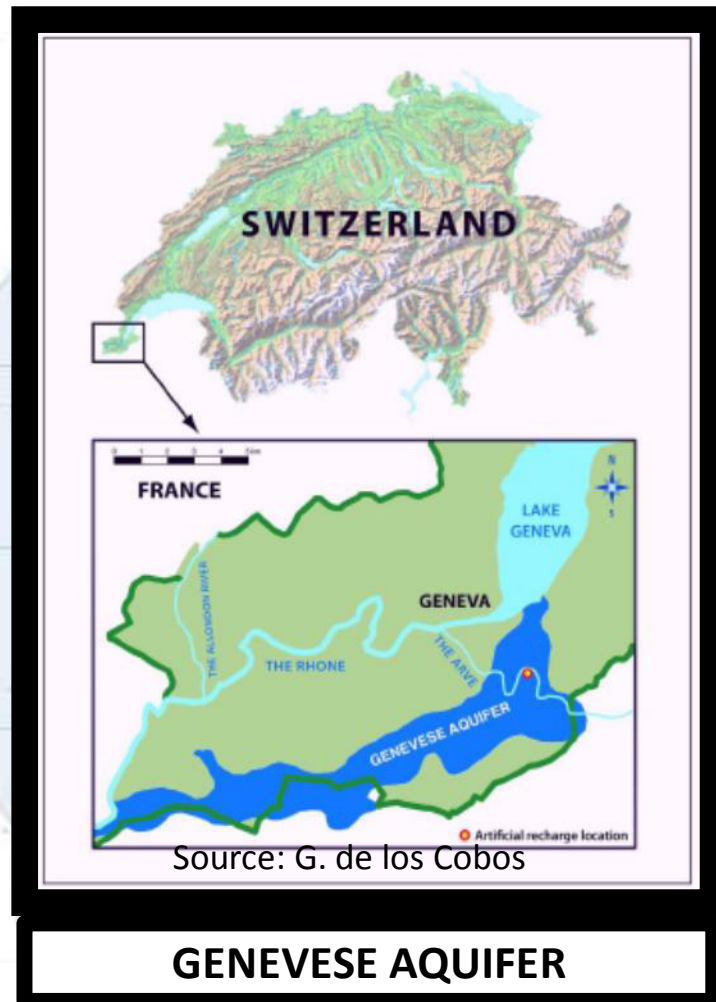
Scale 1 : 50 000 000

# ***Ad hoc* legal mechanisms on TBAs at local and federal levels**





# *Ad hoc* legal mechanisms on TBAS at local and federal levels

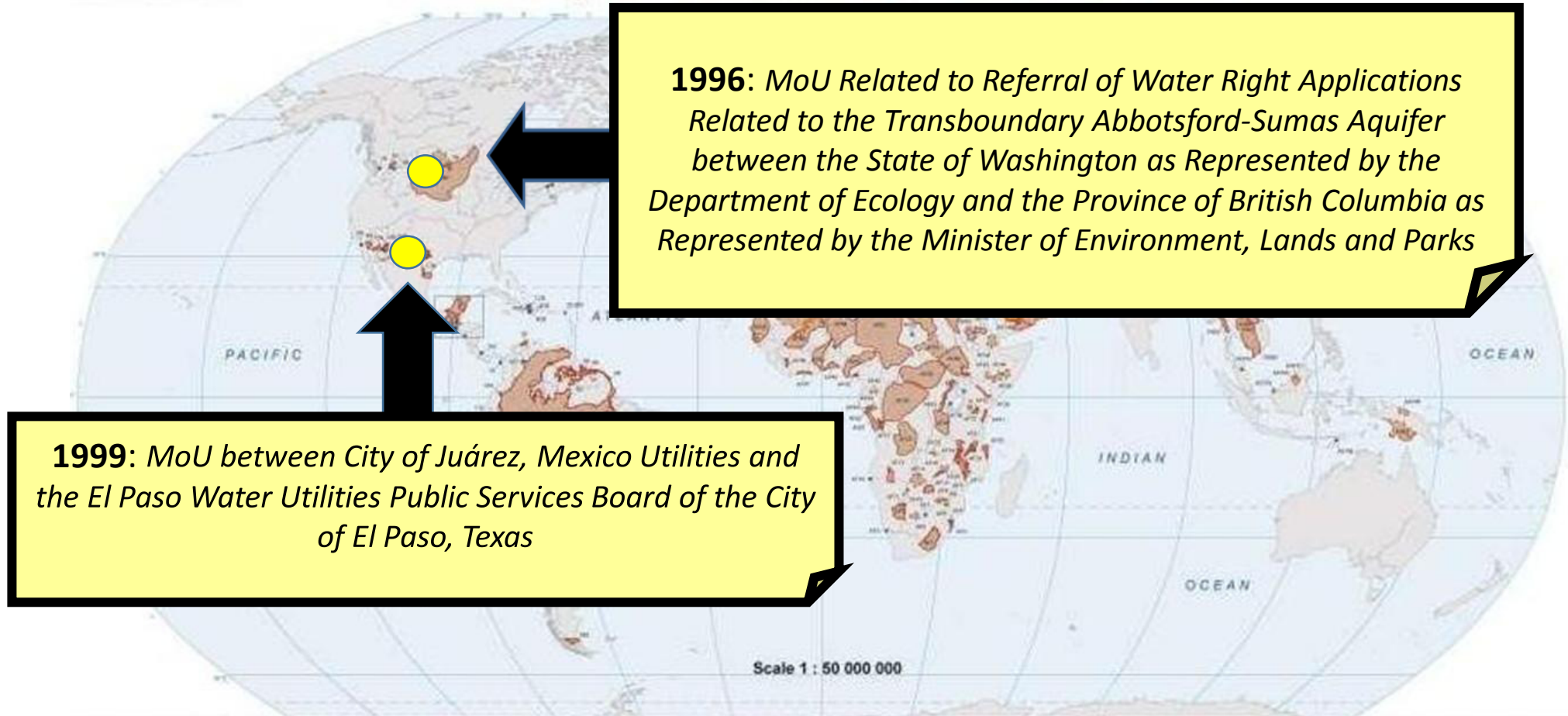


*1977- Arrangement on the Protection, Utilization, and Recharge of the Franco-Swiss Genevese Aquifer*

*2007- Convention on the Protection, Utilisation, Recharge and Monitoring of the Franco-Swiss Genevese Aquifer*



# AD HOC LEGAL MECHANISMS



# **SOME REMARKS ON THE FEW EXISTING *AD HOC* LEGAL MECHANISM ON TBAs**

- A geographical pattern is hard to determine
- In most cases these agreements resulted from projects with funding and assistance from international organizations
- The legal nature and status of the *ad hoc* legal mechanisms varies. Some are proper binding treaties while others are informal agreements or MoUs
- The scope and content of these agreements vary considerably. Some of them are mostly technical, some are fairly simple and others contain very detailed provisions.

# WHY ARE STATES RELUCTANT TO GOVERN TBAs THROUGH *AD HOC* AGREEMENTS?

Cooperation on TBAs is affected by the same difficulties that arise for surface transboundary water resources + **additional challenges arising from the particular features of a hidden resource such as groundwater:**

- remaining knowledge deficit on TBAs.
- sometimes TBAs are simply not a priority for the states because there are no urgent problems relating to their exploitation or there is plenty of surface water.
- the special connection of this resource with the principle of state sovereignty may favour unilateral actions.
- still unclear global legal framework to take as a reference in groundwater governance.

