

From Watersheds to Fisheries: Lessons from Transdisciplinary Work at Multiple Scales in South America

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Uruguay**

HumanitiesScience Workshop

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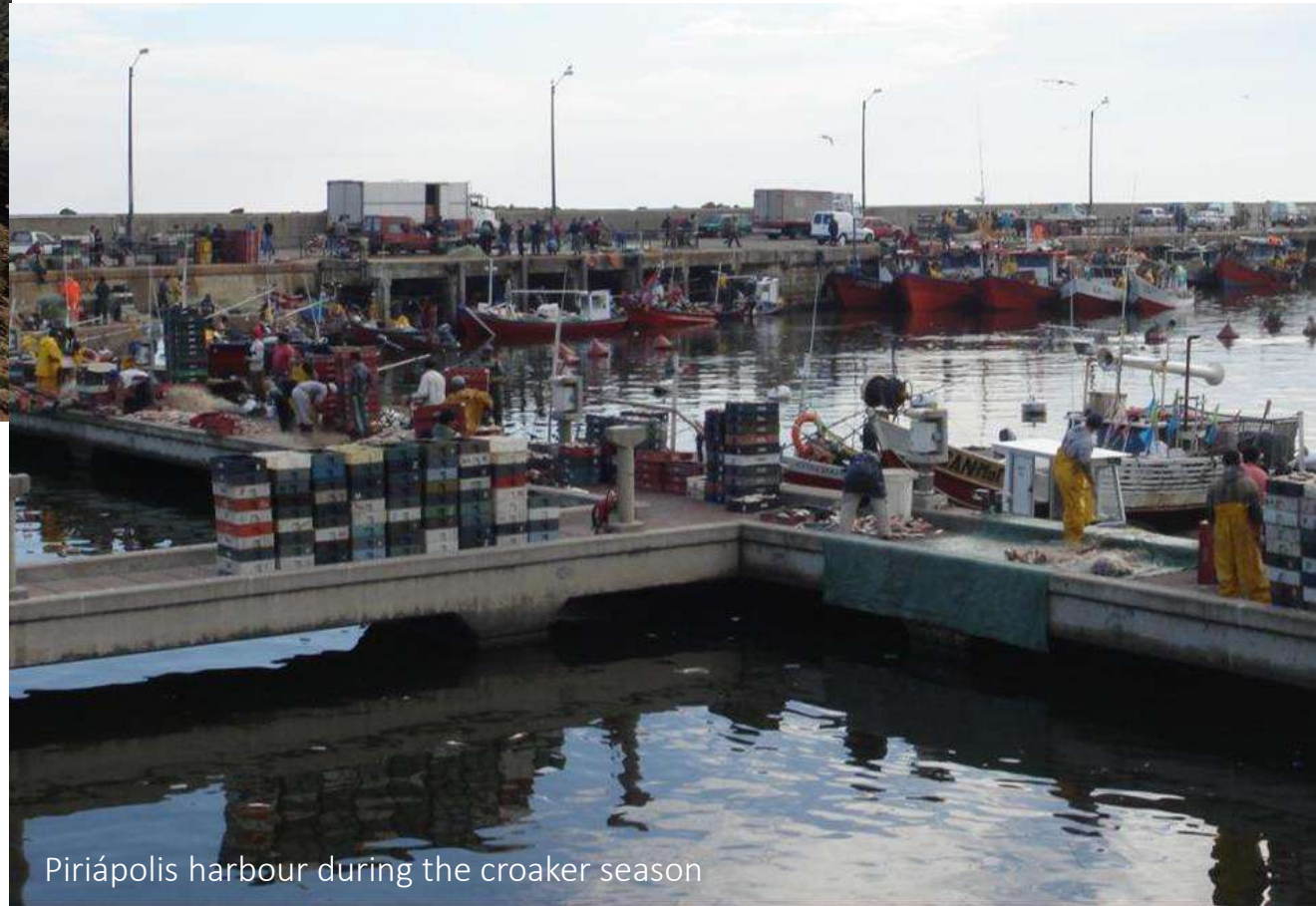




