

# chaitén: land of volcanoes

Karen Holmberg, Andres Burbano, Constanza Gomez, Pierre Puentes, Javiera Letelier, Amy Donovan, Julie Morin, Rory Walshe & Thierry Dupradou - March 23, 2023

• geoheritage • geosciences • resilience • cultural heritage • archaeology • coastline • environment • environmental sciences • disaster • environmental change • crisis • rock art • excavation • regeneration • community memory

This pan.able visual essay traces both a coastline and timeline of northwestern Patagonia, which is part of a highly dynamic environmental region. Indigenous peoples who traversed its coast for millennia were witnesses to glacial retreat, dramatic sea level rise, and repeated volcanic eruptions amongst other landscape and climate changes. Permanent settlement of the area near the Chaitén volcano in Chilean Patagonia began only a century ago, when settlers from other areas (including Osorno, the Chiloe islands, and Argentina) built homes and developed a local culture based on industries that included fishing, boat making, basket making, textiles, livestock, and bee-keeping in a remote but thriving town.

In May 2008, the Chaitén volcano erupted, prompting one of the largest evacuations in modern Chilean history. Within two days, the human populations of Chaitén and nearby Futaleufú were relocated and dispersed in distant cities with little time to plan and no clear knowledge of the length of time they would be displaced. Farm animals, pets, family mementos, and the familiar landscapes of home were lost over the three years of exile that elapsed before resettlement was permitted. Even if it did not cause large-scale loss of human life, the eruption was still a deeply disruptive and traumatic event for residents.

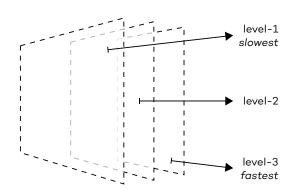
In the process of surveying a new site for the town of Chaitén, a cave complex filled with prehistoric rock art and shell middens was encountered in a distinctive landscape monument called the Vilcún. While the proposed new location for the town was rejected by townspeople, who fought to rebuild on the site of the old town, the cultural heritage represented by the Vilcún rock art caves and the geological heritage represented by the volcanic landscape are now contributing to the ongoing rebirth of the town.

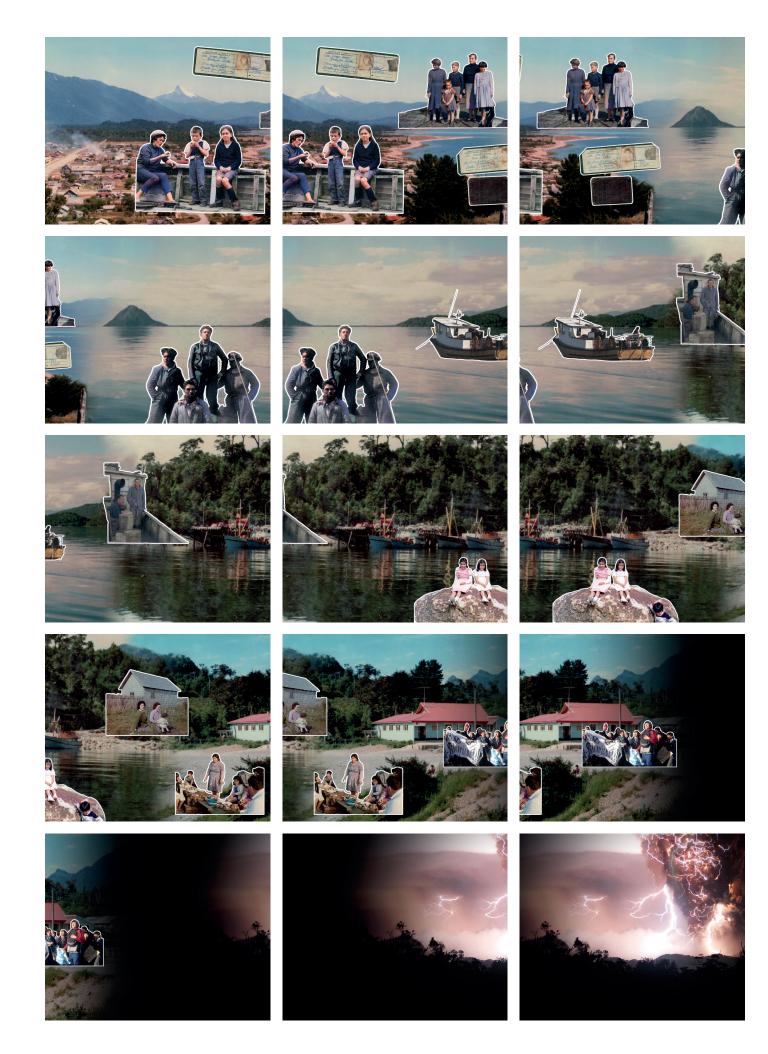
A new interpretive center in Chaitén was built in the midst of houses ruined by the eruption. Together, they are designed to serve as a nexus for community memory, tourism information, science communication and education, and art as part of a development strategy based on local heritage and educational outreach. This offers opportunities for academic and technical programs for local youth that did not exist prior and also conveys future risks and community resilience, through both material and textual media. This is part of a vibrant creative explosion inadvertently prompted by the volcanic eruption. Once the site of disaster, Chaitén is now a site of regeneration.

