

Water security in the South.

Reflections on the Mendoza River Basin's case, Argentina

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Mendoza river basin in central western Argentina



Contrastive landscapes: urban, intensive agriculture and desert

Urban
oasis



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Contrastive landscapes: urban, intensive agriculture and desert

Rural oasis



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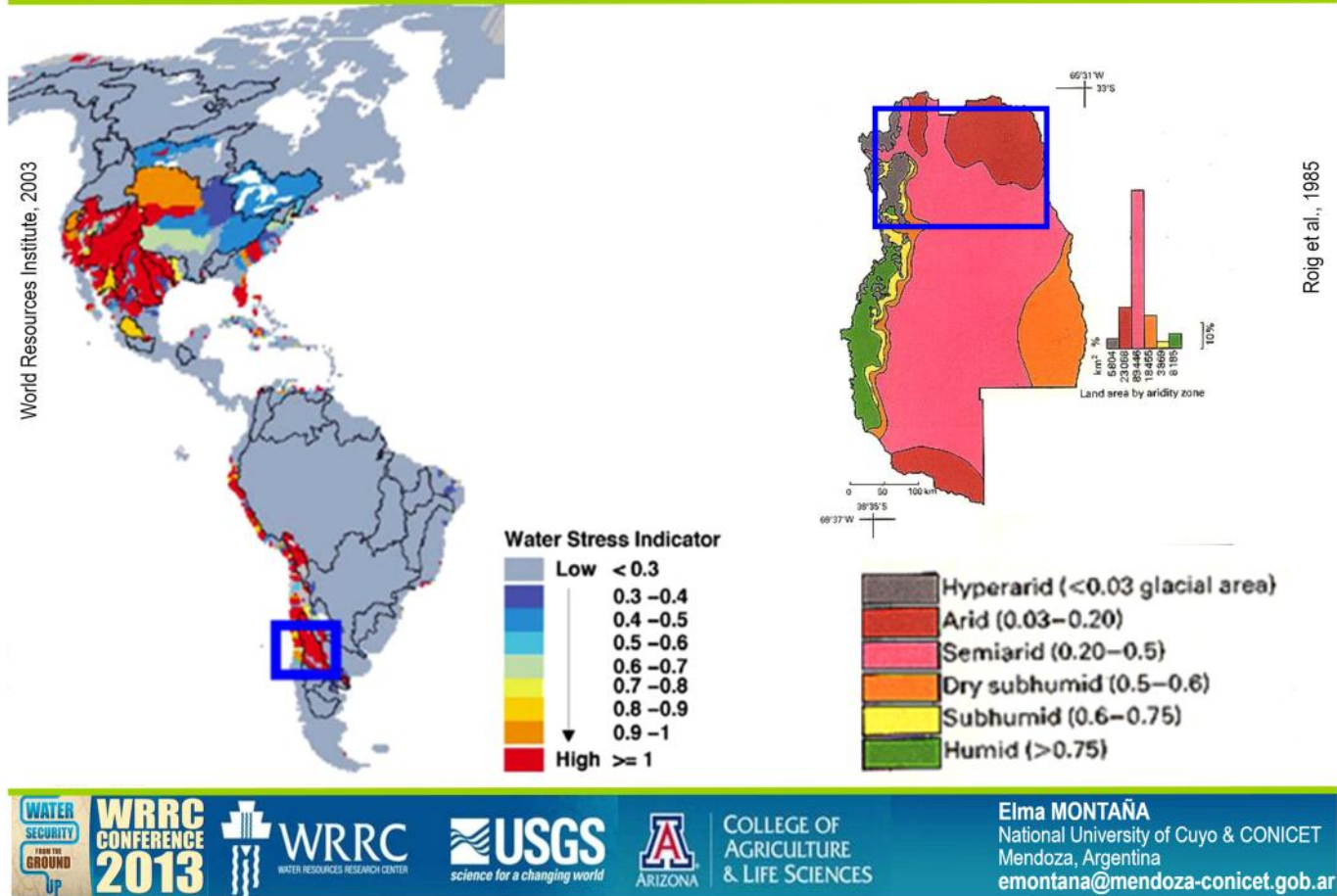
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Mendoza river basin is under water stress