# TOWARDS A MORE COOPERATIVE APPROACH: SOME REFLECTIONS ON THE WAY FORWARD (I)

- In an ideal scenario, a step-by step approach should be adopted, whereby knowledge is first acquired, followed by a focus on regulation.
- TBAs seem particularly prone to one-off solutions, because of the different composition and structure that respective subsoils may have and the variety of possible transboundary implications.
- The effectiveness of cooperation will depend ultimately on the will of the parties to fulfil and implement the agreement.
  - Bilateral or multilateral treaties: enhance cooperation; promote and r e f l e c t awareness of the particular circumstances of a TBA; provide certainty; they may provide an institutional structure, as well as dispute-settlement mechanisms.
  - Informal agreements: simple, flexible, rapid and have a low public profile .
- Local transboundary arrangements may be useful, especially if the communities involved are mainly local.



# **TOWARDS A MORE COOPERATIVE APPROACH: SOME REFLECTIONS ON THE WAY FORWARD (II)**

- A wider cooperative approach to the management of TBA should be encouraged by the international community.
- The precautionary principle in particular is called to play an important role in the specific regulation of TBAs as a result of the uncertainty in many cases on the features of this resource and the consequences of its ongoing exploitation or related activities.
- Finally, this strategy will necessarily require enhanced knowledge about the resource, an increase in public awareness of the benefits of cooperation, an understanding of the consequences of not taking preventive and precautionary actions, exchange of good practices and international funding.

# THANK YOU!

[lauramovilla@uvigo.es](mailto:lauramovilla@uvigo.es)