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Coping with Water Scarcity in River Basins  
Worldwide: Lessons Learned from Shared  
Experiences (Martz Summer Conference, June  
9-10)

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### **SLIDES: Learning from Drought Crises in Federations: Principles, Indicators and Lessons Learned**

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Dustin Garrick

Daniel Connell

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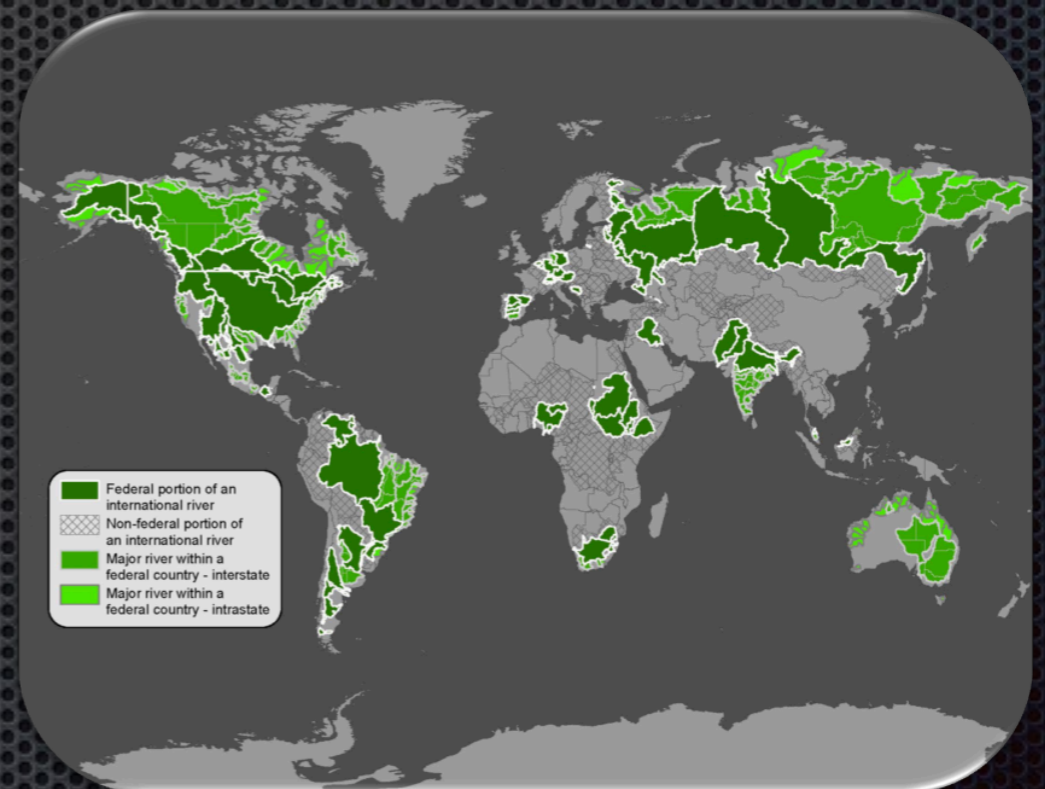