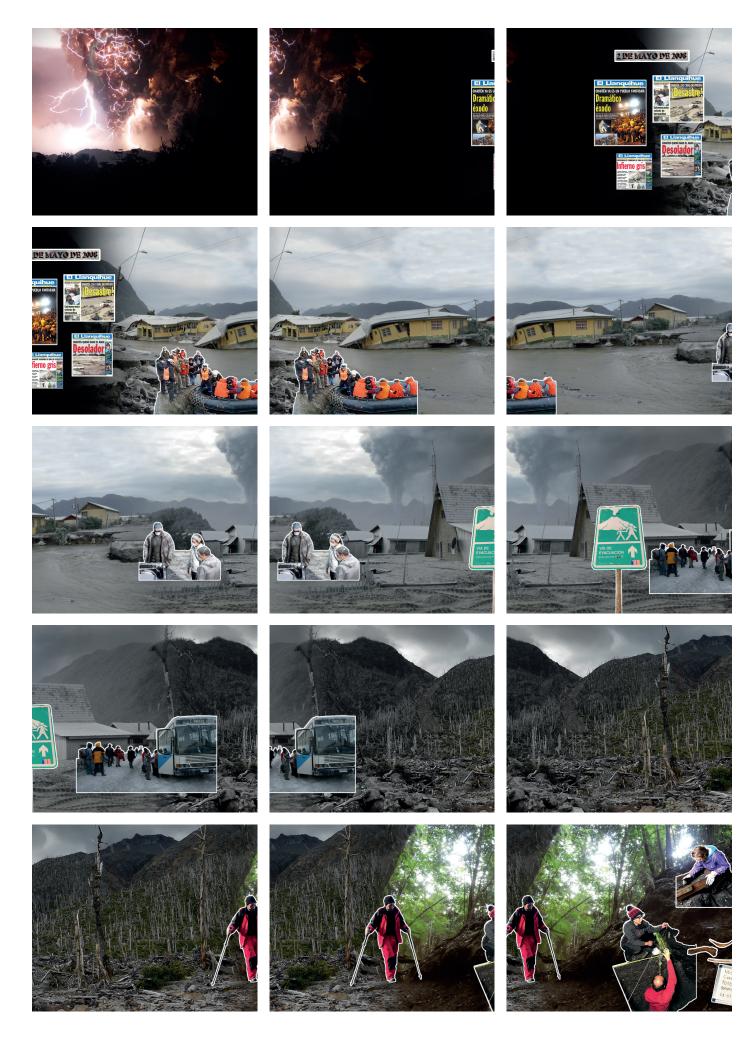
This contribution was published on <u>www.able-journal.org</u> in a pan.able format:

www.able-journal.org/chaiten-land-of-volcanoes

When the user scrolls, each image layer moves from left to right at different speeds giving an impression of depth in the page. The speed of each layer is defined by its width compared to the width of other layers: the wider the image, the faster it will move.





































