



ANNUAL REPORT SARAS² 2017

Annual Report SARAS² Institute 2017

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1. ABOUT SARAS² Institute

SARAS² Institute is a joint initiative of Wageningen University (The Netherlands), Resilience Alliance (International network based in the United States), University of the Republic - Udelar (Uruguay), Ministry of Education and Culture (Uruguay), and Municipality of Maldonado (Uruguay).

The governance structure and direction of SARAS² Institute consist of three bodies: Advisory Board, Administration Board (part of the SARAS² Foundation, the Institute's administrative support), and the Executive Team.

The South American Institute for Resilience and Sustainability Studies (SARAS²) is an interdisciplinary research institute aimed at contributing substantially to the production of knowledge and capacity building in processes and mechanisms that determine the sustainability of ecosystem services, key to determining human well-being.

The Institute's building, as well as its operations, encourage and support networking and collaboration, by providing the space and facilities for workshops, courses, and other academic activities. The first phase of SARAS² construction project in Bella Vista was completed in 2015 with funds from the Ministry of Education and Culture (MEC) and the Municipality of Maldonado. Initially, MEC provided the basic financial support until 2016 but since 2017, the Ministry of Housing, Territorial Planning and Environment (abbreviated MVOTMA in Spanish) covers most of the baseline budget.

In December 2017, the SARAS² Institute was composed as:

Advisory Board: Marten Scheffer (Chair of Advisory Board, Wageningen University, The Netherlands), Laurie Beth Clark (Co-Chair of Advisory Board, University of Wisconsin-Madison, USA), Patricia Balvanera (National Autonomous University of Mexico, Mexico), Matilda Baráibar (Stockholm University, Sweden),

Ricardo Ehrlich (University of the Republic, Uruguay), Esteban Jobbágy (National University of San Luis, Argentina), Jesse Lee Kercheval (University of Wisconsin-Madison, USA), Jorge Marcone (Rutgers University-New Brunswick, USA), Pablo Marquet (Pontifical Catholic University of Chile, Chile), Mariana Meerhoff (University of the Republic, Uruguay), Henrik Österblom (Stockholm Resilience Centre, Sweden), Eduardo Viola (University of Brasilia, Brazil) and Cristina Zurbriggen (University of the Republic, Uruguay).

Administration Board: Mariana Meerhoff and Ricardo Ehrlich (delegates of the Advisory Board), Juan Cristina and Néstor Mazzeo (delegates of Udelar), Jorge Céspedes (delegate of the Municipality of Maldonado), Marisol Mallo (delegate of the Ministry of Education and Culture) and Álvaro Soutullo (academic delegate).

Executive team: Néstor Mazzeo (Executive Director), Paula Bianchi (Communications Officer), Virginia Lucas (Associated Artist), Mariana Meerhoff (Advisory Board), Matías Piaggio (Research Associate), Juan Carlos Rocha (Research Associate), Manfred Steffen (Research Associate), Micaela Trimble (Executive Coordinator) and Cristina Zurbriggen (Advisory Board).

VISION

SARAS² generates critical insights allowing South America to build sustainable futures characterized by resilience and the capacity for transformation.

It produces such insights through integration across a broad range of knowledge using innovative approaches, ranging from mathematical models to arts. In its atmosphere minds meet to find peace to think deeply.

At the same time, the kind and intense interaction at SARAS² shapes a new generation of broad visionary thinkers and creators.

The design and place of the SARAS² building provide the context essential to such innovative synthesis.



SARAS² Institute's headquarters in Bella Vista, Maldonado, Uruguay

2. RESEARCH

2.1. EXECUTED PROJECTS

Over the past few years, SARAS² has organized a series of events, including international conferences and workshops, research and training activities, focusing on the analysis of resilience and sustainability of social-ecological systems of great importance to Uruguay and the region.

The construction of the Institute in Bella Vista, Maldonado, marked the transition into a new phase.