# Learning from Drought Crises in Federations

## Principles, Indicators and Lessons Learned



Elephant Butte Reservoir, New Mexico (USA) (Rio Grande) (c) Zach Guido



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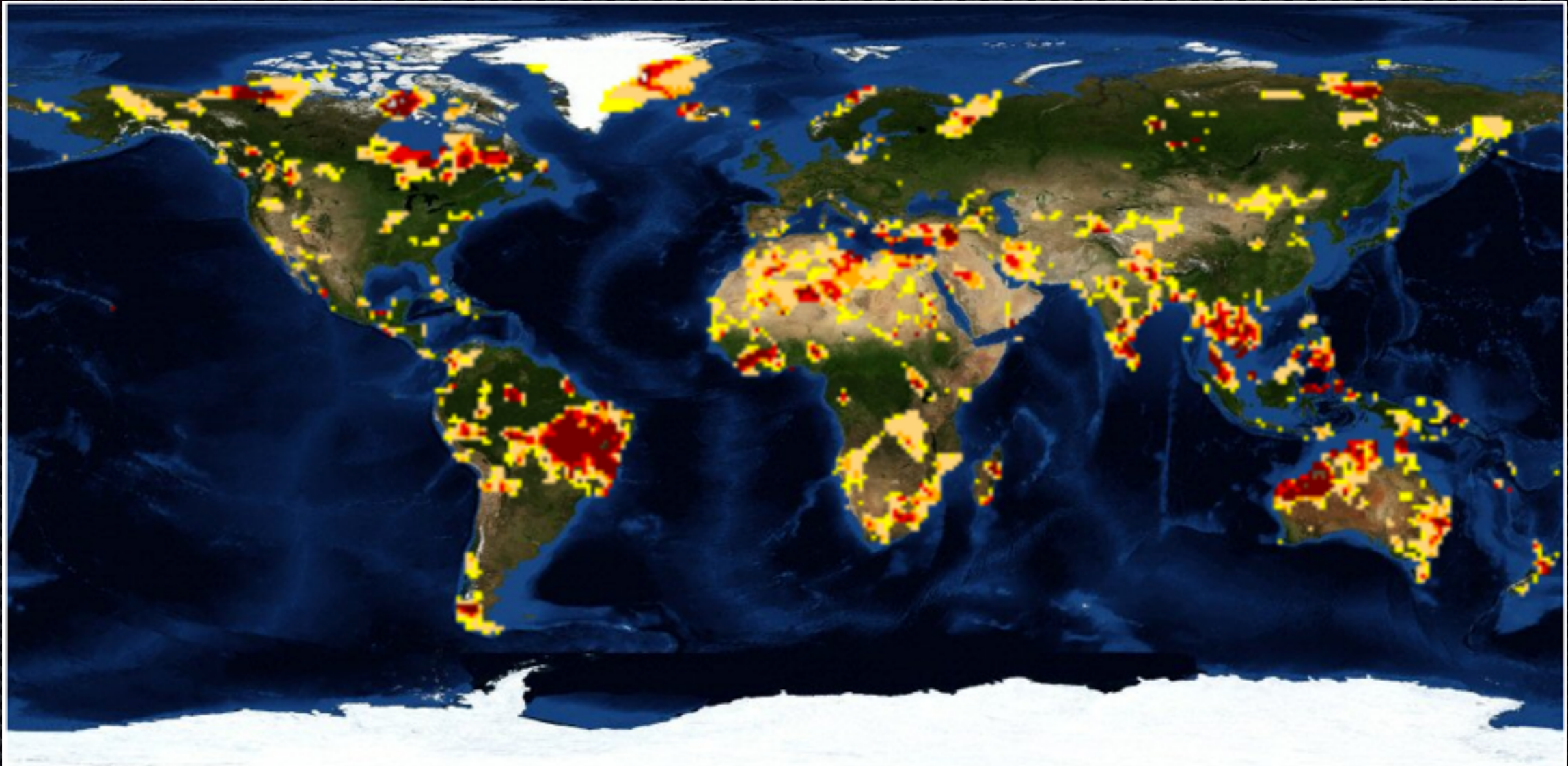
Social Sciences and Humanities  
Research Council of Canada

Conseil de recherches en  
sciences humaines du Canada

Canada

 **Forum of Federations**  
The Global Network on Federalism and Devolved Governance





*Global Drought Information System  
Accessed June 9th 2016*





# Arizona Daily Star

## Is California trying to take our water?

Recommend 902 Tweet 17 +1 4 Share 35 Print Email

Respond: Write a letter to the editor | Write a guest opinion



# Federal rivers matter

## THE HINDU

OPINION » COMMENT

Published: June 3, 2015 00:50 IST | Updated: June 3, 2015 00:50 IST June 3, 2015

### The water tribunal trap

• [Srinivas Chokkakula](#)

