

## Biocultural resistance and re-existence through a dialogue of knowledges and citizen art in a threatened biosphere reserve

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### Abstract

Biosphere Reserves face huge challenges worldwide, especially those located in metropolitan areas such as La Campana-Peñuelas Biosphere Reserve in central Chile. As well as direct threats, such as urban sprawl and wildfires, such reserves face a less evident threat in the form of weak community engagement and awareness of the value, opportunities and challenges that the name *biosphere reserve* offers. Since 2015, environmental conflicts have intensified in this area of Chile, and counter-movements towards re-territorialization have arisen under the slogan “*We are biosphere reserve*”. This implies a deep understanding of the imbrications of the lives of humans and more-than-humans in a common territory which face common challenges with regard to the preservation of life and regenerative actions and pathways. In Chile, this local social/political/spiritual movement now converges with a national movement towards recovering sovereignty over common goods through a new Constitution. In this article, we describe a fruitful academia-community dialogue of knowledges created through a series of open-access courses, collaborative mapping, and artistic initiatives developed by citizens, such as textile-making and handcrafts using natural pigments. All of these initiatives come together within the framework of very local geopolitical actions for the preservation of the biocultural landscapes found within the biosphere reserve. We discuss these initiatives as forms of biocultural resistance and *re-existence*.

### Profile

Protected area

La Campana-

Peñuelas Biosphere

Reserve

Mountain range

Andes

Country

Chile

### Introduction

As we approach the 50<sup>th</sup> anniversary of UNESCO’s Man and the Biosphere programme (MAB), a biocultural paradigm has emerged as one of the main shifts in the recent evolution of biosphere reserves (United Nations 2010; Merçon et al. 2019; Reed & Price 2020). This turn means that biosphere reserves (BRs) have “*evolved from a main focus on conservation and natural science toward a transdisciplinary endeavour that aspires to promote local participation and inclusiveness*” (Hanspach 2020, p. 2). BRs are now moving towards “*community-based research, action research, and transdisciplinarity*” (Reed & Price 2020, p. 322). In this context, the notion of biocultural diversity associated with BRs emphasizes “*the interdependence between biological and cultural diversity, indicating how significant ensembles of biological diversity are managed, conserved and created by different cultural groups*” (Merçon et al. 2019, p. 1). In the context of the Anthropocene, with biological and cultural diversity threatened by human modes of production and their impact on the Earth, it is essential to promote actions, knowledge and new forms of governance that contribute towards the generation of alternative ways for humans to relate to the ecosystems they inhabit. Taking into account the multiplicity of knowledges and values originating from diverse human communities in relation to their environments is fundamental in this regard (United Nations 2010).

This turn towards a biocultural paradigm for the understanding and management of BRs implies finding new types of human-nature relationships that promote relevant dialogues and behaviours, moving from vertical and centralized management models focused on ecological conservation, towards more effective and affective governance. To develop a kind of governance that is coherent with the development model proposed by UNESCO for BRs, dialogue between different organizations needs to be increased, and networks that secure governance in the long term need to be created (Schultz et al. 2019). By *affective governance* we are referring to the active engagement of communities in conservation, integrating their social practices, specific forms of knowledge and representations of nature and development (Leff 2006; Giraldo & Toro 2020), promoting a *dialogue of knowledges* (Escobar 2011) between diverse social actors, humans and more-than-humans, moving the focus from institutions, and creating and making visible new and multiple perspectives. At a local level, however, this endeavour constitutes a huge challenge, particularly for peri-urban and urban BRs (de la Vega-Leinert et al. 2012).

Aiming to advance in this direction, citizen science as a trend has become increasingly relevant in BRs (Mckinley et al. 2017; Couvet & Prevot 2015), while participatory governance has been widely explored and



Figure 1 – Aspects of communities' active engagement in environmental demonstrations and open-access courses under the slogan "We are biosphere reserve". © A. Moreira-Muñoz