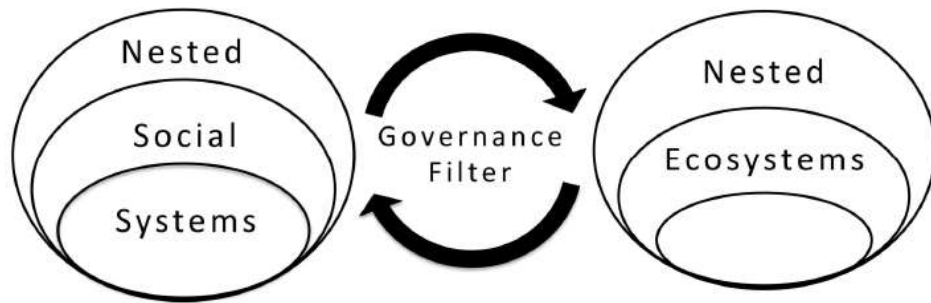
Laguna del Cisne basin (Credit: Intendencia de Canelones)

Watersheds and fisheries as social-ecological systems

Complexity & uncertainty



Piriápolis harbour during the croaker season



(Berkes 2010)



Transdisciplinarity (TD) & Sustainability Science

- Action-oriented: looks for solutions to real-world problems
- Integration of multiple sources of knowledge
- Knowledge co-production
- Stakeholder involvement (“science with the people”)
- Participation throughout an adaptive process

TD RESEARCH

Increasingly found in environmental contexts

(Lang et al. 2012, Trimble & Plummer 2019, Vinke-de Kruijf et al. 2022)



Objective

To share lessons learnt from two transdisciplinary research projects, involving watersheds and small-scale fisheries, at multiple scales (local, national, international) in South America



*Transforming water governance
in South America*



Fishing Transformations

GovernAgua Project (2019-2022)

Transforming water governance in South America: from reaction to adaptation and anticipation

Analysis of water crises and water governance in six watersheds (Argentina, Brazil and Uruguay), understanding them as windows of opportunity for governance transformations.

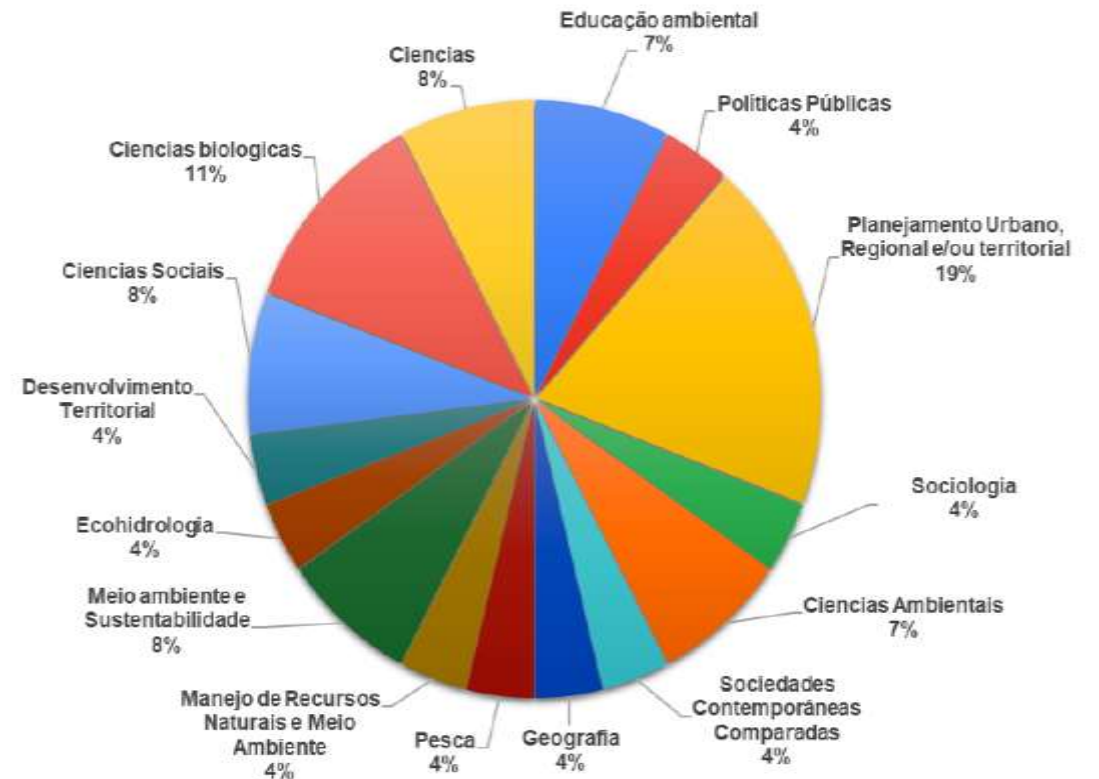
Interdisciplinary and transdisciplinary approach seeking to improve adaptation and anticipation capacities in water governance.