FOREIGN AFFAIRS

INDIA'S WATER POLITICS  
Scott Moore

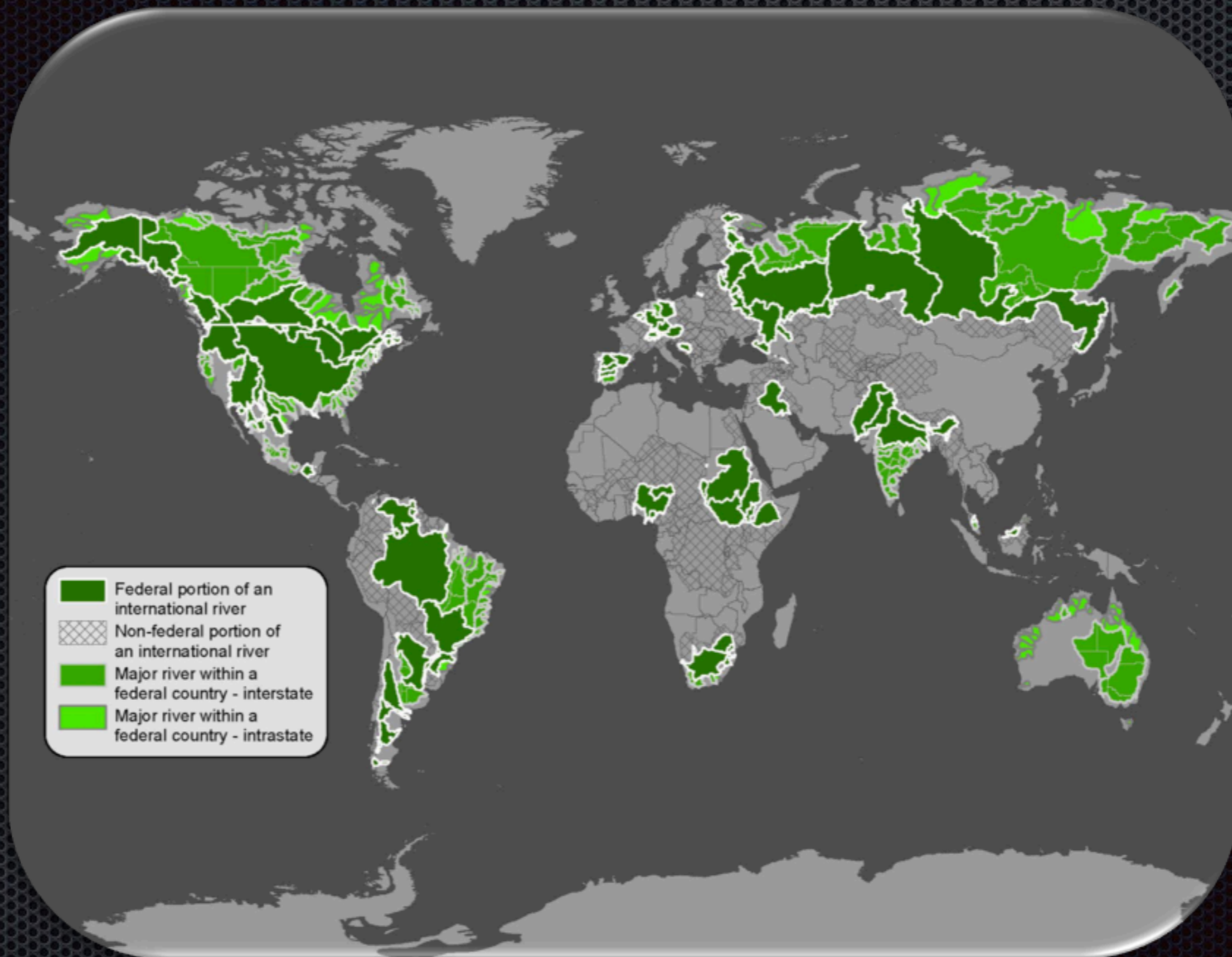
## India's Water Politics

When Drought Leads to Discord

By Scott Moore



# What are federal rivers?



“Major” river basin within or shared by a country with a federal political system

Adapted from Garrick et al 2013



# Objectives

***Establish a policy-oriented research agenda and partnership*** of researchers, practitioners and PhD students to develop, compare and learn from case studies of drought adaptation in federations of North America and internationally.

***Advance our understanding of the factors and institutions*** influencing cooperation, conflict resolution and capacity to adapt to droughts and extreme climate events in federal rivers.



