

## Case Study

## Florestania

Reparation Ecologies  
in Post-extractive  
Landscapes

Galicia is a territory that has historically been shaped by extractive industries. Mining has been present in the region since Roman times and subsequently expanded during the 20th-century industrialization. Together with forestry monocultures, these processes have turned the region into a site of vulnerability in the face of climate change. Nevertheless, amid poisoned soils and eucalyptus forests scorched by fire, communal practices of land care persist, resisting, repairing and reimagining ways of inhabiting the earth. That is the case of Monte Veciñal en Man Común, a rural form of ownership where the forest is shared equally by the neighbors of the community, as well as the responsibility towards it. At the same time, technologies such as phytoremediation explore ways to heal the scars of industrial exploitation in Galicia through the transformative capacity of certain plants.

This case study takes inspiration from the Amazonian concept of Florestania —“forest citizenship”— to propose a critical framework where the political and the ecological intertwine, exploring how plants, forests, and waters act as agents of repair, memory, and environmental justice, and how aesthetics can amplify processes of territorial reimagination.

[Introductory video →](#)**Pulso:** Paulo Tavares**Facilitating entities:** Centro de Arte Fundación María José Jove**In collaboration with:** Fundación RIA and Fundación Montescola

## 02 Case Study conceptualization

Part of the historic mining regions of Europe since the Roman times, the territories of Galicia have been historically shaped by extractive industries<sup>1</sup>. In the context of the Second World War, Galicia became a key site in the provision of minerals essential to fabricate military armory, such as tungsten.<sup>2</sup> During the Francoist dictatorial regime (1939–1975), extractive territories further expanded with the implementation of monoculture forestry and the consequent hydric exploitation that has continued to this day.

Over the years, the intensification of extraction both below and above ground has made the region of Galicia a polluted environment, generating a fractured ecology that is highly vulnerable to the effects of climate change. Moreover, in recent years, many of the ruined landscapes of abandoned mines in Galicia have been brought back to life. Meanwhile, new prospects for mining minerals essential to the new digital economy, such as lithium and rare earths minerals, are currently being developed in the region.<sup>3</sup>

In parallel, Galicia also nurtures a long and deep history of ecological practices rooted in ancient systems of communal land, water and forests stewardship. That is the case of *Monte Veciñal en Man Común*, a form of organization in which the ownership of the forest is shared equally by the neighbors who are part of the community.<sup>4</sup>

Despite the disruptive effects of the aforementioned extractive industries, such forms of community-based land management systems have resisted and survived, preserving forms of knowledge and practices of care for the land that proved to be resilient to the extreme events of climate change that affect the region. In the context of consecutive years experiencing the worst wildfires seen in the northwestern region of the Iberian Peninsula<sup>5</sup>, Galician communal woodlands with active neighborhood management are among the least impacted, attesting to the environmental soundness and ecological resilience of ancestral modes of planning and managing the territory.<sup>6</sup>

Classified as degraded or unproductive, the landscapes of extraction can equally become sites of territorial reparation where, together with vernacular systems of land stewardship — such as traditional harvesting, silvopasture, controlled burnings, reforestation with native species, or the more recent “anti-eucalyptus brigades,”— novel practices of plant-based phytoremediation strategies for environmental restoration can be explored.

This case study dwells in the post-extractive landscapes of Galicia to explore how natural systems, chiefly plants and forests, but also land and water, can be mobilized as tools of ecological reparation and climate resilience, while at the same time functioning as political agents within forms of civic organization, participatory governance, and earth justice. From ancestral local practices to the futuristic techno-scientific designs of plant remediation, what are the strategies of environmental regeneration that are being implemented, who are the agents in that process, and to what end are they being deployed? In researching the politics and aesthetics of ecological reparation, we ask how strategies of environmental restoration intersect with social memory, cultural practices, land rights, and public policies, how histories of violence and rights violations associated with extractive industries bear an effect on environmental degradation, pollution, and climate change, and how the protection of human and non-human rights is intrinsically associated with environmental restoration and resilience.