“Legacy in research and teaching in Latin America”

July 2016 - May 2017

Financing: Climate and Development Knowledge Network (CDKN) and Latin American Future Foundation

“Analysis of Vulnerability, Resilience and Climate Change Adaptation of Uruguay’s Productive Sectors”

March 2017 - April 2018

Financing: Food and Agriculture Organization of the United Nations (FAO) (Letter of Agreement with SARAS² within the framework of the National Plan of Adaptation to Climate Change and Variability for the Agricultural Sector)

“Contribution to OSE’s Water and Sanitation Plan for the Department of Maldonado, Uruguay”

September - December 2017

Financing: OSE-UGD (Agreement with SARAS²)

“T-LAB for Sustainable Futures: Science + Art + Policy”

May 2017

Coordinator: Cristina Zurbriggen

“Strengthening Ties between Science and National Government for the Development of Climate Policies in Latin America” (LatinoAdapta)

December 2017 - March 2020

Financing: International Development and Research Centre (IDRC) of Canada Project coordinated by the Avina Foundation, executed by the Regional Center for Climate Change and Decision Making.

Project Management

“National Forest Monitoring and Information System for a transparent and truthful REDD+”

December 2016 - March 2017

Financing: Food and Agriculture Organization of the United Nations (FAO)



Workshop to discuss artisanal fisheries' adaptation to climate change and variability.

2.2 PUBLICATIONS

ACADEMIC ARTICLES

Environmental Sustainability in Uruguay: Contributions from Resilience Thinking

Paper published on the School of Architecture, Design and Urbanism Journal
Sustainable May: 28-31.

Mazzeo N., Zurbriggen C., Trimble M., Bianchi P., Gadino I., Steffen M.

Teaching originality? Common habits behind creative production in science and the arts

Ecology and Society 22(2): 29.

Scheffer M., Baas M., Bjordam T.K.

SPECIAL ISSUE IN ACADEMIC JOURNAL

Seeking Sustainable Pathways for Land Use in Latin America

Ecology and Society

Unpublished, articles in review process

OTHER PUBLICATIONS FROM EXECUTED PROJECTS

Climate change, analysis and decision-making processes

Mazzeo M., Bianchi P., Steffen M.

Project: "Legacy in research and teaching in Latin America"

Exploring the relationship between political parties and climate change in Latin America

Ryan D.

Project: "Legacy in research and teaching in Latin America"

Gender and climate change in Latin America

Arana M.T.

Project: "Legacy in research and teaching in Latin America"

Tools for decision-making and risk transfer in the agribusiness sector in the face of the effects of climate change, climate variability and disasters in Uruguay, Argentina and Paraguay

Gamarra T.

Project: "Legacy in research and teaching in Latin America"

Research for Climate Action in Latin America – Contributions from CDKN in the Region (Compilation)

Trimble M.

Project: "Legacy in research and teaching in Latin America"

EXAMPLES OF PUBLICATIONS BY THE ADVISORY BOARD

Creating a safe operating space for wetlands in a changing climate

Frontiers in Ecology and the Environment 15(2): 99–107.

Green A.J., Alcorlo P., Peeters E.T.H.M., Morris E.P., Espinar J.L., Bravo-Utrera M.A., Bustamante J., Díaz-Delgado R., Koelmans A.A., Mateo R., Mooij W.M., Rodríguez-Rodríguez M., van Nes E.H., Scheffer M.

Emergence of a global science-business initiative for ocean stewardship

Proceedings of the National Academy of Sciences (PNAS) 114: 9038–9043.

Österblom H., Jouffray J.-B., Folke C., Rockström J.

Forests and water in South America

Hydrological Processes 31: 972–980.

Jones J., Almeida A., Cisneros F., Iroume A., Jobbágy E., Lara A., de Paula Lima W., Little C., Llerena C., Silveira L., Villegas J.C.



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Workshop of the project "Contributions to the Water and Sanitation Plan of OSE for the Department of Maldonado".

Fish but not macroinvertebrates promote trophic cascading effects in high density submersed plant experimental lake food webs in two contrasting climate regions

Water 9: 514.

Iglesias C., Jeppesen E., Mazzeo N., Pacheco J.P., Teixeira-de Mello F., Landkildehus F., Fosalba C., Clemente J.M., Meerhoff M.

Inequality in nature and society

PNAS 114 (50): 13154-13157.

Scheffer M., van Bavel B., van de Leemput I.A., van Nes E.H.

Interconnected place-based social-ecological research can inform global sustainability

Current Opinion in Environmental Sustainability 29: 1-7.

Balvanera P., Calderón-Contreras R., Castro A.J., Felipe-Lucia M.R., Geijzendorffer I.R., Jacobs S., Martín-López B., Arbieu U., Ifejika Speranza C., Locatelli B., Pérez Harguindeguy N., Ruiz Mercado I., Spierenburg M.J., Vallet A., Lynes L., Gillson L.