**Meet Tony** – on the trail of Alfred Deakin



Tony at Parker Lake, Nevada United States

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“The 21st century will almost certainly be an era of increased **global circulation of water issues, inquiry, expertise, and action**...In light of the critical water problems faced in every region of the world, the next twenty years **will require a major shift from largely implicit comparisons to rigorous comparative analyses**

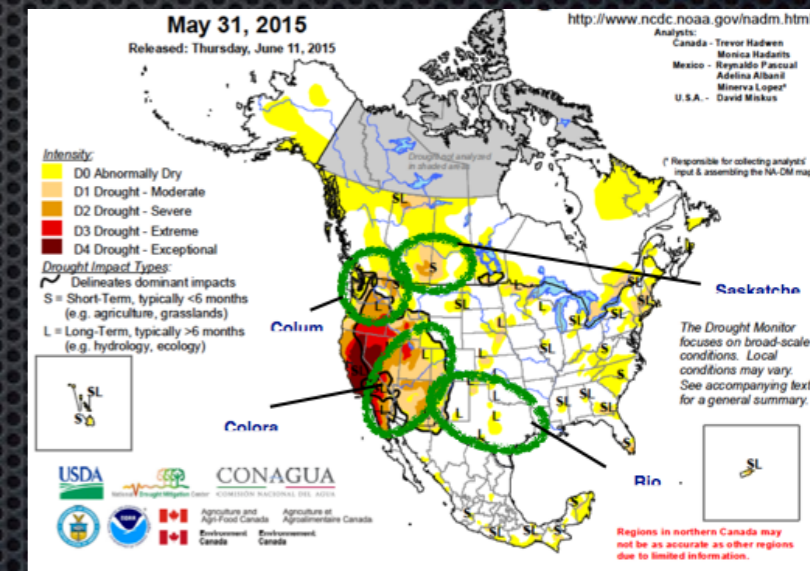
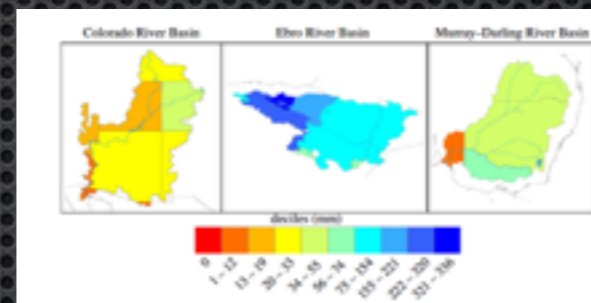
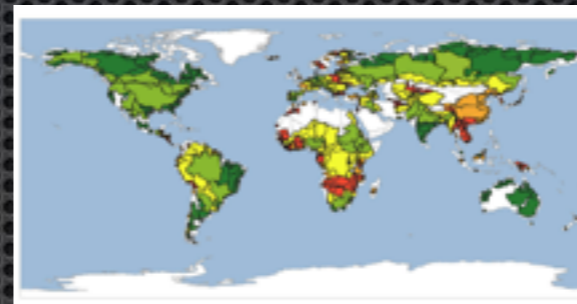
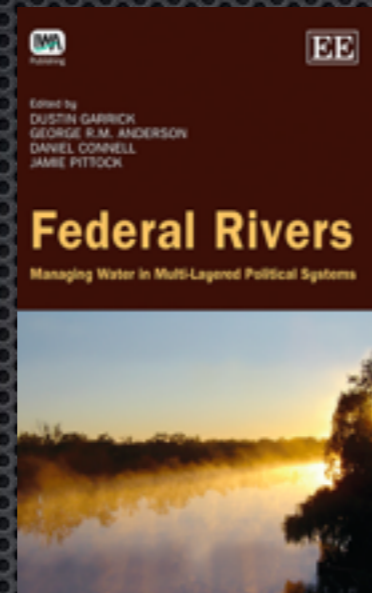
”