Around 40 researchers and students involved + over 100 non-academic actors.



TD approach

- ❖ Research oriented to real-world problems (e.g., crises involving water quality and quantity, difficulties in basin committees).
- ❖ Integration of different sources of knowledge: interactions between disciplines (e.g. natural, social, political sciences), and between researchers and multiple stakeholders.



Diversity of actors involved

- Government (local, subnational, national)
- Non-government: cooperatives, social organizations, agriculture sector, academia, etc.



http://gradingeffort.weebly.com/uploads/6/1/4/6/61466795/9970487_orig.jpg

Basin Committees:

Advisory boards for water management (composed of government and non-government actors)

PCJ, SP, Brazil



Climate change

Laguna del Sauce, Uruguay



Water crises

Chubut, Argentina



Land use

San Luis, Argentina



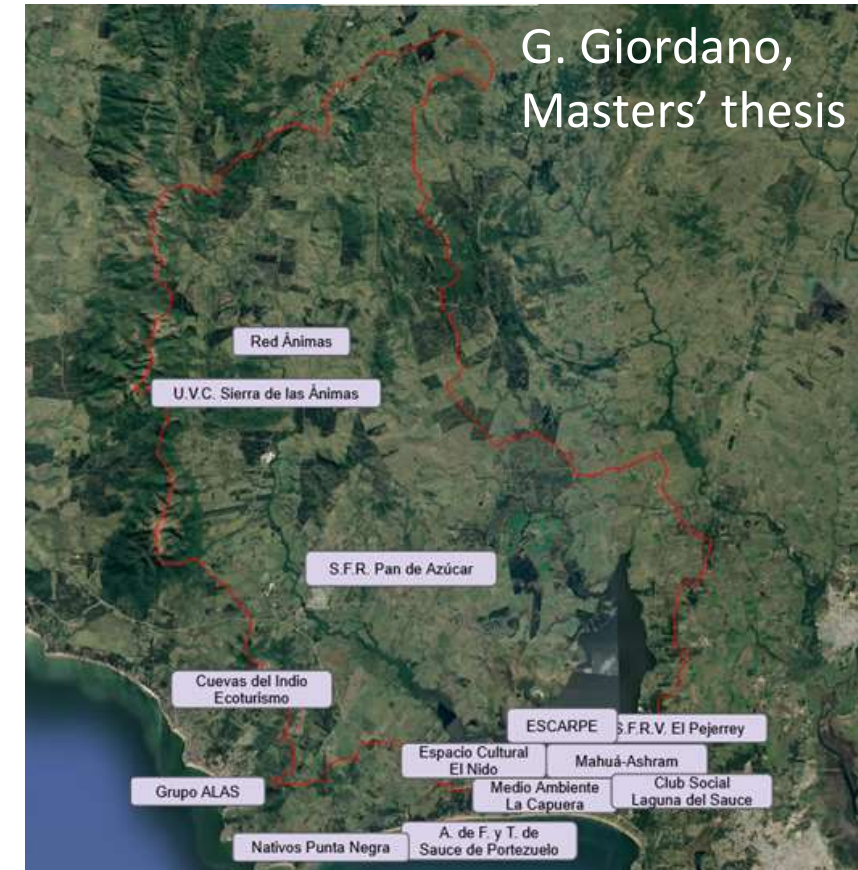
Water governance and management

Main research methods



Field examples – Local scale (Laguna del Sauce, Uruguay)