promoted to help improve the legitimacy and re-territorialization of BRs (Price 2017). However, the potential of artistic initiatives in the context of so-called creative geographies and GeoHumanities has been overlooked in this regard (Marks et al. 2017). This is, nonetheless, a crucial aspect of *"staying with the trouble"* (Haraway 2016) or *"living in a damaged planet"* (Tsing et al. 2017) in the context of BRs, or of moving away from a perspective of biocultural diversity towards one of biocultural resistance. Grass-roots resistance initiatives have been defined as *"alternative counter-hegemonic and emancipatory proposals to the global process of ecological and social deterioration that prevails in much of the planet"* (Toledo & Ortiz-Espejel 2014, p. 7). Here, however, we follow Porto-Gonçalves's (2009) notion of *"territorial re-existence"* to make sense of the practices we examine. The idea of *re-existence* emerges as an alternative for practices that are usually understood as resistance; it conveys a sense of creativeness and of the sovereignty of the actions of communities that go beyond resisting extractivist, exploitative capitalist practices, towards the generation of local people's own ways of living and doing. In this view: *"rather than resistance, which implies a reaction triggered by a previous action and so on, [...] we have re-existence. That is, a way of existing, or a certain rationality matrix that acts, even re-acts, in a particular context and according to a particular topos – in a specific time and place, geographical as well as epistemic."* (Porto Gonçalves 2006, p. 165, quoted in Paz 2014, p. 1; own translation).

From a biocultural resistance and re-existence perspective, in this contribution we present and discuss three interrelated initiatives, developed in the context of La Campana-Peñuelas BR (CPBR) in Chile. They exemplify possibilities for developing a biocultural perspective in relation to BRs, with an emphasis on the dialogue of knowledges and on artistic interventions. First, we introduce the results of several courses run in and on BRs, organized by the Biogeoart project ([www.biogeoart.cl](http://www.biogeoart.cl)). Next, we present one of the activities that emerged from these courses – an online participative project mapping environmental conflicts and conservation practices in and around the CPBR. Finally, we discuss one artistic-environmental grass-roots initiative that was identified through the participative mapping project. We present these various projects as examples of dialogues between multiple actors and diverse forms of knowledge and practice

focused on the interdependent aspects of BRs; we also see them as forms of resistance in the context of the environmental tensions faced by local communities in the Anthropocene, specifically in Chile.

### **We are biosphere reserve: co-creative learning between the community and academia in biosphere reserves**

Aiming to strengthen the link between academia and the community, we designed a series of open-access courses on BRs, in which basic concepts of conservation and regenerative development are addressed, in addition to issues specific to individual BR territories. The design of the courses was inspired by environmental education programmes that had been constructed jointly by academics and the community (Cerdeira & Bidegain 2018). Community participation is essential for the management of BRs from a biocultural perspective (Merçon et al. 2019; Stoll-Kleemann et al. 2010). The courses were thought of as a space for dialogue, and therefore as a space that would promote horizontal relationships. As organizers and facilitators, we learned from participants' original and alternative points of view in relation to the difficulties of understanding the concept of the BR and of experiencing it directly. The participants named the courses and the craft initiative that emerged from them *"We are biosphere reserve"* (Figure 1). Their involvement showed a path for transitioning from a disciplinary perspective towards one based on scientific research and transdisciplinary actions (see Sarmiento & Frolich 2020).

The BRs courses encompass aspects of history, environmental values and threats, management tools, public actors, communities, and so on, drawing on our experiences in Chilean BRs and specifically in CPBR (Manríquez et al. 2019). They also expand reflection on the meaning of a BR in the transition towards sustainability, and the manifold aspects of the preservation of the biocultural landscape (Hong et al. 2014). One of the main dimensions of the courses has been the co-construction of a positive vision of the future of BRs. Drawing on the concepts of permaculture and the transition movement, participants envisioned the *"probable, possible and preferable"* (Pot 2019) futures in the transition of BRs towards sustainability.