Long-lasting floods buffer the thermal regime of the Pampas

Theoretical and Applied Meteorology 131: 111-120.

Houspanossian J., Kuppel S., Noretto M., Di Bella C.M., Oricchio P., Barrucand M., Rusticucci M., Jobbágy E.G.

[Marine ecosystem science on an intertwined planet](#)

Ecosystems 20: 54-61.

Österblom H., Crona B., Folke C., Nyström M., Troell M.

[Programme on Ecosystem Change and Society: Knowledge for sustainable stewardship of social-ecological systems](#)

Ecology and Society 22(1): 47.

Norström A., Balvanera P., Spierenburg M., Bouamrane M.

[The challenges of the Anthropocene: from international environmental politics to global governance](#)

Ambiente & Sociedade XX(3): 177-202.

Franchini M., Viola, E., Barros-Platau A.F.

[Ways of Eating: Tradition, Innovation, and the Production of Community in Food-Based Art](#)

In What's Cooking? Food, Art and Counterculture (eds. S. Botinelli, M. d'Ayala Valva), University of Arkansas Press.

Clark, L.B., Peterson, M.

DIFFUSION DOCUMENTS

[Channeling the analysis: Modifications to Uruguay's Irrigation Law](#)

Mazzeo N., Steffen M., Trimble M., Bianchi P., Zurbriggen C., Inda H.

[Channeling the Analysis: Uncertainty and Decision Making](#)

Mazzeo N., Steffen M., Trimble M., Bianchi P., Zurbriggen C., Inda H.

3. TEACHING, TRAINING AND EXTENSION

3.1. UNIVERSITY COURSES

Post graduate course **“Social-ecological Systems. Introduction”**

March – April 2017

School of Social Sciences, University of the Republic of Uruguay (abbreviated in Spanish UdelaR)

Support to Participatory Workshop **“Scenarios 2050 for the basin of the Maggiolo Reservoir and the San Francisco stream, Minas, Lavalleja”**.

September 2017, Minas.

Within the framework of the Interdisciplinary Workshop of Regional Topics II, Bachelors' Degree in Environmental Sciences, Regional University Center of the East (abbreviated CURE in Spanish)

Course **“Collaborative Territorial Planning and Ecosystem Services”**

September - October 2017

Semi-presential course. Workshop at SARAS² on October 5, 6 and 7.

Co-organized with the Territorial Studies Group, CURE.

Course **“Urban Resilience to Climate Change”**

October - November 2017 (CURE) and March 2018 (Medellin, Colombia)

Organized by the Territorial Studies Group, CURE (within the Framework of the Project “Erasmus Empowering Climate Resilience/CARE”), with support from SARAS²

3.2. CAPACITY BUILDING

Seminars **“Instruments for Water Co-management: Tools from Network Methodologies”**

May 12th and August 11th, 2017

Location: SARAS² Institute

Dialogue of Artisanal Fisheries Adaptation for the National Adaptation Plan to Climate Change in the Agricultural Sector

13 de julio de 2017

Location: DINARA-MGAP (Montevideo)

The activity was co-organized with the Ministry of Livestock, Agriculture and Fisheries (abbreviated MGAP in Spanish) within the Project “Analysis of Vulnerability, Resilience and Adaptation to Climate Change in Uruguay’s Productive Sectors”

Course **“Cost-Benefit Analysis and Adaptation to Climate Change in the Agricultural Sector. Training for the ex-ante evaluation of policies”**

October 2 to 5, 2017

Location: Four Points Hotel (Montevideo)

The activity is co-organized with the MGAP, the Economy Institute (Instituto de Economía -IECON) of the School of Economic Sciences of the Udelar, and the Tropical Agricultural Center for Research and Teaching (Centro Agronómico Tropical de Investigación y Enseñanza CATIE, Costa Rica), within the project “Analysis of Vulnerability, Resilience and Adaptation to Climate Change in Uruguay’s Productive Sectors”

3.3. ACTIVITIES OPEN TO THE GENERAL PUBLIC

Presentation **“Knowledge management in environmental issues: What do we do with what we know?”**

Speaker: Néstor Mazzeo

June 15, 2017

Location: APROTUR (Piriápolis)

Co-organized with the Municipality of Piriápolis and other local organizations within the context of Junio Verde

