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Fostering art-science collaborations to tackle environmental challenges

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About the research

Creative engagements with environmental challenges are vital in breaking down the idea that nature is somehow external to humans. Art-science collaborations are an emerging field in Chile and they have the potential to generate new ideas in response to the climate and biodiversity crises. These collaborations enable shifts of perspective that can bring us into closer contact with the effects of climate breakdown and give urgency to the development of new practical solutions.

An international team of researchers, supported by Fundación Mar Adentro, undertook a mapping study of art-science collaborations in Chile, with a particular focus on projects that address ecological challenges. The team found many examples of effective and exciting practices in this field, as well as significant obstacles in terms of financial support and dissemination of outcomes. This report highlights ways in which public and private funders, in Chile and globally, can better support art-science collaborations and in turn help to more holistically address the climate crisis.

Policy implications

- There is a need for more interdisciplinary funding calls that move beyond institutional 'silos' and acknowledge art's potential to generate new thinking around environmental challenges.
- Funding bodies should streamline application and reporting processes to enable more diverse communities to engage with the process and access funding.
- Research and higher education institutions, as well as museums, libraries and cultural centres, should develop spaces and structures where scientists, humanities researchers, artists and others are able to network with the goal of creating new environmentally focused art-science projects. These new spaces and structures could also act as a means to improve public dissemination of project outcomes.
- Funders should make use of open, qualitative criteria when evaluating the success of environmentally focused art-science collaborations, acknowledging that the impacts produced by these projects are not necessarily visible in the short term or measurable by quantitative indicators.
- Researchers, artists and funders should look to engage more closely with the communities and territories where art-science collaborations are undertaken, in order to promote wider participation and knowledge diversification in educational and cultural institutions.

Image: Fernanda Oyarzún. Asociación íntima. Stoneware ceramics with Nacimiento clay, Colchagüe sand, lava from the Antuco volcano and Quilleco stones.

Photography by Sara Olivia Fuentes.

Key findings

- Environmentally focused art-science collaborations in Chile are undertaken by a wide range of different organisations and individuals. These include community associations, artisans, NGOs, and activist organisations, alongside researchers based in higher education institutions.
- The projects focus on a range of topics, and adopt diverse methodologies and structures. Funders should acknowledge and support particular areas of strength in work that explores eco-feminist ideas and perspectives inspired by indigenous thought, among other more experimental practices that currently lack recognition from funders and academic bodies. This work offers an alternative to dominant voices in discussions of environmental challenges, and can reach groups less likely to engage with traditional scientific communication strategies, such as indigenous communities.
- The nature of the application process and reporting requirements discourages applicants from proposing the most experimental and innovative ideas.
- Difficulties in obtaining funding within Chile sometimes lead the designers of art-science collaborations to seek financing from international institutions, such as the cultural arms of governments from the Global North. This often leads to a reduced dissemination of outcomes locally and nationally, since international funders sometimes prioritise international audiences.
- In Chile, projects that are interpreted as "artistic" are not eligible for funds intended for the sciences and the communication of scientific knowledge, while those considered more "scientific" are excluded from funding calls intended for the promotion of arts and culture. This means that applicants often spend a lot of time justifying the relevance of their work in terms that have little to do with the real aims of the projects.

"In Chile there are funds that appear, disappear, appear, disappear, so there is a lack of continuity in a place that unites all the people who are in this [art-ecology field]."

Patricia Domínguez, Chilean visual artist and founder of Studio Vegetalista, an ethnobotanical educational community and research platform

Image: Stoneware ceramics with Nacimiento clay, Colchagüe sand, lava from the Antuco volcano and Quilleco stones.

Photography by Sara Olivia Fuentes.

Case study

"Simbiosis: Mujeres creadoras de cordillera a mar" is a group of projects that brings together artists, scientific researchers and local communities to make visible the link between cultural and natural heritage in the coastal area of Chile's Biobío region.

Dharma Reyes (from the Universidad de Concepción and the NGO Conciencia Sur) is collaborating with local artisans to find new ways of monitoring the impact of pollution caused by heavy metals.

This project incorporates the needs and insights of the pottery communities of Nacimiento and Quinchamalí, formed by families that have passed down this trade over generations. Their trade is under threat due to the damage caused by industrial projects and the climate crisis in the places where they extract raw material for their work.

Civil society organisations and activists (ADDEP and Limpiemos CMPC), together with seven Chilean NGOs, are sampling sediments from nearby rivers and from the raw material in order to determine levels of contamination.

The project thus combines scientific techniques and artisan practice with local geographical knowledge in order to provide a more accurate view of the effects of pollution caused by heavy metal industries.

Turba Tol, the 'heart of the peatlands', in the Chilean Pavilion at the Venice Biennale 2022. Courtesy of Turba Tol and the Ministry of Cultures, Arts and Heritage of Chile © Ugo Carmeni

Methodology

This study was led by a team of researchers trained in social anthropology, art history, biology, ecology and science communication, who work in the areas of cultural and educational policy and management, environmental and arts education, scientific communication, and art-science curatorship and research.

In order to better understand the field of art-science collaborations at a regional and national level, the research team reviewed existing scholarship and looked into specific cases to create a map of actors, practices and experiences located at the intersection of the arts and environmental sciences in Chile.

This mapping was complemented by a questionnaire aimed at artists, curators and other cultural agents who work at the crossroads of the arts, crafts, ecology and environmental sciences, as well as in-depth interviews.

Case study

The Turba Tol Hol-Hol Tol installation – whose name means 'the heart of the peatlands' in the Selk'nam language – aims to draw attention to swamp ecosystems and serves as an example of how humans can be reintegrated with nature.

The installation integrates knowledge from the arts, sciences and indigenous communities. Camila Marambio, curator and founder of Ensayos Tierra del Fuego, began by integrating artists, humanists and social scientists from Chile and abroad into scientific research processes that were already being carried out in Karukinka Natural Park.

The team also convened an assembly bringing together international groups that fight for the protection of global peatlands, culminating in the signing of the Venice Agreement: Protecting Global Peatlands Locally on World Peatland Day, 2nd June 2022, a poetic declaration of the need to protect peatlands around the world. The agreement is a joint effort between Wildlife Conservation Society Chile, Ensayos, Griefswald Mire Centre and TBA21 Academy.

"We need more criticism from the sciences. Because if artists are wanting to influence science, which is at least what I want to do, I want to be influenced by science. So I want scientists to tell me when I've got it wrong!"

Camila Marambio,

Chilean curator of Ensayos Tierra del Fuego and Turba Tol Hol-Hol Tol Chilean Pavilion at the 569th Venice Biennale

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Further information

Corporación chilena de video - Bienal de Artes Mediales https://cchv.cl/bienal-de-artes-mediales-de-santiago/

Ensayos Tierra del Fuego https://ensayostierradelfuego.net/

Turba Tol Hol-Hol Tol https://turbatol.org

Bienal Concepción - Artes, ciencias y comunidad http://www.bienalconcepcion.cl/

Ignacio Acosta's project Traces of Nitrate https://tracesofnitrate.org

Patricia Dominguez's project Studio Vegetalista: https://www.studiovegetalista.com/teaching

Fundación Mar Adentro: https://fundacionmaradentro.cl

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