1. CSIC Delegación en Galicia. 'Un proyecto del CSIC estudia cómo la minería del oro en la Hispania romana transformó el paisaje' (Feb 24, 2022). - link

2. Joan María Thomàs. 'El wolframio: de cuando Galicia era un Nera West' Universidad Rovira i Virgili (2022). - link

3. Minería Sostenible de Galicia. 'Galicia posee reservas de tierras raras, vitales para la sociedad' (Mar 16, 2020). - link

4. Montes Veciñais en Man Común (MVMC)—which translates in English as “Neighborhood Mountain in Common Hand.”—cover some 650,000 hectares, approximately 25% of Galicia's forest area, and represent one of the most significant forms of collective ownership in Europe. - Xunta de Galicia. Montes vecinales en man común (2024). - link

5. 'Los últimos datos de Copernicus sitúan a Galicia como la

comunidad con más hectáreas quemadas en agosto, 143.628' in Europa Press Galicia (Sept 5, 2025). - link

6. Diego Cidrás, and Rubén Camilo Lois González. 'Prevención de incendios desde lo comunal: Una mirada hacia los Montes Veciñais en Man Común' in Gobernanza, comunidades sostenibles y espacios portuarios (Universidade de Santiago de Compostela, 2023), pp. 997- 1012. - link



01. Froxán, Galicia. © Fundación RIA  
02. Effects of wildfire in Galicia. Credit: Alberto Carballido.  
03. Effects of wildfire in Galicia. Credit: Alberto Carballido.  
04. Mina de Monte Neme. Image: Jglamela - Own work, CC BY-SA 4.0.  
05. Eucalyptus. Credit: Alberto Carballido.  
06. Brigadas Deseucaliptizadoras. © Fundación Montescola.

07. Brigadas Deseucaliptizadoras. © Fundación Montescola.  
08. Bornmuella emarginata, hyperaccumulator plant. Credit: Andrea Cerdeira  
09. XXX  
10. Converging grassroots struggles. Photograph of one of the famous empates, i.e. stand-offs against loggers conducted by the rubber tappers movement in Acre, Brazilian Amazon, circa 1982.

## 03 | Key research approaches

### Environmental Reparation as Territorial Rewriting

- Long after activity has ceased, soil and water persist saturated with the chemical pollution of extraction, carrying the slow environmental violence of heavy metals, tailings, and sludge that affect future generations. The case study aims to decode how practices of environmental restoration function as vectors for the reconfiguration of the cultural, legal and political meaning of nature, reorganizing the terms under which land is managed, valued, shared and legislated. How are such practices often caught in between ecological repair and regimes of greenwashing? What forms of violence and rights violations does the emerging industry of environmental remediation produce? On the other hand, how do social practices of environmental care and repair enact new political-ecological imaginaries responding to the climate crisis?

### Ruined Landscapes as Living Archives

- Polluted or degraded land can be interpreted as repositories of social and political memories. Thus, cultural narratives and forensic architecture methodologies can help interpret records and visualize memories to make these territories testify to forms of nature exploitation and (human and environmental) rights violations. What does it mean to remediate a place without forgetting its social and political history?

### Bio-poetics of Forests and Soil

- The case study proposes to delve into the aesthetic, affective, and speculative dimensions of vegetal life in degraded territories: how trees, leaves, roots, fungi, and microbial ecologies become narrative agents in stories of recovery, resistance, and reworlding? How do plants operate as sensitive agents of not only environmental but also historic reparations?

### How Forests Think

- Departing from the learnings of the book by Eduardo Kohn *How Forests Think: Toward an Anthropology Beyond the Human* (2013), the proposal is to attune to the networked intelligence of forest landscapes and vegetal life, and learn from them to devise new epistemic, visual and political imaginaries in the face of global climate change.

### The Future is Ancestral

- Learning from rooted ecological practices that shape territories is paramount in order to identify forms of knowledge and social technologies that present alternative routes to deal with the climate crisis beyond green capitalism. What are the social, cultural, economic and political infrastructures that are necessary for such forms of environmentally-sound practices to be enacted, maintained, learned and transmitted from the local to the global?

### Towards “Forest Citizenship”, Florestania:

- Florestania is a concept that emerged from the struggles of forest peoples in the Brazilian Amazonia in the 1970s and 1980s, when the country was under a military dictatorship that promoted large-scale deforestation in the region. Championed by environmental activists such as Chico Mendes and the Indigenous leader Ailton Krenak, the term is a neologism that results from the combination of the words floresta and cidadania, translating into “forest-citizenship,” that expresses an integrated vision of ecology that associates the environment with rights and politics. This case study aims to prototype cultural narratives, political protocols, and advocacy strategies that engage local communities and cultural institutions, connecting situated histories and ancestral knowledge with contemporary forms of visual representation, ecological reparation, and environmental justice.