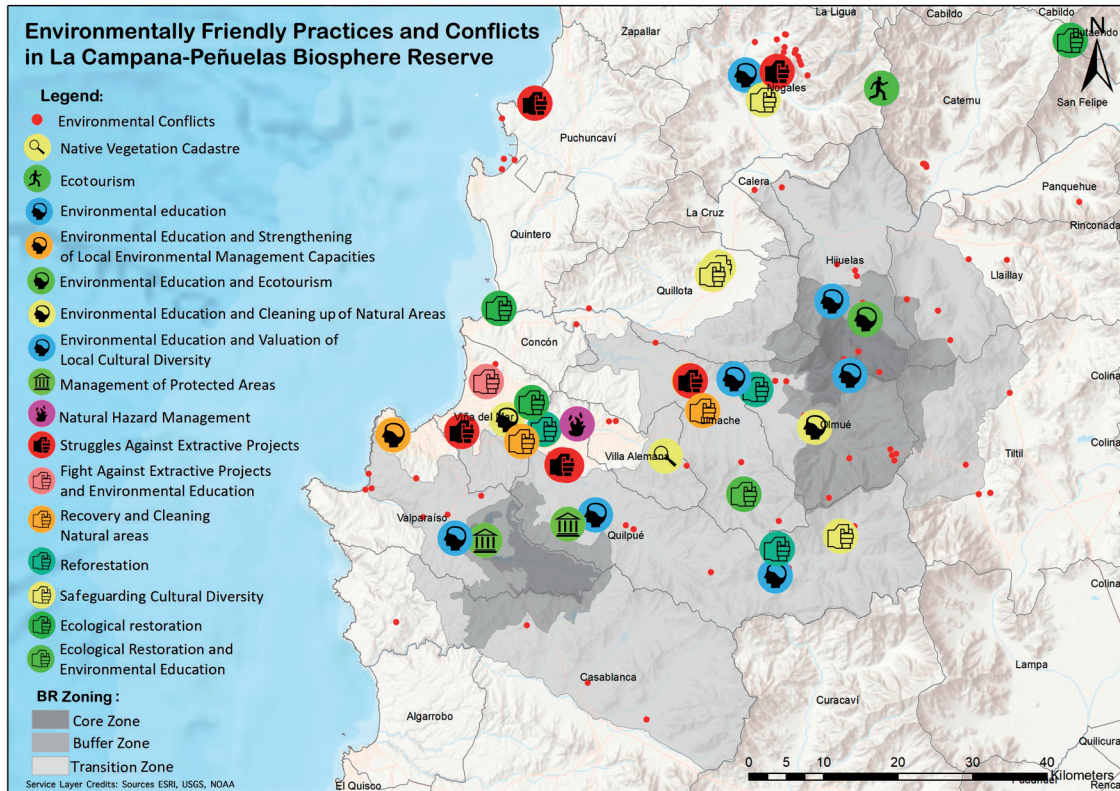


Figure 2 – Environmentally friendly practices in and around La Campana-Peñuelas Biosphere Reserve by means of participatory-GIS. Map elaborated by Natalia Ortiz and Pablo Mansilla-Quñones on the base of participatory mapping.

This open-access course has been offered every semester since 2019; participation has averaged around 50 people, with participants coming from Chile, Uruguay, Peru, Ecuador, El Salvador and Honduras. The diverse origins of the participants have allowed an enriching dialogue of knowledges among them. For example, comparisons have been made between various BRs in Latin America, and we have all learned about local, regional and national initiatives taken in relation to sensitive landscapes as alternatives for unsustainable development. One of the most important results was the identification of socio-environmental conflicts and good ecological practices in CPBR, through collaborative mapping (Sijtsma et al. 2019), encouraged by reflections that emerged from this dialogue.

**Dialogue of knowledges: online Participatory GIS in La Campana-Peñuelas BR**

Within the context of the BR course, and in collaboration with its participants, we developed an interactive map using the ArcGis123 Survey platform. The aim of this collaborative map was to record the environmental conflicts affecting the CPBR. The participants suggested including ecological conservation practices developed by communities, as well as conflicts. During August 2020 the initiative was circulated on social media and in the national media, aiming to reach a wide range of communities and to encourage them to participate by adding information about eco-

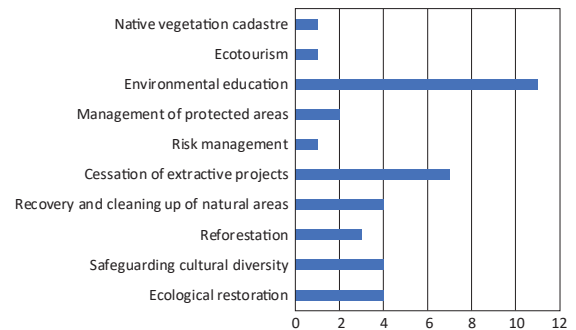


Figure 3 – Environmentally friendly practices and conflicts in La Campana-Peñuelas Biosphere Reserve.

logical conflicts, experiences and practices. This resulted in 180 conflicts being recorded, and 46 examples of environmentally friendly practices or practices for the conservation of common goods (see Figure 2 & 3).

Regenerative initiatives emerged as powerful actions within BRs (Moreno-Ramos & Müller 2019; Moreira-Muñoz et al. 2019), and CPBR was no exception in this regard. An unexpected kind of practice that emerged were the artistic initiatives developed as bio-political artefacts and mediators between local inhabitants and the BR’s management. In what follows, we focus on one of these experiences, discussing its potential in relation to BRs.