*MDBA 2015*

*- James Wescoat, 2009*



# Global and river basin perspectives



2008-9  
Attention

2012  
Oxford  
Workshop  
Case Studies

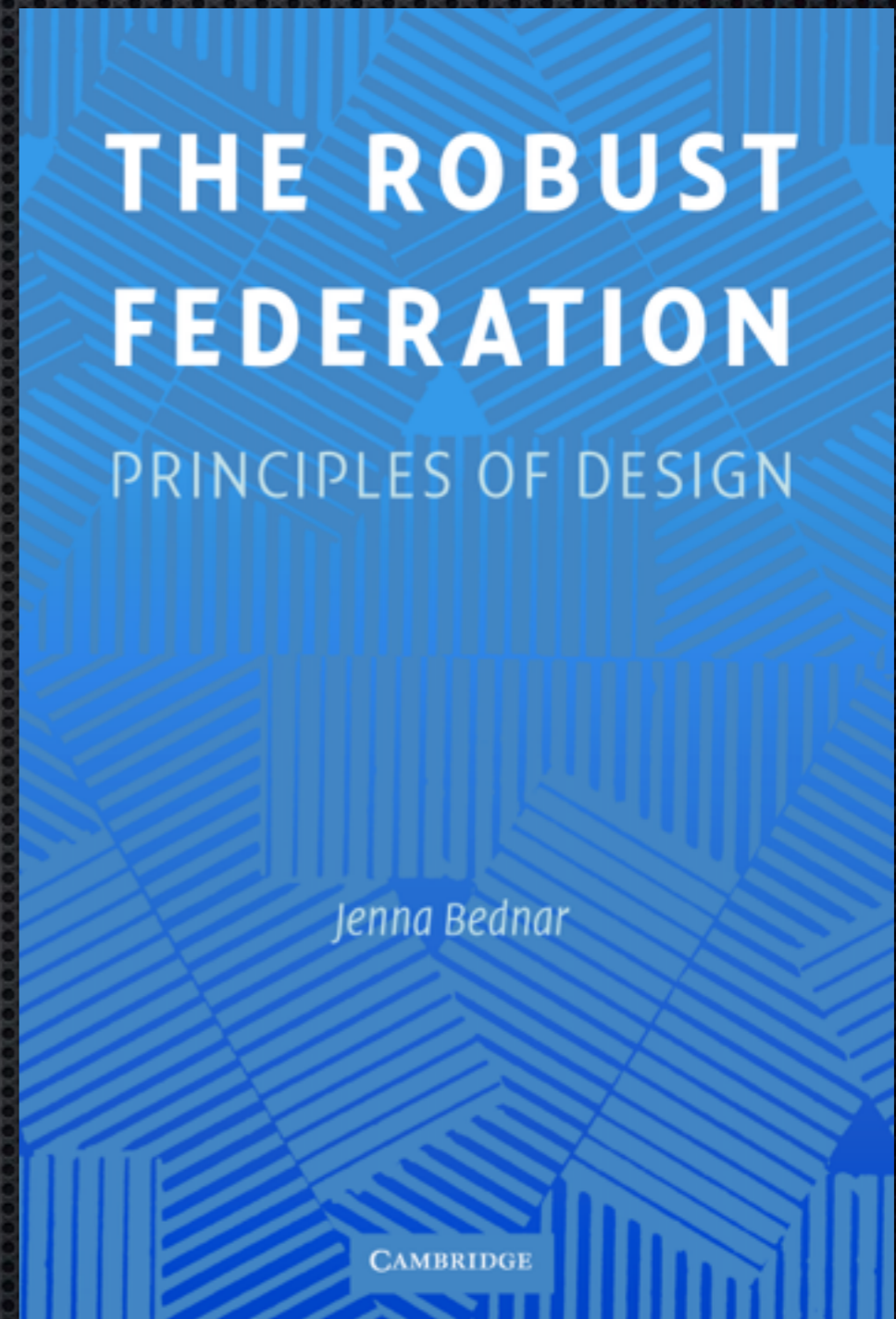
2013-4  
Diagnostic

2014-present  
TRACE

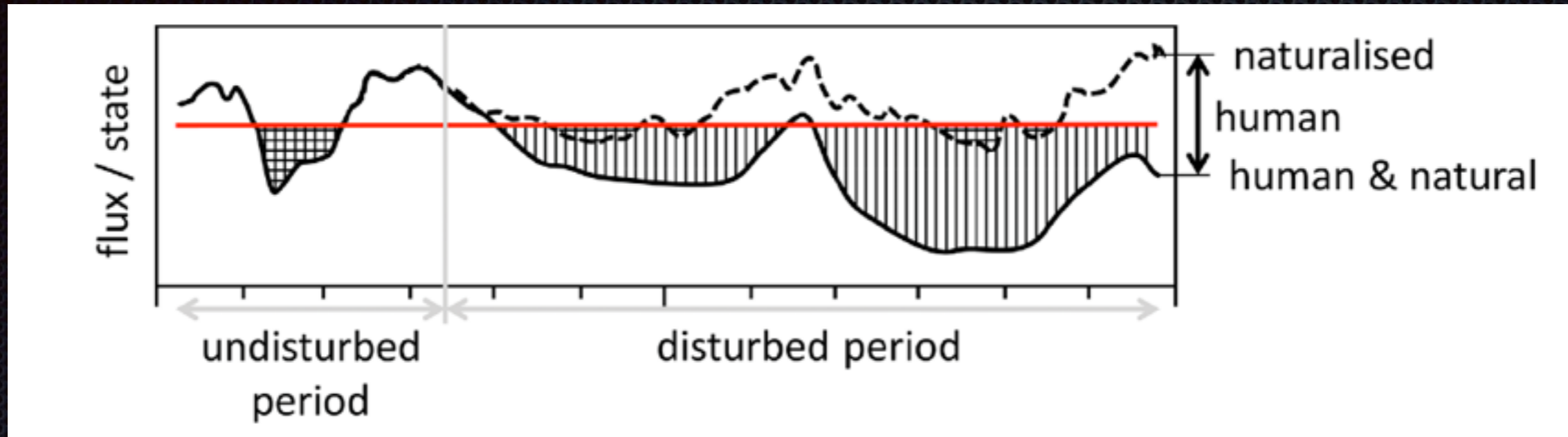


# Federalism defined

1. Geopolitical division
2. Independence
3. Direct governance







Van Loon and Van Lanen 2013

# Drought

A socially constructed crisis

A stress test for intergovernmental arrangements



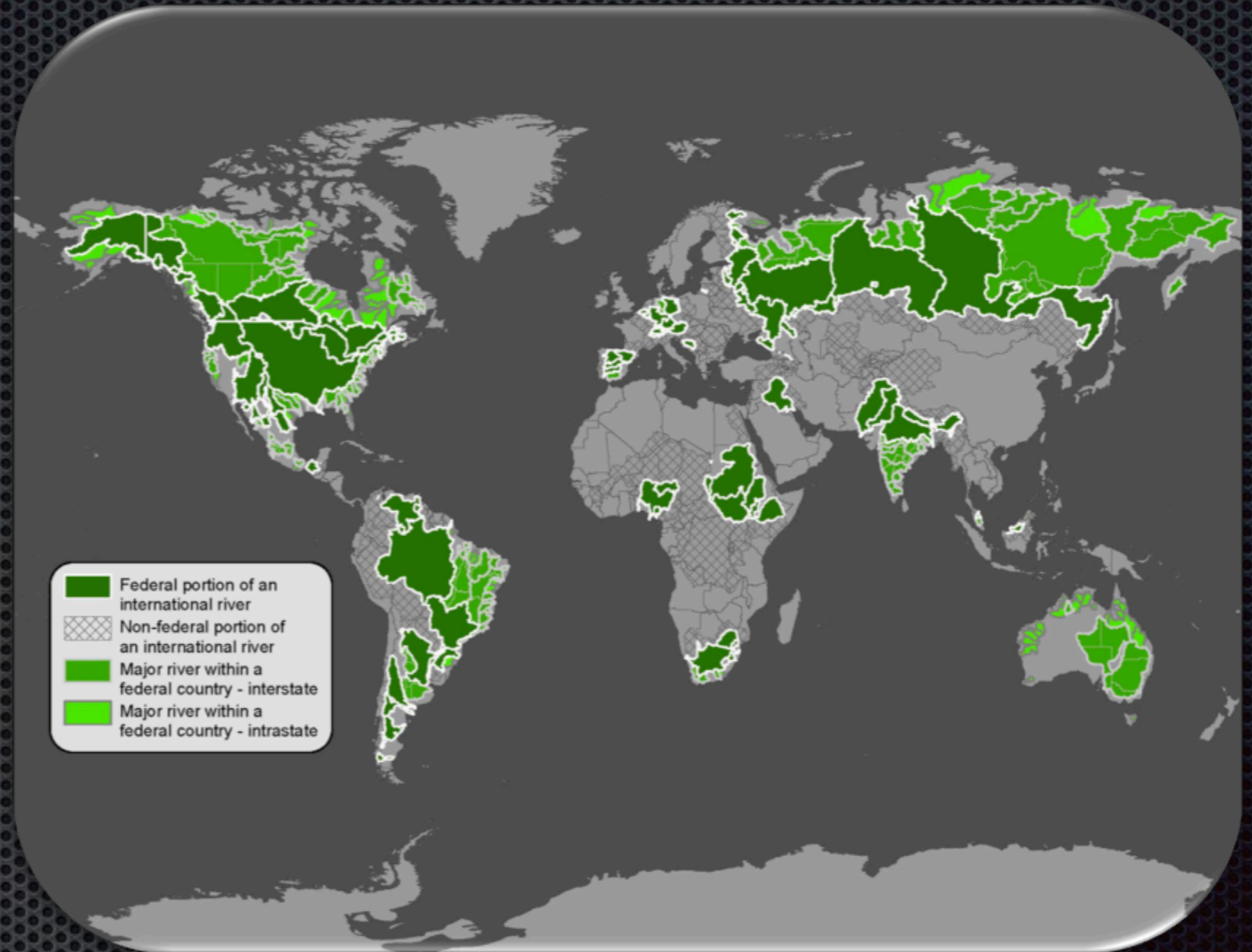
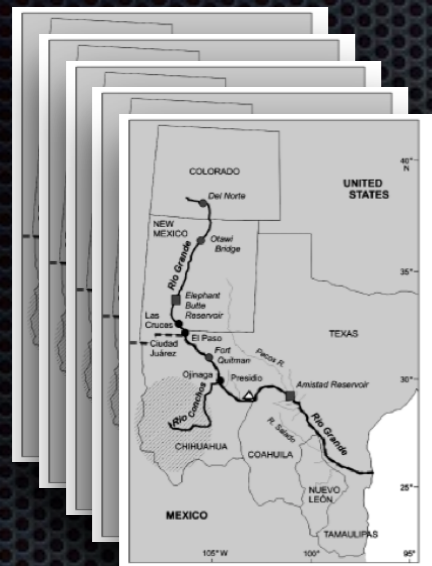
# Adaptation: Institutions, Infrastructure and Information

1	Constitutional provisions
2	Interstate water agreements (joint infrastructure, apportionment)
3	Infrastructure planning, financing and operations
4	River basin organizations (authorities, commissions)
5	Variability management provisions (droughts, floods)
6	Role of law
7	Conflict resolution mechanisms (courts, settlements, ADMs)
8	Fiscal arrangements
9	Data sharing, joint monitoring and river system modelling

Emphasis on **inter-governmental** and **multi-level governance** attributes of adaptation options and adaptive governance



# Federal rivers network



archival data, field surveys, etc

Frameworks for sharing lessons

Data architecture to store and analyze physical, institutional and socioeconomic data