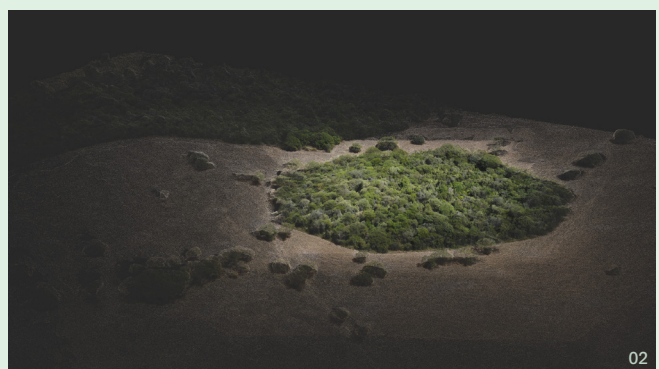
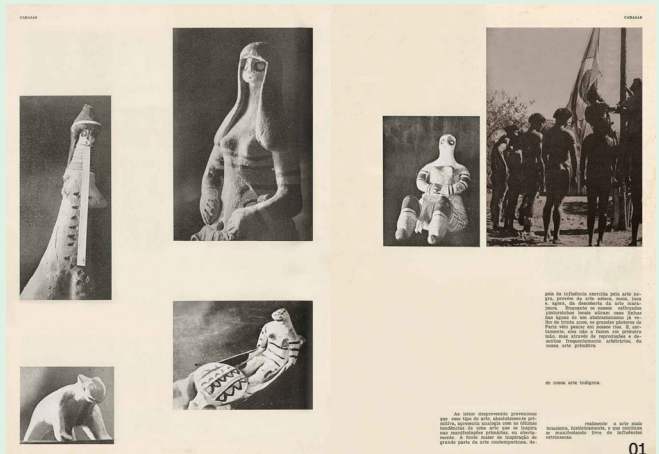
## 04 | Pulso



### Paulo Tavares

→ is an architect, author, and educator. His practice dwells at the frontiers between architecture, visual cultures and advocacy. Operating through multiple media, Tavares's projects have been featured in various exhibitions and publications worldwide, including Oslo Architecture Triennial, Istanbul Design Biennale, São Paulo Art Biennial, and the Venice Architecture Biennale 2023. He is the author of books questioning the colonial legacies of modernity, including *Des-Habitat* (2019), *Lucio Costa era Racista?* (2022), and *Derechos No-Humanos* (2022). He was co-curator of the 2019 Chicago Architecture Biennial, and the curatorial project *Terra* was awarded the Golden Lion for best national participation at La Biennale di Venecia 2023. Tavares teaches at the University of Brasilia and leads the spatial advocacy agency *autônoma*.

[www.paulotavares.net](http://www.paulotavares.net) →



01. Paulo Tavares, *Des-Habitat*, commissioned for Bauhaus Imaginista, published by K. Verlag, p.04, 2019.  
02. Paulo Tavares, *Abertura (Trilogía de la Tierra)*, still, 2014.  
03. Paulo Tavares, *Trees, Vines, Palms and Other Architectural Monuments* (2013 – ongoing).

## 05 Facilitating entities

### Centro de Arte Fundación María José Jove

→ Centro de Arte Fundación María José Jove promotes social development by sharing art in all its complexity and diversity. Through research, production, and dissemination processes connected to the territory, the foundation develops site-specific projects that are structured around different thematic axes, fostering their interrelation and continuity. Within this framework, special attention is given to topics such as architecture, bioconnectivity, the environment, landscape, heritage, rural areas, and sustainability. All of these are approached

from an integrative perspective, in dialogue with art, to activate processes of reflection and shared action that strengthen the bond between culture and society. With Galicia as its epicenter, the curatorial project responds to the logic of historical interaction among the countries of the Atlantic axis, mainly between our community, Portugal, and Latin America. This framework of thought addresses global contemporary issues from local perspectives, facilitating interdisciplinary collaborations and the creation of new cultural cooperation networks.

[centrodearte.fmjj.org](http://centrodearte.fmjj.org) →

### In collaboration with:

#### Fundación RIA

→ Created by the architect David Chipperfield in 2017, the Fundación RIA is an independent non-profit agency, a think tank working for the long-term sustainability of the built and natural environment of Galicia. The Fundación RIA focuses on the development of interdisciplinary studies, pilot projects, and strategic territorial planning, connecting global challenges with specific contexts. It is based on close collaboration with local communities, administrations, economic sectors, and academic institutions in the region, bringing together international and local knowledge. Its ambition is to gain a deeper

understanding of the factors that contribute to quality of life beyond conventional economic indicators such as GDP. Building links between public and private actors is essential to repairing the relationship between the built and natural environments. In this sense, Galicia can become a European benchmark for sustainable development. By focusing on the quality of the built environment, the foundation embraces a broader context, considering both the forces that shape what is built and those who are affected by it.