### Biocultural resistance: a collective cartographic textile project

La Dormida is an area in the Coastal Mountain Range in the Region of Valparaíso that has been affected by the installation of pylons (Cardones-Polpaico project) (Paulsen et al. 2019). Neighbours and local organizations came together to oppose the installation, generating a strong social movement against the undertaking. Collective actions were launched, strengthening human links with the territory, acknowledging the ability of local people to make viable concrete proposals for self-governance and ways of inhabiting the territories sustainably. Their proposals included a space for self-directed learning around how to live well from a biocultural perspective. Within this context, a textile map of the CPBR was created. This constituted a pedagogical artefact embodying the virtues of the territory from the perspectives of personal and collective experiences. The initiative was led by local women of different ages, who through threads, wool and fabric focused on portraying each participant's vision and intention in relation to shared territories.

This became the TEJER-NOS (*WEAVE-US*) collective, which allowed women of different ages, united by textile crafts, to come together in difficult times, to sustain their collective view of how to inhabit their territory, and to encourage each other with every stitch, building resistance through this practice of *doing together*. The banner is an excuse to meet, to engage in dialogue, to reflect on and defend the body-earth territory that they inhabit, honouring the heritage of their female ancestors as expressed in the textile practice itself.

The group has created two banners. The first features a phrase that resonated deeply with all participants: “*Somos la tierra defendiéndose*” (“*We are the earth defending itself*”). Each letter was crafted using a different technique, on seven metres of raw fabric (Figure 4). Its length was based on the width of the urban streets, so that it could be an active part of demonstrations for the vindication and protection of the territory and all its inhabitants.

The second banner was a map of the CPBR, from the coastal mountain range to the sea, which made visible the rivers that sustain the BR's biodiversity. It was again created from the perspectives of personal and collective experiences; it questioned cartographic representations based on colonial perspectives. Various pictorial techniques were employed, with soil and natural dyes being used to paint the mountains, valley, forests and fertile land, and also to make visible the territories that were in conflict. The banner is currently still being crafted; it is constantly being transformed, conceived as an artefact that is at once pedagogical, informative and for use in demonstrations.

This textile constitutes a collective prayer, calling for water to return to its course, extractivist greed to recede, forests to get the water they need and grow



Figure 4 – Collective TEJER-NOS (“WEAVE-US”), a space for women of different ages united by textile crafts. © Colectiva Tejer-Nos

strong, and the land to turn green again, become fertile and feed the children. For the members of the group, the ritual of making something together, of crafting together inspired by the territory, invokes a sense of the spiritual. The textile supports the women in times of crisis, extractivist and police violence, social unrest and catastrophes. It has turned into an emotional safety blanket for the group, and the feeling that it generates has expanded beyond them. Collaborative work has enabled the women to learn and communicate about their territory, and to feel empowered (see Figure 5).

### Conclusions

As a result of the experiences and actions around the La Campana-Peñuelas territory, its conservation and care, and the social struggle against extractivist projects that threaten it (Paulsen et al. 2019), spontaneous initiatives emerged to create artefacts of political resistance and unique forms of re-existence. These initiatives involved groups of local people communicating with the management of the BR, as an inter-generational practice (Mitrofanenko et al. 2018). This opens up the possibility for “*critical conceptual attention to thinking intimate geopolitics through creative performance*” (Veal 2019, p. 1). Spontaneous art and its rhizomatic connections, such as environmental arts, have been held up as a real possibility for “*living on a damaged planet, limiting the destruction we call [the] Anthropocene*” (Tsing et al. 2017, G2). “*We will have to break free of that yoke and imagine creative aesthetic interventions to revitalize small [...] settlements in the middle of reclaimed and poetically inhabited lands*” (Giraldo & Toro 2020, p. 162).

The experiences of collective environmental arts, collective mapping and the BR open-access course that we have shared here, and the way in which these initiatives became interwoven, are examples of how multiple kinds of actors, knowledge and practice converge around the territories, interests and conflicts that constitute BRs, generating dialogues that cross over traditional disciplinary and academic barriers. This relationship between groups needs to be con-



Figure 5 – Pictorial banner using earth pigments. © Colectiva Tejer-Nos

structure: it must acknowledge and value the territorial and ecological knowledge of the BRs' inhabitants, and its potential contribution to scientific knowledge (Porto-Goncalvez & Leff 2015). The initiatives presented here are also examples of the non-instrumental relationship with nature that a biocultural perspective fosters (Merçon et al. 2019), and of particular, territorialized modes of re-existence (Paz 2014; Porto-Gonçalves 2009). This kind of dialogue and this kind of relationship emerge as potential ways forward in generating an understanding of humanity as part of nature, and of BRs as key territories in our struggle to protect biocultural diversity and re-existence at local scales, from a global perspective. This dialogue between knowledges is also key in the current historical moment in Chile, when a new Constitution is being drafted – one that we hope will prioritize the environment and its biocultural diversity.

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