Roundtable **“Climate Change and the Paris Agreement”**

Speakers: Daniel Ryan of the Technological Institute of Buenos Aires (ITBA), Alvaro Ramos of the IFAD MERCOSUR CLAEH Programme, and Ignacio Lorenzo of the National System of Response to Climate Change - Uruguay (SNRCC)

August 12, 2017

Location: CLAEH University (Maldonado)

Co-organized with the CLAEH University and the Liga de Fomento y Turismo of Punta del Este

Presentation **“Fishers’ Ecological Knowledge and Legal Framework for Artisanal Fishing in the Paraná River (Argentina)”**

Speaker: Trilce Castillo, University of Rosario (Argentina)

December 8, 2017

Location: SARAS² Institute

Co-organized with the Socio-Historical Regional Research Institute. Rosario, Argentina (ISHIR/UNR) and Group POPA – For Artisanal Fisheries in Piriápolis (Por la Pesca Artesanal en Piriápolis)



Workshop within the course "Collaborative Territorial Planning and Ecosystem Services".

3.4. OTHER INITIATIVES

Partners in the **"Program for the Certification of Enjoyable and Sustainable Educational Spaces"**
Pilot phase starts in 2018
Coordinated by the Ministry of Education and Culture



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4. CONFERENCES AND SEMINARS

4.1. ORGANIZATION OF EVENTS

“East Wind” First Public Colloquium-Debate on the Construction of the Territory in the East Region
September 14 to 16, 2017

Location: CURE and Azotea de Haedo (Maldonado)

Co-organized with the Territorial Studies Group, CURE

International Meeting of the Project “Spatial Planning for Protected Areas in Response to Climate Change”
September 25 to 27, 2017

Location: SARAS² Institute

Co-organized with the Catholic University of Chile

VII Cycle of SARAS² Public Conferences “Environmental Humanities for the 21st Century”

December 11, 2017

Location: Theater of “Casa de la Cultura” (Municipal Cultural Centre)

Workshop “Environmental Humanities for the 21st Century”

December 12 and 13, 2017

Location: SARAS² Institute



VII Public Conference SARAS² - Environmental Humanities for the 21st Century.

4.2. PARTICIPATION IN EVENTS

Congress **“Associated Writing Programs and Writers Convention”**

February 2017, Washington DC.

Participation of Virginia Lucas during the dissemination of the poetic anthology “Earth, Water and Sky”, edited by SARAS²

Congress **“Social Innovation 2030 - Building Sustainable Futures”**

May 2017, Santiago de Chile.

Project Presentation T-Lab led by Cristina Zurbriggen

Congress **“Resilience 2017”**

August 2017, Stockholm, Sweden.

Presentations:

- **“Cross-cutting perspectives on resilience”**

Néstor Mazzeo, Marten Scheffer, Francisco Gazitua, Angela Leible, Henrik Österblom

- **“Cascading effects of critical transitions in social-ecological systems”**

Juan Rocha

- **“Mapping Social Ecological Systems Archetypes”**

Juan Rocha, Katja Malmborg, Line Gordon

- **“Sustainability Science in Latin America: who is doing what?”**

Juan Rocha, Matías Piaggio, Néstor Mazzeo

- **“Reconciling Art and Science for Sustainability”**

Marten Scheffer, Laurie Beth Clarke, Carl Folke, Jesse Lee Kercheval, Néstor Mazzeo, Henrik Österblom, Frances Westley

- **“Resilience science, creativity and art in turbulent times”**

Tone Bjordam, Marten Scheffer, Brigitte Baptiste, Line Gordon

Colloquium **“East Wind” First Public Colloquium-Debate on the Construction of the Territory in the East Region**

September 2017, Maldonado.

Presentations:

- **“Territorial Planning Challenges in the Rehabilitation of the Laguna del Sauce”**

Néstor Mazzeo, Paula Bianchi, German Taveira, Ruben Puente, Manfred Steffen, Hugo Inda, Isabel Gadino, et al.

- **“Participatory Evaluation for Adaptive Governance of Social-Ecological Systems”**

Micaela Trimble, Ryan Plummer

- **“The Role of Experimental Labs in Territorial Transformations”**

Cristina Zurbriggen

Conference PECS II (Programme on Ecosystem Change and Society)

November 2017, Oaxaca.

Presentations:

• **“Hacking sustainable diets”**

Juan Rocha, Laurie Beth Clark, Michael Peterson, Frances Westley

• **“Experimental Transformation Lab for Sustainability: Science, Art and Policy”**

Cristina Zurbriggen, María Mancilla García, Mariana González Lago



Co-Director of Advisory Board Prof. Laurie Beth Clark preparing the event “Hacking sustainable diets”, Oaxaca, Mexico.