[fundacionria.org](http://fundacionria.org) →

#### Fundación Montescola

→ Fundación Montescola is a non-profit and public-interest entity, focused on environmental protection, the defense of human rights, and the promotion of the social economy. Created in 2018, it works actively in the fields of community conservation and restoration, environmental education, and litigation in defense of

the territory. It is headquartered in Froxán (Lousame), an area recognized in 2017 as an Indigenous Peoples' and Community Conserved Area (ICCA) by the United Nations Environment Programme. Among other projects, it is involved in the Barbanza Ecosocial Laboratory and the Iberian Mining Observatory.

[instagram.com/montescola/](https://www.instagram.com/montescola/) →

## 06 Guest experts

Some of the voices informing this case study, among others, are:



### Marina Otero Verzier

→ is an architect and researcher. She is a Lecturer in Architecture at Harvard GSD and leads Data Mourning at Columbia GSAPP, an initiative focused on digital infrastructures and climate catastrophe. She received Harvard's 2022 Wheelwright Prize for her project on the future of data storage and collaborates with scientific institutions such as the DIPC Supercomputing Center on prototypes like Computational Compost. She also contributed to Chile's first National Data Centers Plan, working alongside "Resistencia SocioAmbiental – Quilicura" and other local communities on the front lines of extractivism. Otero is the author of *En las Profundidades de la Nube* (2024), which proposes new paradigms and aesthetics for data storage by integrating architecture, preservation, and digital culture. She has also explored the lithium-rich springs of Galicia and northern Portugal and their historic thermal architectures, a culture now endangered by mining projects in the region. Her latest book, *Flotando en Litio* (2025), interweaves architecture, ecology, political economy, and body cultures, and pays tribute to those defending soil and water against extractivism.



## Imani Jacqueline Brown

- is an artist, activist, writer, and architectural researcher raised in New Orleans and currently based in London. Her work investigates the “continuum of extractivism,” which spans from settler-colonial genocide and slavery to fossil fuel production and climate change. In exposing the layers of violence and resistance that form the foundations of settler-colonial society, she opens space to imagine paths to ecological reparations. Imani's practice combines photography and videography, archival research, ecological philosophy, legal theory, peoples' and oral history, remote sensing, and counter-cartography. These strategies disentangle the spatial logics that make geographies, unmake communities, and break Earth's geology.

[imanijacquelinebrown.net](http://imanijacquelinebrown.net) →



## Joám Evans Pim

- is a *comunero* (commoner) in the Monte Vecinal en Mano Común de Froxán (Lousame), which, since 2017, has been recognized by the United Nations Environment Programme as one of the Indigenous and Community Conserved Areas (ICCAs). Together with the Fundación Montescola, where he serves as director, he promotes community conservation and restoration initiatives as well as the monitoring of malpractice in the extractive sector through the Iberian Mining Observatory (MINOB). He is an Adjunct Professor of Peace and Conflict Studies at Åbo Akademi University (Finland), where he teaches, among other subjects, “Extractivist Violence and Environmental Justice.” He has produced numerous reports focusing on extractivism, its consequences, and alternatives.



## Andrea Cerdeira Pérez.

- Graduated in Biology (2014), Master in Biotechnology (2016), and PhD in Environment and Natural Resources (2022) from the University of Santiago de Compostela (USC). Her research career has focused on the study of bacteria-plant interactions for the remediation of soils contaminated with organic compounds and trace elements, as well as on the development of phytomining aimed at the sustainable extraction of economically valuable metals and the restoration of the structure and functions (bio-rehabilitation) of soils affected by mining activities. Her work has therefore been multidisciplinary, spanning Plant Ecophysiology, Soil Biochemistry, and Environmental Microbiology.