Contrastive landscapes: urban, intensive agriculture and desert

Non irrigated
lands



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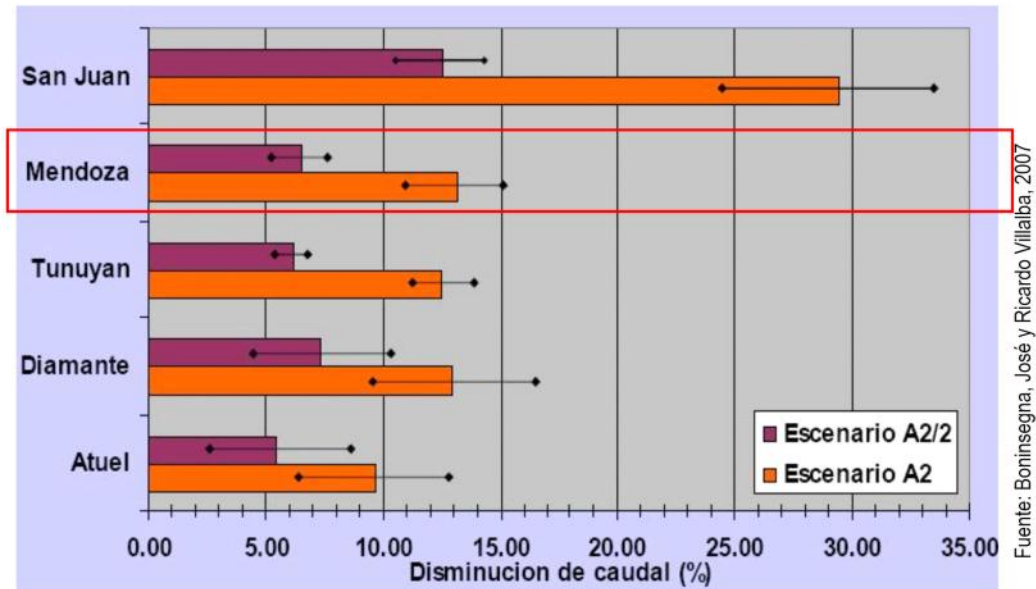


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Climate change scenarios: more droughts

Central Andes river flows.
Percentage of mean flow reduction for 2021/2030



River Tight Balance and Aquifer Overexploitation

Water balance (in annual hm³)

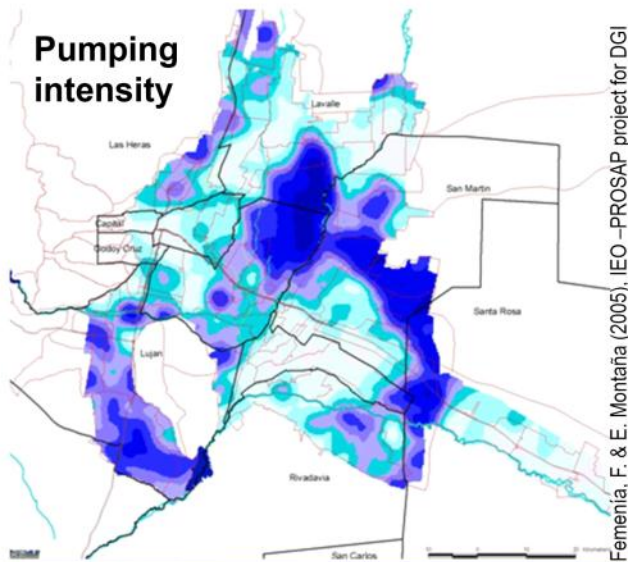
	Surface water	Ground water
Offer	1.041,46	385
Demand	1.121,05	Unquantified
Balance	-80	Negative

Groundwater Balance (in annual hm³)

Inputs Free Aquifer	590
Outputs Free Aquifer	622
Extraction in Excess	- 32

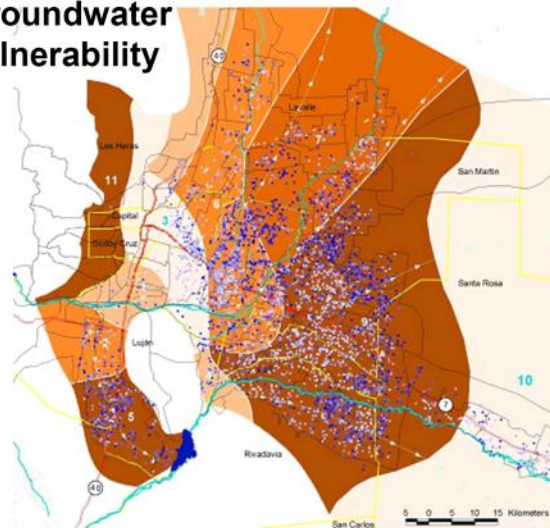
INA-CRA-DGI in FFAO
Proj. for DGI, 2006

Pumping intensity



Femenia, F. & E. Montaña (2005), IEO –PROSAP project for DGI

Groundwater vulnerability



Alvarez, Montaña & Femenia (2005), IEO –PROSAP project for DGI



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River Tight Balance and Aquifer Overexploitation

Surface water management



Groundwater management



“Groundwater war”

Más acusaciones complican

Las asociaciones de inspectores de cauce solicitaron superintendente y que la investigación se amplíe a involucrados en la actual gestión

El Jury trata hoy graves cargos titular de Irrigación

En medio de presiones, el jurado se reúne para definir si iniciará Frigerio por el otorgamiento irregular de pozos y contaminación

Edición Impresa: jueves, 18 de agosto de 2011



Eduardo Frigerio fue nombrado superintendente de Irrigación

Los Andes

Denuncian que Irrigación funciona en forma irregular

Un ex inspector de cauce reveló ante la Fiscalía que todas las decisiones son avaladas por el titular.