5. COOPERATION and NETWORKS

5.1. NATIONAL

Uruguayan Institutes with which SARAS² worked with in 2017:

- National Agency for Research and Innovation (ANII)
- National Water Directorate (DINAGUA) of the Ministry of Housing, Territorial Planning and Environment (MVOTMA)
- National Environmental Directorate (DINAMA – MVOTMA)
- National Directorate of Aquatic Resources (DINARA) of the Ministry of Livestock, Agriculture and Fisheries (MGAP)
- Office of Planning and Agricultural Policy (OPYPA – MGAP)
- Water and Sanitation Office (OSE-UGD)
- University of the Republic of Uruguay (Udelar): Regional University Center of the East (CURE), School of Sciences, School of Social Sciences, School of Economic Sciences (School of Engineering)
- Office of Environmental Education and National Network of Environmental Education for Sustainable Human Development (ReNEA – MEC)

5.2. LATIN AMERICA

Advances in cooperation with Latin American institutions:

- Formalization of the Regional Center for Climate Change and Decision Making through a UNITWIN network (UNESCO)
Members of the Center: Latin American School of Social Sciences (FLACSO), Post Graduate School - Technological Institute of Buenos Aires (ITBA), National Technological University (UTN), Environment and Natural Resources Foundation (FARN), Argentina; Energy and Environment Institute (Universidade de Sao Paulo – USP) and Getulio Vargas Foundation (FGV), Brazil; Center for Global Change, Catholic University of Chile and ADAPT Foundation, Chile; Moises Bertoni Foundation for the Conservation of Nature and the Catholic University of Asuncion, Paraguay; SARAS² Institute, the University of the Republic of Uruguay and the ORT University, Uruguay.
 - Participation in the national meeting of UNESCO Chairs of Uruguay
 - Meeting of the Executive Committee of Regional Center (December 2017).
- Signing of Agreement for Collaboration with Avina Foundation related to activities with the Regional Center for Climate Change and Decision Making and the UNITWIN Network.

- Signing of an Agreement with the Research and Development Program in Economics and Environment of the Tropical Agricultural Center of Research and Teaching (IDEA-CATIE, Costa Rica) within the Project “Analysis of vulnerability, resilience and climate change adaptation of Uruguay’s productive sectors”

Centers and Institutes that have shown Interest in Collaborating or Working with SARAS²:

- Chile: Millenium Institute of Ecology and Biodiversity
- Chile: Center for Climate and Resilience Science
- Colombia: University of Rosario. Visit of the Dean of the School of Natural Sciences and Mathematics in June 2017.
- México: Center for Global Change and Sustainability in Southeast Mexico

5.3. EUROPE

Advances in cooperation:

- Sweden

Visit of Swedish government delegation in May 2017.

Discussion on possible agreement between ANII and the University of Stockholm for PhD scholarships in Sweden or in *sandwich mode*

- Germany

Visit of Arnold Quadflieg, consultant sent by the Ministry of Environment, Germany. Activity organized by DINAMA-MVOTMA in August 2017.

Visit of German Corporation for International Cooperation (GIZ) in October 2017.

- France

Visit of the French Agricultural Research Center for International Development (CIRAD) in November 2017



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6. COMMUNICATION and DISSEMINATION

Online Communication:

- New SARAS² website was created containing news, project information, network, etc.
- A page for donations was added.
- Financial information was included in the About section.
- The new platform allowed SARAS² to include a Newsletter with external news, which is published quarterly and contains main headlines referred to the institute's activities.
- Since the implementation of the web platform, a database was generated for the dissemination of activities. It includes the emails of participants of courses, workshops, conferences, and webinars (online seminars), as well as members of the local community

The following webinars were carried out within the framework of the "Legacy of research and teaching in Latin America" project:

- "Research that Contributes to Climate Action in Latin America"
CDKN and SARAS² Institute- April 5, 2017
- "Integrating Climate Change and Decision Making to Training"
CDKN and SARAS² – May 31, 2017
- "Climate Change, Analysis Processes and Decision Making"
Regional Center for ClimateChange and Decision Making and SARAS² Institute, June 29, 2017



Workshop "Environmental Humanities for the 21st Century", SARAS² Institute headquarters, Bella Vista, Uruguay.



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