## 07 | Expanded study materials

- Anna L. Tsing, Jennifer Deger, Alder Keleman Saxena and Feifei Zhou, *Feral Atlas* ([web](#))
- Donna Haraway and Anna Tsing, ‘Reflections on the Plantationocene: A Conversation with Donna Haraway and Anna Tsing’ in *Edge Effects Magazine* (June 18, 2019). - [link](#)
- Emmanuel Coccia, *How to make cities with plants*, HDS Center for the Study of World Religions (Youtube, 2025). - [link](#)
- Louis Volont, ‘Who steals the goose from off the common? An interview with Peter Linebaugh’ in *Commonism: A new aesthetics of the real* (2019) pp.315-327. - [link](#)
- maat Climate Collective: T. J. Demos, Molemo Moiloa, Susan Schuppli, and Paulo Tavares, ‘Climate Emergency > Emergence’ in *Maat Extended* (April 17, 2021). - [link](#)
- Malcom Ferdinand, *Facing the colonial toxicity of the world*, The Cooper Union Intra Disciplinary Seminars (Youtube, 2021). - [link](#)
- Olúfémi O. Táíwò, ‘Climate Reparations’ in *Maat Extended* (June 29, 2021). - [link](#)
- Richard Fisher, ‘The Unseen Slow Violence’ that Affect Millions in *BBC* (Feb 1 2021). - [link](#)
- T.J. Demos, ‘An Interview with T.J. Demos. Climate Breakdown and Capitalism’ in *CINAM* (Sept 30, 2021). - [link](#)
- T.J. Demos, ‘The Role of Art in Environmental Activism’ in *International Public Policy Review* (May 30, 2023). - [link](#)
- Theo Jean Cuthand, *Reclamations* (2018). - [link](#)

## 07 Expanded study materials #02

visit [are.na Florestania](#) →

→ Arturo Escobar. 'Farewell to Development:

An interview with Arturo Escobar' in *Local Futures* (2018). [link](#)

"Recognizing this opens possibilities for new thinking based on alternative notions of human and ecological well-being. One such alternative is Buen Vivir, which, with its roots in indigenous cultures, has influenced social movements and politics in Latin America. What do you see as the essence of Buen Vivir? Buen Vivir, in a literal sense, means good life or good living. It stresses living in ways that promote the collective well-being of both humans and nature. Eduardo Gudynas, Maristela Svampa, Alberto Acosta, and Pablo Solón are leading voices on Buen Vivir. The concept originated in the Andes, especially Ecuador and Bolivia, but also in Peru and Colombia. With a firm footing in the worldviews of indigenous peoples, Buen Vivir embraces the inseparability and interdependence of humans and nature. In the current development debates, Buen Vivir has informed critiques of the prevailing development model, confronting basic assumptions about progress, competition, consumerism, and materialism. It rejects anthropocentrism and critiques capitalist and socialist forms of development because both, albeit in different ways and to different degrees, are destructive of both humans and ecological systems. The ethos of *Buen Vivir* centers on fostering harmony between humans and nature, quality of life, and conviviality."

→ Rob Nixon, *Slow Violence and The Environmentalism of the Poor*

(Harvard University Press, 2023). [link](#)

"(W)e urgently need to rethink—politically, imaginatively, and theoretically—what I call "slow violence." By slow violence I mean a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all. Violence is customarily conceived as an event or action that is immediate in time, explosive and spectacular in space, and as erupting into instant sensational visibility. We need, I believe, to engage a different kind of violence, a violence that is neither spectacular nor instantaneous, but rather incremental and accretive, its calamitous repercussions playing out across a range of temporal scales. In so doing, we also need to engage the representational, narrative, and strategic challenges posed by the relative invisibility of slow violence."

→ Paulo Tavares, 'In the Forest Ruins'

in *e-flux architecture* (Dec 2016). [link](#)

"As design becomes such a widespread concept as to be rendered virtually meaningless, the way design is conceptualized has never been so politically consequential. The roots of the human-engineered ecological catastrophe towards which we are moving are deeply connected to the modes by which the relations between design, the human and nature have been conceived and operated in modernity. Anthropogenic global climate change make us realize that design is always the design of the Earth, of life itself, but there are different ways of articulating the novelty this represents. The concept of the Anthropocene is so hype in the field of design because it denotes that the whole planet, in the totality of its geophysical processes, has turned into design's ultimate object of mastery. The living ruins of Amazonia tell a different, dissident story, suggesting an image of design that is less about planning and more about planting the planet, inasmuch as planting is also a practice of planning and design, but one that needs to be fine-tuned to the agency of winds, climates and the myriad of beings upon which the seeding and pollination of life depends. Beings as vital to humans as bees, and at a moment in which the ecocidal designs of late modernity are driving bees to extinction, let be the bees, and not man, draw the concept of design with which we can make life a possible project amidst the ruins of the age of humans."