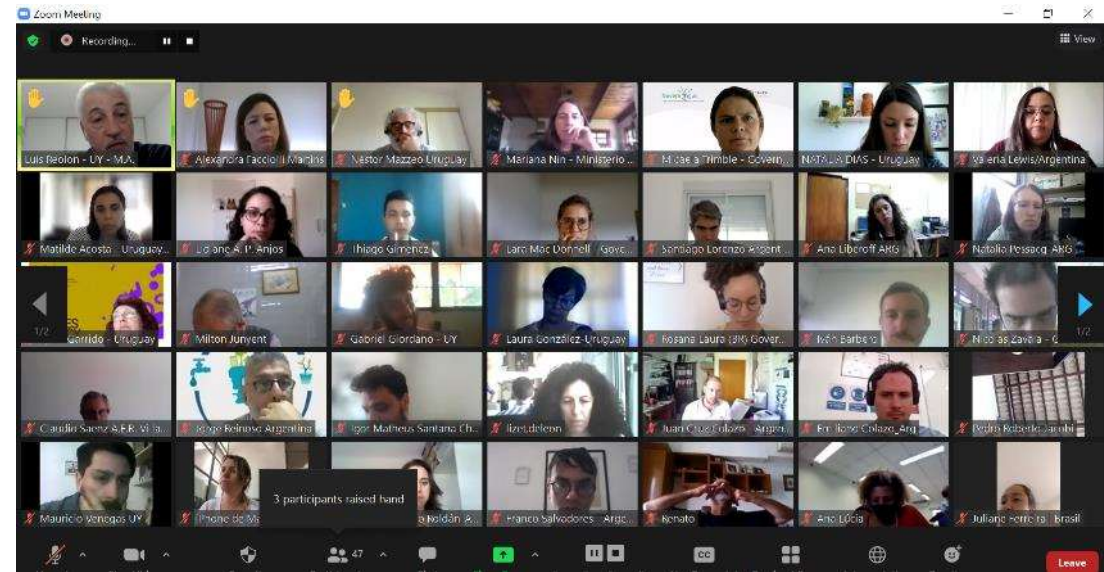
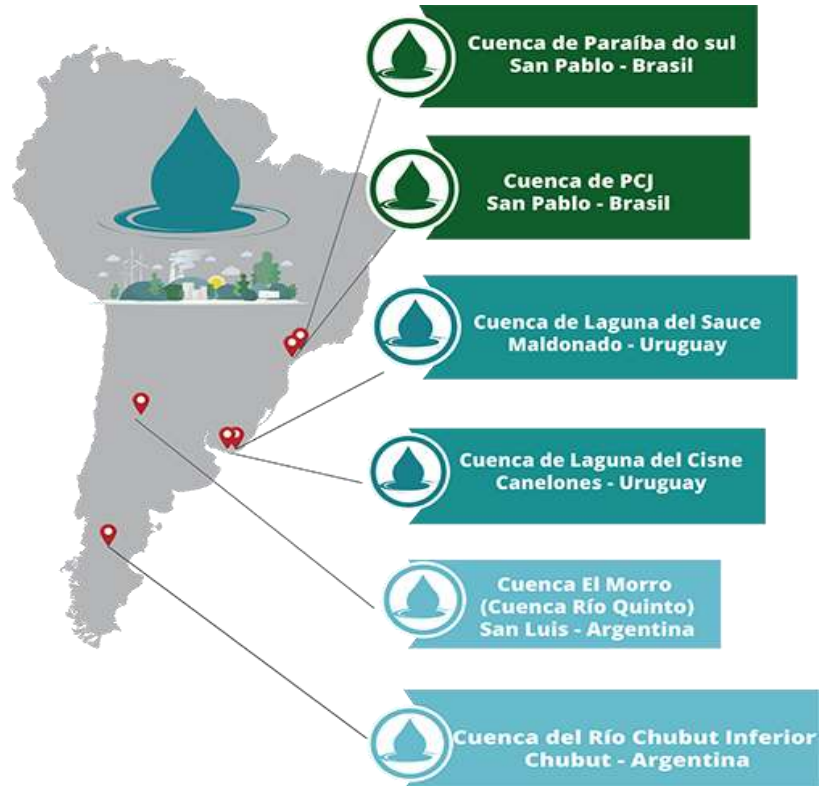
- Workshops with non-governmental organizations and social groups to: (i) improve linkages between them, (ii) strengthen social participation in water management, (iii) provide inputs for an environmental education strategy in the watershed.
- Formation of “Red Activa Cuenca Laguna del Sauce”