Network of researchers and practitioners



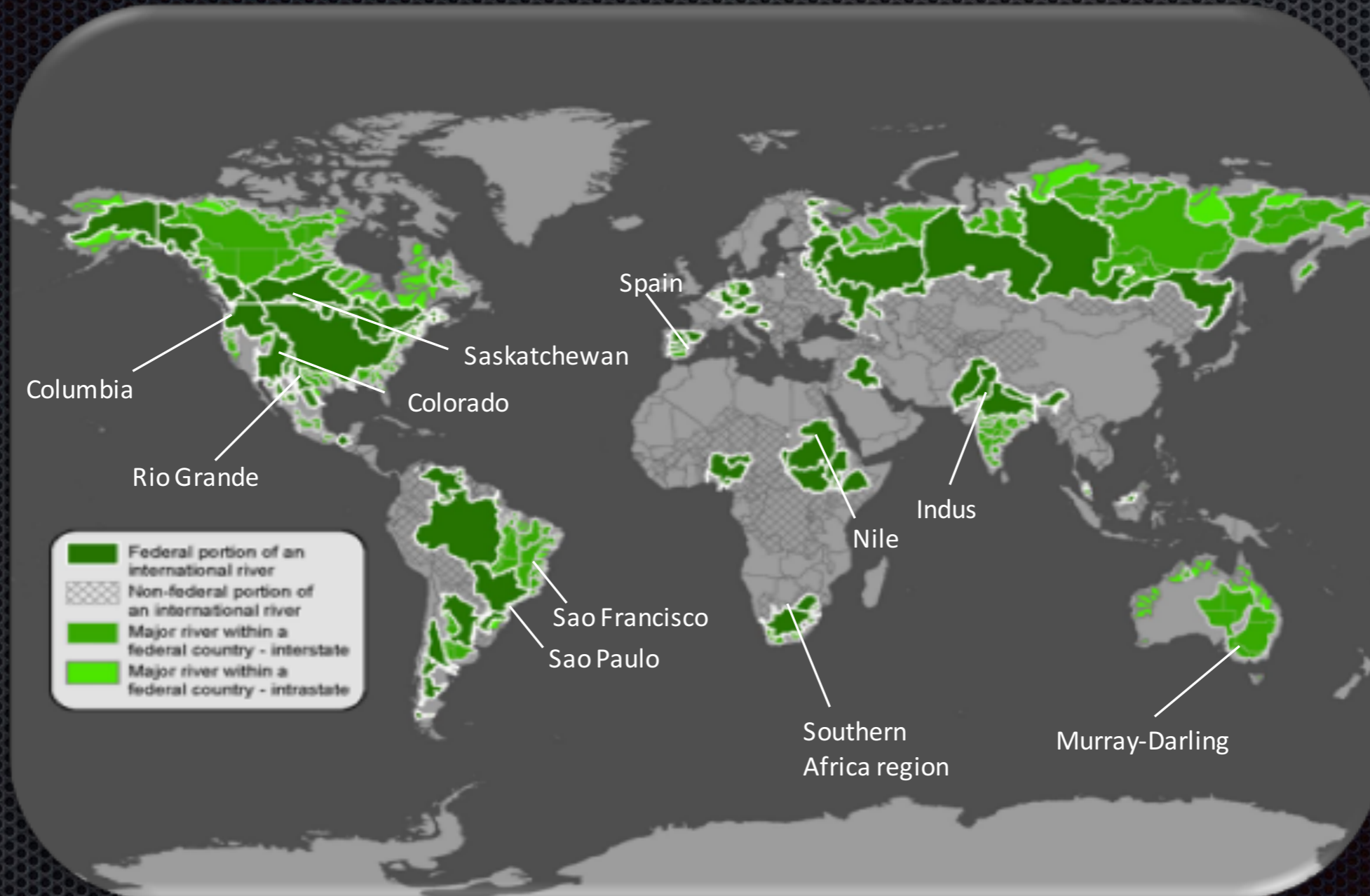
# Building the network



17 senior researchers. 10 practitioners. 8 PhD Students.  
40 rivers



# Study basins and regions





# Same water... different laws

India — TRAIN Srinivas

Brazil -

Water politics spilling over...



**Politics matter ... a lot**

Water politics spilling over  
to national politics



“I see political problem behind these things....  
the politicians want to play with the nerve of the  
people to get more and more votes...  
otherwise, it is very easy to solve this problem.”

- Ms Uma Bharati, Senior BJP Leader and, current Union Minister  
for Water Resources, 29 July 2012 (then in opposition).







**Jerson Kelman \***  
Professor e pesquisador

Uma carreira dedicada  
à água e à energia

\* É doutor em Hidrologia e Recursos  
Hídricos pela Colorado State Univer-

## ‘NÃO É PECADO PEDIR À POPULAÇÃO ECONOMIA DE ÁGUA E DE LUZ’

Conscientização poderia ter preservado os reservatórios, alerta especialista



Racionalidade. Na escassez, a prioridade é o consumo humano, depois, a atividade que gere mais riqueza

“What turned this into a real problem was the political dispute. It would have been enough to say that reservoirs are empty and there is lack of water [for all users] We have to use water wisely”

(Ing. Jerson Kelman. Former Director of Brazil's National Water Agency, former Director of the National Energy Agency. Current President of Sabesp S.A, 9 Nov 2014)



# Courts ... a necessary evil?

- Act as an incentive for reaching agreements
- Win-lose situation that fuels the dispute



La Sentencia del Tribunal Supremo de 20 de octubre de 2004 que anula el Plan Hidrológico del Júcar. Una decisión clarificadora sobre la distribución competencial en materia de aguas

Identifícate / Regístrate Domingo 30 de octubre de 2011 Contacta con levante-emv.com | RSS

**levante-emv.com**  
El Mercantil Valenciano

NOTICIAS  
**Comunitat Valenciana** HEMEROTECA »

PORTADA ACTUALIDAD DEPORTES OPINION/BLOGS ECONOMIA OCIO VIDA Y EST

**C.Valenciana** Valencia Comarcas Castelló Sucesos España Internacional Cultura Sociedad Tecnología Gente Fallas Me

Levante-EMV.com » **Comunitat Valenciana**

## El Supremo tumba la segregación del Júcar del resto de cuencas valencianas

La sentencia del alto tribunal anula la parte del Real Decreto que alteraba los límites de la demarcación hidrográfica en la Comunitat Valenciana al entender que nada justifica esa decisión

**PROVINCIA**

Recursos hídricos

# El Supremo reabre la guerra del agua en el Júcar

E.F. - viernes, 3 de julio de 2015



# Supreme Court will hear Texas-New Mexico water dispute

STATE & REGIONAL GOVT & POLITICS

By [Asher Price](#) - American-Statesman Staff



Posted: 6:32 p.m. Wednesday, Jan. 29, 2014





Follow the money



# PM's \$10b water plan

January 25, 2007

Page 1 of 2 | [Single page](#)

Prime Minister John Howard has announced a \$10 billion national water management plan that includes a Commonwealth takeover of Australia's biggest river system.