Pedirán el juicio político para superintendente de Irrigación

El diputado Roberto Blanco, del PJ Federal, formalizará mañana el pedido de juicio político a Eduardo Frigerio por manejo irregular de pozos de agua para las acusaciones.

martes, 28 de junio de 2011



La presencia de Eduardo Frigerio en la Comisión de Obra Pública, ya que el manejo irregular de los pozos de agua

La Conclusión para el juicio político se sustentará en la acusación presentada por el diputado del PJ Federal



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How should we understand water security?

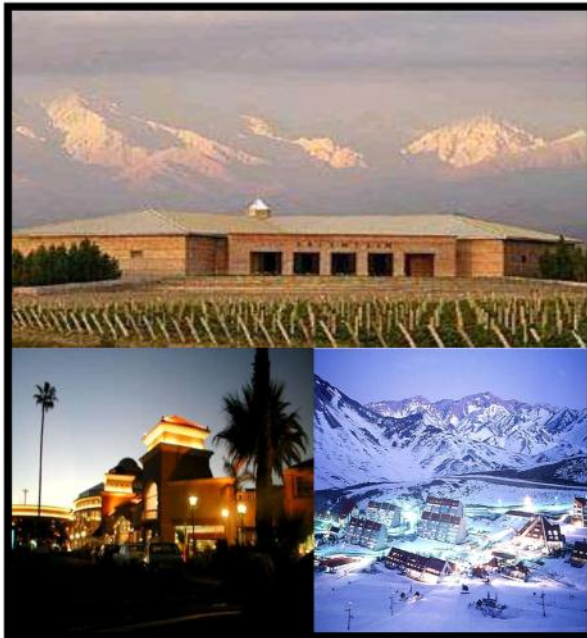
- Realist school: nation's sovereignty and competition for territory and resources
- "Rethinking security": expansion of the concept of security to include social, economic, demographic, agricultural, and natural-resources-related matters
- Security as opposed to vulnerability, encompassing food security and poverty, climate variability and change, energy, and water security.
- D. Grey & C. W. Sadoff (*Water Policy*): [WS] "... is the availability of an acceptable quantity and quality of water for health, livelihoods, ecosystems and production, coupled with an acceptable level of water-related risks to people, environments and economies"
- Varady & Scott (mimeo): **"Water security constitutes the sustainable availability of adequate quantities and qualities of water for resilient societies and ecosystems in the face of uncertain global change"**

Source: Varady & Scott, 2013 (mimeo)

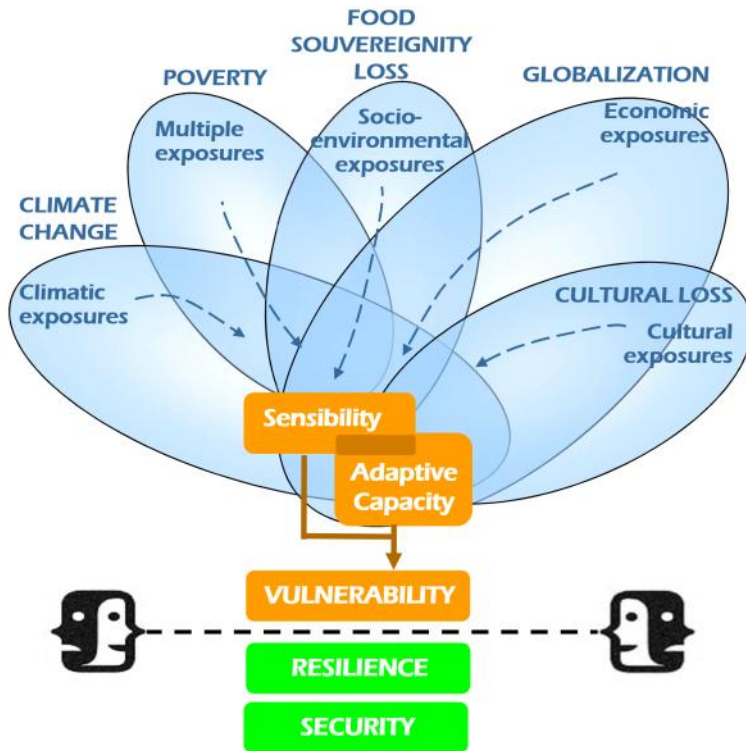


Looking for a social inequity-proof definition of water security

What is water security for them?



Water security is also a matter of development models



“Water security constitutes the sustainable availability of adequate quantities and qualities of water for resilient societies and ecosystems in the face of uncertain global change”

... (and specially in peripheral drylands)...

... in respect of the rights to maintain and develop its own capacity to produce the own food in the own territory, conserving cultural and productive diversity and reducing rural migration, uprooting and cultural diversity loss”