G. Giordano,
Masters' thesis

Net-Map during a workshop

International scale - Cross-sites learning through virtual workshops



(Zoom workshop, October 2021)

Topics of discussion were selected by participants (e.g. adaptation in contexts of crises; challenges to interinstitutional coordination; access to information; social participation)

Outputs

Reports (with summary versions)



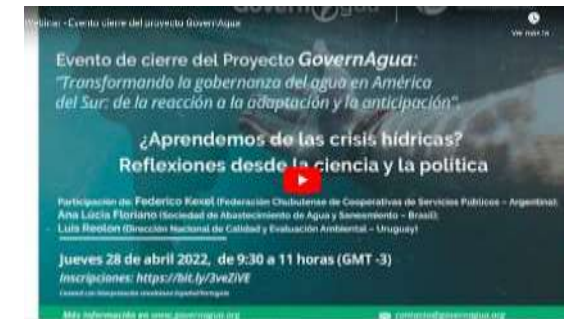
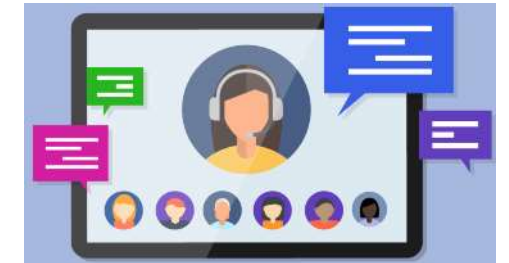
Overview of each publication (*digest*)



Policy Brief (Spanish/Portuguese)



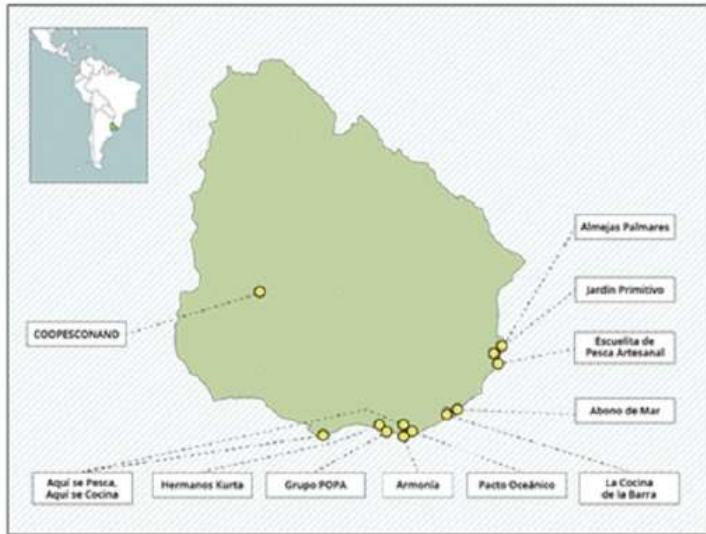
Recordings of webinars + Video of the project





Fishing Transformations Project

Envisioning desirable futures in small-scale fisheries: a transdisciplinary co-creation process in Uruguay



- SSF as food system (initial workshop in Dec. 2019)
- 11 innovative initiatives from the food system around SSF (fishers, chefs, environmental entrepreneurs, researchers, among others)



(Gianelli, Trimble, et al. 2022)





The project team (in addition to members of the initiatives)