## credits

graphic design: Pierre Puentes

editorial mediator: Karen Holmberg

authors:

Karen Holmberg, New York University

Andres Burbano, Universitat Oberta de Catalunya, Barcelona

Constanza Gomez, Fundación ProCultura

Pierre Puentes, independent designer

Javiera Letelier, Universidad Austral de Chile & Centro de Investigación en Ecosistemas de la Patagonia/CIEP

Amy Donovan, University of Cambridge

Julie Morin, University of Cambridge

Rory Walshe, University of Cambridge

Thierry Dupradou, independent photographer

**acknowledgment:** This project was made possible by the unflagging efforts of Constanza Gomez with ProCultura to assist the recovery of Chaitén and is dedicated to the Chaitén townspeople and their resilience.

**supported by:** The graphic design work for this submission was funded by the This is Not a Drill program directed by Mona Sloane through the Future Imagination Fund at NYU Tisch.

## about the authors

**Karen Holmberg** (PhD) is an archaeologist and volcanologist who focuses on creative responses in the past, present, and future to radically changing environments. She teaches at the interdisciplinary Gallatin School at New York University, where she is a Research Scientist and Scientific Director of an experimental art-science laboratory, the Gallatin WetLab.

https://gallatin.nyu.edu/people/faculty/kgh1.html https://wp.nyu.edu/gallatinwetlab/

**Andres Burbano** (PhD) is a media artist and scholar and is currently an Associate Professor in the Faculty of Arts and Humanities at Universitat Oberta de Catalunya in Barcelona, Spain. He holds a PhD in Media Arts and Technology from the University of California Santa Barbara and is visiting professor at the Danube University in Krems, Austria.

**Constanza Gomez** directs the southern regional operation for the Fundación ProCultura in Chile. ProCultura focuses on improving the well-being of Chilean communities by creating grassroot development strategies based on identity and cultural heritage. Her expertise is in social development and promoting self-management and productive development capacities in rural communities. She is also the founder and Director of the Museo de Sitio de Chaitén.

https://procultura.cl

https://instagram.com/museodesitio\_chaiten/?hl=es

**Pierre Puentes** is a designer in Bogotá who was trained at the Universidad de los Andes and is interested in interactive media, graphic design, and audiovisual production. He believes in curiosity as the best creative engine, which has allowed him to get involved in a wide range of fields including academic research, independent electronic music, multimedia artistic production, and agroecology.

**Javiera Letelier** (PhD) is an archaeologist and professor of the Archeology Unit of the Austral University of Chile and an affiliated researcher at the Centro de Investigación en Ecosistemas de la Patagonia (CIEP). Her research focuses on ethnohistory and pre-Hispanic and historical archaeology in Patagonia and central and northern Chile. She is also interested in contemporary archaeology.

**Amy Donovan** (PhD) is an interdisciplinary geographer and volcanologist in the Department of Geography, University of Cambridge. She has worked on geological politics, understanding intersections of knowledges around volcanoes, and early warning systems for disaster risk reduction.

**Julie Morin** (PhD) is a geographer working on disaster risk studies in volcanic, coastal, and small island environments. She sees her research as inherently transdisciplinary. She works with communities, scientists, and authorities on their perception of the environment and their vulnerabilities and capacities in order to find solutions for disaster risk reduction, including through audiovisual tools.

https://geog.cam.ac.uk/people/morin/ https://imaginingrisk.com/ https://uk.linkedin.com/in/julie-morin-345b5535

**Rory Walshe** (PhD) is a geographer and social scientist with expertise in disaster research, disaster risk reduction and particularly the role of local knowledge, culture and long-term processes in community vulnerability and resilience.

https://geog.cam.ac.uk/people/walshe/ https://twitter.com/RoryWalshe https://imaginingrisk.com/

**Thierry Dupradou** is a French photographer based in Chile. He considers his work to be an intense research journey to discover and share the heritage of Patagonia. From a documentary perspective, he focuses on natural and cultural heritage and scientific work. From an artistic perspective, inspired by Patagonia, he continuously explores elements of composition, angles, tone, and contrast and is drawn especially to texture, shape, and volume.

https://facebook.com/thierrydupradouediciones?mibextid=ZbWKwL



# rights and references

### illustration rights and references

Copyrights 2023 by the authors. Reproduced with permission.