# State election unlikely to change SA's Basin funding cut

ABC Rural By [Anna Vidot](#)

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Updated 9 Mar 2014, 9:32pm

**South Australia seems likely to halve its funding to the Murray-Darling Basin Authority regardless of who wins the state election on Saturday.**

The current Labor government has previously announced its intention to cut its contribution to river maintenance and other programs by \$14 million.

That's in retaliation against New South Wales, which has more than halved its own contribution to the Basin Authority.





Feds and states...each plays a role





# Agenda

**Proceedings** - co-edited by PhD student team, to feature summary, main messages and crosscutting themes

**Policy brief / issues paper** - aimed at practitioners (*Forum of Federations*)

**Special Issue** - provisionally *Water International*

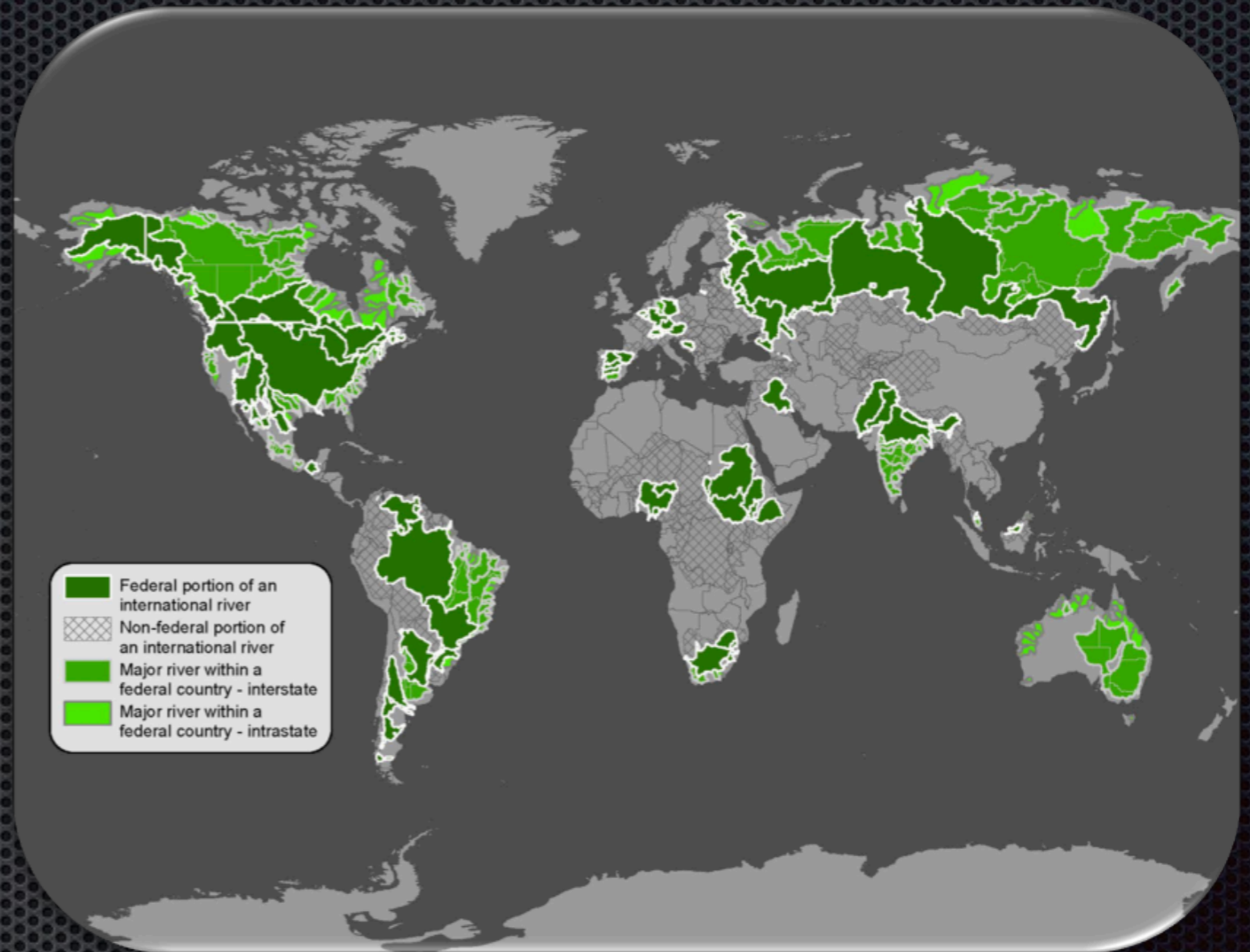
**Working groups (ad hoc)** - proposals, principles, indicators, etc.



# Partnership, networks and next steps



archival data, field surveys, etc



Frameworks for sharing lessons

Data architecture to store and analyze physical, institutional and socioeconomic data

Identify factors and institutions that enhance cooperation, conflict resolution and adaptive capacity; opportunities to learn from other levels and from other sectors.



# Thank you