Project leader
Researcher
Fisheries



Project co-leader
Researcher
Public participation



Researcher/Writer
Environ. humanities



Researcher
Coastal Management



Researcher
Economics



Researcher
Arts/Design



Communication
Comm. sciences



Visual artist
Arts



Film-maker
Arts



Journalist
Journalism



Visioning workshop - Arts-based methods (May 2022)



Collaging Futures





Outputs (in addition to peer-reviewed publications)



Paperback Catalog



No hay tierra pobre si el mar es rico

Con muchas riquezas en el mar, pero con muchas carencias en la tierra. Así se puede caracterizar desde la perspectiva de un productor hortícola el Cerro de los Pescadores, popularmente conocido como Punta del Diablo. Es que el mundo del lugar es armonioso, con poca materia orgánica para nutrir los cultivos. Por ello es que Claudio y Leticia, residentes locales y horticultores, habían estado probando distintas formas de enriquecer el suelo a través del compostaje.

Desde del 2016, Claudio bajó a la playa y vio que todo el desperdicio de la pesca del día anterior había sido derribado por el mar: cabezas de lomo de tilapia, cabezas y colas de pescado entre la gente que había venido a Punta del Diablo por el encanto de sus playas. Con la idea en la cabeza de que sería posible producir así de gran valor para mejorar el suelo de cultivos de calidad cercanos a los pescadores, los dos se dieron a la tarea. Al comenzar los pescadores no entendían qué iba a hacer una sola persona con todo el desperdicio de pescado de la localidad. Sin muchos conocimientos, los pescadores le cedieron parte del desperdicio para que Claudio iniciara el primer prototipo. Así fabricaron dos prototipos claves de la historia: el **suero** y los **microorganismos**.

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Phone: (+598) 099 302 301
Translation by Claudio Toranzo y Leticia de Toledo, horticultores de Jardín Primitivo

Online Catalog



Saboreando cambios en la pesca artesanal: un catálogo transformador del agua a la mesa

La pesca artesanal es parte de un **sistema alimentario** que conecta transversalmente los sabores y la cultura del mar, lagunas y ríos entre pescadores/as, chefs y comensales. Históricamente la pesca artesanal en Uruguay ha recibido menos atención de la que merece, pero una ola creciente de pescadores/as y emprendedores/as están desafiando el status quo. A través de alianzas con el sector gastronómico, investigadores/as, actores gubernamentales e iniciativas de desarrollo local, se están gestando y afianzando **iniciativas innovadoras y transformadoras** que tienen el potencial de cambiar la marea. Por ello, y para dar a conocer estas experiencias (así como seguir reuniendo otras que se puedan estar gestando) es que hemos creado el **Catálogo Transformador de la Pesca Artesanal**, con esperanzas de que sea una herramienta inspiradora para muchos.



Foto: Pacto Océanico

Short-Film





Lessons learnt from the two cases

Some ingredients for TD projects

Problems addressed of key interest to stakeholders

Sufficient time for discussion among team members from different disciplines / backgrounds

Involvement of academic & non-academic actors throughout the project

Facilitation and collective decision making through deliberation

Multiple means of communication and appropriate information management

Flexibility, adaptability and creativity!



Lessons learnt - Outcomes

- ✓ Social learning
- ✓ Knowledge co-production
- ✓ Strengthened social networks
- ✓ Empowerment of local actors
- ✓ Transformative change

“Through the project we learned that transformative change can only be reached through the convergence of multiple actors and institutions. It’s necessary to meet each other, know their views, and propose transformations that fulfill communities’ concerns and needs.”
(GovernAgua, non-academic participant, Oct.2021)



Conclusions

- ❖ Transdisciplinary and participatory processes involving multiple actors can be powerful and transformative... They can contribute to moving towards more sustainable trajectories!
- ❖ TD projects can involve multiple scales (e.g. local, subnational, national, international).
- ❖ Communication platforms are key tools for TD projects.
- ❖ Early involvement of the different actors (academic + non-academic) is highly recommended.
- ❖ Arts-based methods foster creativity, participants' engagement and collaboration.
- ❖ There is room for further involvement of the Humanities in TD projects on social-ecological systems.

Thank you!

¡Gracias!

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