#### bibliography and references

Borrero, Luis A., Amalia Nuevo Delaunay, and César Méndez. 2019. "Ethnographical and historical accounts for understanding the exploration of new lands: The case of Central Western Patagonia, Southernmost South America." *Journal of Anthropological Archaeology* 54: 1-16, doi: https://doi.org/10.1016/j.jaa.2019.02.001.

Carn, S., J. Pallister, L. Lara, J. Ewart, S. Watt, A. Prata, R. Thomas, and G. Villarosa. 2009. "The unexpected awakening of Chaitén volcano, Chile." *Eos Transactions American Geophysical Union* 90 (24): 205-206, doi:10.1029/2009E0240001.

Fuentes Pino, Anita, and Ana Maria Ugarte Caviedes. 2015. *Re-Creando Chaitén en Comunidad*. Santiago: Mavel, S.A. García Morabito, Ezequiel, Alejandro Beltrán-Triviño, Carla M. Terrizzano, Florencia Bechis, Jeremías Likerman, Albrecht Von Quadt, and Víctor A. Ramos. 2021. "The Influence of Climate on the Dynamics of Mountain Building Within the Northern Patagonian Andes." Tectonics 40 (2): e2020TC006374. doi: https://doi.org/10.1029/2020TC006374.

Holmberg, Karen. 2020. "Landing on the terrestrial volcano." In *Critical Zones: The Science and Politics of Landing on Earth*, edited by Bruno Latour and Peter Weibel, 56–57. Cambridge, MA: MIT Press.

Jara, Ignacio A., Patricio I. Moreno, Brent V. Alloway, and Rewi M. Newnham. 2019. "A 15,400-year long record of vegetation, fire-regime, and climate changes from the northern Patagonian Andes." *Quaternary Science Reviews* 226: 106005, doi: https://doi.org/10.1016/j.quascirev.2019.10 Museo de Sitio de Chaitén. Chaíten, Chile. https://www.instagram.com/museodesitio\_ chaiten/?igshid=NTdlMDg3MTY%3D

ProCultura. 2018. Chaiten: Inventario de Inmuebles Patrimoniales. Edited by Constanza Gómez. Santiago: Andros Impresores.

ProCultura. 2018. *Patagonia Verde*. Edited by Constanza Gómez. Santiago: Andros Impresores.

Reyes, Omar, Carolina Belmar, Manuel San Romàn, Flavia Morello, and Ximena Urbina. 2020. "Avances en la secuencia cronologica del mar interior de Chiloe, Patagonia Occidental: Sitios arqueologicos San Juan 1, Tauco 1 y 2." Magallania (Chile) 48, no. 1: 173-184.

# to cite this article

Holmberg, Karen, Andres Burbano, Constanza Gomez, Javiera Letelier, Amy Donovan, Julie Morin, Rory Walshe, Pierre Puentes, and Thierry Dupradou. 2023. "Chaitén: Land of Volcanoes."

.able journal. https://able-journal.org/chaiten-land-of-volcanoes.

MLA EN Holmberg, Karen, et al. "Chaitén: Land of Volcanoes." .able journal, 2023. https://able-journal.org/chaiten-land-of-volcanoes

ISO 690 EN HOLMBERG, Karen, et al. Chaitén: Land of Volcanoes. .able journal [online]. 2023. Available from: https://able-journal.org/chaiten-land-of-volcanoes

APA EN Holmberg, K., Burbano, A., Gomez, C., Letelier, J., Donovan, A., Morin, J., Walshe, R., Puentes, P., and Dupradou, T. (2023). Chaitén: Land of Volcanoes. *able journal*. https://able-journal.org/chaiten-land-of-volcanoes